# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants.
Civil Action No. 2:18-cv-0069

## PLAINTIFFS' MEMORANDUM IN OPPOSITION TO <br> DEFENDANTS' MOTION TO DISMISS

Twenty months after Plaintiffs Latasha Holloway and Georgia Allen filed their amended complaint, Defendants, for the seventh time, have filed a motion seeking to avoid adjudicating the merits of Plaintiffs' claim under Section 2 of the Voting Rights Act ("Section 2" of the "VRA"). This motion fares no better than the prior six, which all failed. It is deficient in both law and logic. Further, it dresses up factual arguments as faux jurisdictional claims, which cannot conceal Defendants' extreme delay in advancing this latest futile assault.

Defendants wrongly claim that this Court lacks jurisdiction to decide whether Plaintiffs are suffering unlawful vote dilution now, because the 2020 Census will produce new population data sometime next year. This fundamentally misstates the role of population data in this case. The imminent release of new decennial census data can sometimes raise mootness issues in litigation challenging redistricting maps currently in force, where a new census typically renders old maps unenforceable. But Plaintiffs here are not simply challenging an existing redistricting plan. Just the opposite: Plaintiffs challenge the longstanding, permanent at-large system of electing Virginia Beach City Council members without voting districts. To show that this at-large electoral system
violates Section 2, Plaintiffs must prove certain facts about the population of Virginia Beach by a preponderance of evidence. See Thornburg v. Gingles, 478 U.S. 30, 49-51 (1986). The decennial census is just one source of relevant evidence, among others-including other, more detailed annual data and local electoral data-about the local population. No jurisdictional doctrine requires the Court to withhold adjudication of Plaintiffs' vote-dilution claim until the Census Bureau provides updated population data about Virginia Beach’s population by releasing 2020 Census data. Indeed, "[t]he [Supreme] Court has never hinted that plaintiffs claiming present Voting Rights Act violations should be required to wait until the next census before they can receive any remedy." Garza v. County of Los Angeles, 918 F.2d 763, 772-73 (9th Cir. 1990), cert. denied, 498 U.S. 1028 (1991).

Second, Defendants argue that because Plaintiffs are Black, they lack standing to challenge the dilution of political opportunity for a cohesive community of color that includes Hispanic, Black, and Asian (together "HBA") members. But if the HBA community in Virginia Beach is cohesive, as Plaintiffs claim, then any member of that community-Hispanic, Black, or Asiancan properly assert harm from that dilution. Defendants thus assume the conclusion, that the combined HBA community in Virginia Beach is not politically cohesive. This Court has already refused to indulge that dubious assumption. When Plaintiffs prove at trial that the HBA community is cohesive, they will necessarily show that they personally are injured by Virginia Beach's adherence to a voting scheme that systematically submerges the HBA community's preferences.

The Court should therefore find that it has subject-matter jurisdiction over this case, and accordingly deny this motion, like the six meritless motions that preceded it.

## I. Background

## A. Virginia Beach's At-Large System for Electing City Council Members

This case is about the Virginia Beach City Council's electoral system and its dilutive impact on political opportunity for the HBA community. All eleven members of the City Council are elected at-large, although seven of them must live in a specific residency district. Amended Complaint ("Am. Compl."), ECF No. 62 at $921 .{ }^{1}$

Virginia Beach has maintained this at-large voting system for City Council since 1966. ECF No. 118-1 (Initial Report of Dr. Allan J. Lichtman) at 12. Over the decades, members of the HBA community have frequently advocated for a change to a district-based voting system. See ECF No. 150-1 (Opinion and Order, Lincoln v. City of Virginia Beach, No. 2:97-cv-756 (E.D. Va. 1997)) at 1-3; ECF No. 118-22 (Declaration of Georgia Allen) at $\mathbb{I} 4$. The City considered this proposal in the 1990s but rejected it, even as other Virginia jurisdictions moved away from atlarge voting. ECF No. 118-1 at 13; ECF No. 118-7 (John Moss Dep.) at 46:13-49:13, 56:1-57:13, 58:6-59:15.

Virginia Beach's HBA community has grown substantially in recent years. As of the 1990 Census, Hispanic and non-white residents made up 21.2 percent of the City's population. Ex. 1 (Selected Historical Census Bureau Data) at 2. By the 2010 Census, Hispanic, Black alone, and Asian alone residents made up 31.6 percent of the population of Virginia Beach. Ex. 2 (Selected 2010 Census Data). Since then, the HBA community has continued to grow as proportion of the City's population. See Ex. 3 (Selected 2016 ACS 5-Year Estimates) (showing that Hispanic, Black

[^0]alone, and Asian alone residents together made up 32.6 percent of the City's population); Ex. 4 (Selected 2017 ACS 5-Year Estimates) (32.7 percent); Ex. 5 (Selected 2018 ACS 5-Year Estimates) (33 percent).

However, as Plaintiffs will prove at trial, the at-large voting system has prevented the HBA community from achieving political representation commensurate with its population growth. Only six minority candidates have ever been elected to the City Council. No Black candidate has ever been re-elected. Am. Compl. II 4. More broadly, City Council elections follow a clear pattern with few exceptions: the HBA community votes together for particular candidates of choice; the white majority votes as a bloc against those candidates; and the HBA candidates of choice therefore lose. Am. Compl. IqI 7-8. Defendants could end this systematic subordination of the HBA community's political voice by adopting a district-based system where two districts (or at least one) have a majority-HBA electorate. Id. ๆI 8; Ex. 6 (Supplemental Report of Anthony Fairfax). They have not done so.

## B. Census Bureau Data Products, Redistricting, and Section 2 of the VRA

The U.S. Census Bureau produces numerous types of data about the population in Virginia Beach and throughout the United States. The best-known, but by no means the only survey, is the decennial census, which the Census Bureau conducts as required by the Constitution. U.S. Const. art. I § 2, cl. 3. For the decennial census, the Bureau attempts to collect information about every person living in the U.S. as of April 1 in each year ending in zero. 13 U.S.C. § 141(a). The Bureau uses this information to produce numerous data products. Of particular note, the decennial census provides the raw data for the once-a-decade Public Law 94-171 redistricting data file, which
contains tabulations of population data for geographic units throughout the nation, down to the granular level of census blocks. ${ }^{2}$

The Census Bureau is currently collecting data for the 2020 Census. The next release of P.L. 94-171 data-reflecting the population as of April 1, 2020-is expected in 2021. Under current law, these decennial census data are due to be published by April 1, 2021. See 13 U.S.C. § 141(c). However, the 2020 Census has experienced significant delays due to the COVID-19 pandemic, and the Bureau is now operating under the assumption that Congress will extend the data-delivery deadline to July $31,2021 .{ }^{3}$ The Bureau does not even plan to start releasing P.L. 94171 data until at least the week of June 17, 2021. ${ }^{4}$

The surveys the Census Bureau conducts in addition to the decennial census include the American Community Survey ("ACS"), which collects detailed information from a sample of U.S. households on a rolling basis throughout the decade. ${ }^{5}$ The Bureau publishes updated statistics from the ACS every year, including new tabulations for small geographic subunits within cities like Virginia Beach. ${ }^{6}$ Unlike the P.L. 94-171 file, data releases from the ACS include information on the U.S. citizen voting-age population ("CVAP"), broken down by race and Hispanic origin. ${ }^{7}$

[^1]One function of Census Bureau data is to measure compliance with the Constitution's "oneperson, one-vote" requirement. This constitutional doctrine requires district-based voting schemes to have approximately equal populations in each district. Evenwel v. Abbott, 136 S. Ct. 1120, 1124, 1124 n. 1 (2016). When courts are applying the one-person, one-vote doctrine, the decennial census is the dominant measure of district population equality. Each time new decennial census figures are released, existing voting-district maps must be reevaluated and, if necessary, adjusted to ensure that the districts have sufficiently equal population. Georgia v. Ashcroft, 539 U.S. 461, 488 n. 2 (2003). ACS statistics released between decennial censuses do not trigger this populationequalization requirement. See id.

Another legal application for population data is to provide evidence of vote dilution under Section 2 of the VRA. Unlike the "one person, one vote" doctrine, Section 2 does not single out a particular Census Bureau data product as the source of population information. Courts in Section 2 cases routinely consider multiple sources of population evidence, including ACS data as well as decennial figures. See, e.g., Benavidez v. City of Irving, 638 F. Supp. 2d 709, 729-30 (N.D. Tex. 2009) ("ACS data is Census data" and may properly be used as population evidence to establish Section 2 liability); Terrebonne Parish Branch NAACP v. Edwards, 399 F. Supp. 3d 608, 614 (M.D. La. 2017) ("CVAP [from the ACS] is commonly used in remedial redistricting to assess effectiveness."), vacated on other grounds, Fusilier v. Landry, No. 19-30665, 2020 WL 3496856 (5th Cir. June 29, 2020).
C. Procedural History

Ms. Holloway filed the initial complaint in this case pro se in November 2017. ECF No. 5. Ms. Holloway and Ms. Allen subsequently retained counsel and filed an Amended Complaint in
https://www2.census.gov/programs-surveys/decennial/rdo/technical-documentation/special-tabulation/CVAP_2014-2018_ACS_documentation.pdf?\#.

November 2018. ECF No. 62. As the Amended Complaint alleges, both Plaintiffs are Black voters in Virginia Beach. Am. Compl. IIII 14-15. They seek to replace the at-large electoral scheme with a system in which Black, Hispanic or Latino, and Asian American voters are together able to elect their candidates of choice to the City Council. Am. Compl. II 1.

Defendants chose not to move to dismiss the Amended Complaint, instead filing an answer in January 2019. ECF No. 67; see also Fed. R. Civ. P. 12(b) ("A motion asserting any of [the Rule 12(b)] defenses must be made before pleading if a responsive pleading is allowed."). Since then, however, Defendants have bombarded this Court with motions to avoid or delay a full trial on the merits. Two motions sought to bifurcate the trial into separate phases on the Gingles preconditions and the totality of circumstances. ECF Nos. 79, 132. Two more motions tried to postpone any discovery on the totality of circumstances. ECF Nos. 75, 90. In addition, Defendants moved for summary judgment, urging the Court to resolve, without trial, disagreement among the expert witnesses regarding inter-minority political cohesion and white bloc voting. ECF No. 114. After losing on summary judgment, Defendants moved for certification of appealability, to pursue an interlocutory appeal on their twice-rejected argument that the VRA does not protect cohesive, multiracial communities of color. ECF No. 127. The Court denied every one of these motions. ECF Nos. $93,95,126,134,145$. As the Court explained in rejecting an interlocutory appeal in April 2020, "this case has been on the Court's docket for over two years and involves claims that should be fully litigated given the genuine dispute as to material facts." ECF No. 134 at 3.

Accordingly, on May 15, the Court scheduled trial to begin on October 6, 2020. ECF No. 142. No party objected to this trial date, although the Court gave all parties an opportunity to do so. See ECF No. 129-1 (email from Courtroom Deputy Patrice Thompson to counsel for all parties regarding potential trial dates).

After the Court set the trial date, new counsel also appeared on behalf of Defendants. ECF Nos. 144, 146. Then, on June 30, 2020-over a year and a half after answering the current complaint—Defendants filed the instant Motion to Dismiss. ECF No. 149 (the "Motion").

## II. Legal Standard

A motion to dismiss for lack of subject-matter jurisdiction "must be made before pleading if a responsive pleading is allowed." Fed. R. Civ. P. 12(b). "An untimely motion under Rule 12(b)(1) may be treated as a suggestion that the court lacks jurisdiction." Jones v. United States, 1989 WL 409417, at *2 (D.S.C. Nov. 16, 1989). However, calling a motion jurisdictional does not make it so. A Rule 12(b)(6) motion by another name still falls under Rule 12(b)(6), and still had to be filed back in 2018. Although Defendants' arguments in fact do not go to the subject matter jurisdiction of the Court, they are deficient under any rubric. Plaintiffs therefore will treat this motion as if it legitimately fell under Rule 12(b)(1).

Subject-matter jurisdiction in federal courts requires an actual case or controversy. Campbell-Ewald Co. v. Gomez, 136 S. Ct. 663, 669 (2016), as revised (Feb. 9, 2016). "The Supreme Court has developed a number of constitutional justiciability doctrines" to implement this case-or-controversy requirement, "including the prohibition against advisory opinions, the political question doctrine, and the doctrines of standing, ripeness, and mootness." United States v. McClure, 241 F. App'x 105, 107 (4th Cir. 2007).

In deciding a motion to dismiss for lack of subject-matter jurisdiction, the Court must view all factual allegations "in the light most favorable to" Plaintiffs. Wilson v. Johnson, 535 F.3d 262, 264 (4th Cir. 2008).

## III. Argument

## A. The 2020 Census Does Not Deprive the Court of Jurisdiction.

1. The Census Does Not Moot Plaintiffs' Challenge to the At-Large System.
"A case becomes moot - and therefore no longer a 'Case' or 'Controversy' for purposes of Article III-when the issues presented are no longer 'live' or the parties lack a legally cognizable interest in the outcome." Already, LLC v. Nike, Inc., 568 U.S. 85, 91 (2013) (citation omitted). Defendants claim there is no live dispute because Plaintiffs must wait for updated Census data that will further prove their case. This is incorrect. The parties are engaged in a live controversy over whether Virginia Beach's at-large system dilutes the voting strength of the City's HBA community, given the current facts about the City's population. In arguing that the anticipated release of 2020 Census data next year moots this case, Defendants misconceive the nature of Plaintiffs' claim and the role of population data in this context, and seek to transmute an issue of proof into one of jurisdiction.

The at-large voting scheme for Virginia Beach's City Council long predates the 2010 Census and will survive the release of 2020 Census data, absent relief from this Court. Plaintiffs contend that this system deprives the City's HBA population of equal opportunity to elect its candidates of choice, in violation of Section 2. Am. Compl. II 1. As preconditions for liability in this case, Plaintiffs must "(1) 'demonstrate that [the HBA population] is sufficiently large and compact to constitute a majority in a single member district,' (2) 'show that it is politically cohesive,' and (3) 'demonstrate that the white majority votes sufficiently as a bloc to enable it . . . usually to defeat the minority's preferred candidate.'" Hall v. Virginia, 385 F.3d 421, 426 (4th Cir. 2004) (quoting Gingles, 478 U.S. at 50-51). Relatedly, Plaintiffs must show that it is possible to draw one or more remedial districts that would likely "perform[]"- that is, "enhance the ability of
minority voters to elect the candidates of their choice." Abbott v. Perez, 138 S. Ct. 2305, 2332 (2018). ${ }^{8}$ Each of these factual propositions must be proven by a preponderance of the evidence. Mo. State Conf. of the NAACP v. Ferguson-Florissant Sch. Dist., 894 F.3d 924, 930 (8th Cir. 2018) (preponderance-of-evidence standard for Gingles preconditions); Rodriguez v. Bexar Cty., 385 F.3d 853, 859-60 (5th Cir. 2004) (same); see also CIGNA Corp. v. Amara, 563 U.S. 421, 444 (2011) (preponderance-of-evidence standard is "the default rule for civil cases").

Defendants argue that "the question whether these things can be proven under 2010 census data (or ACS data from the 2010 decade) is moot." Defs. Mem. in Support of Mot. to Dismiss ("Defs. Mem."), ECF No. 150 at 8. But Section 2 claims are not brought "under" a set of data. Instead, Section 2 litigants use multiple population datasets-including decennial census data and ACS statistics-as evidence to help the Court answer factual questions about the geographic distribution and racial makeup of a real-world community. As with any other factual issue, the Court may consider any source of relevant evidence that the law does not specifically exclude. See Johnson v. DeSoto Cty. Bd. of Comm'rs, 204 F.3d 1335, 1342 (11th Cir. 2000) ("Like most evidence presented by expert testimony, we think [the] admissibility [of non-census population evidence] has to be determined on a case-by-case basis by the district court."); Fed. R. Evid. 402. Indeed, courts in Section 2 cases routinely weigh multiple sets of population data from the Census

[^2]Bureau and other sources. See, e.g., Johnson, 204 F.3d at 1341-42 (approving district court's consideration of voter-registration data as evidence of population change since the last decennial census, and noting that "statistical evidence derived from a sampling method, using reliable statistical techniques, is admissible on the question of determining the relevant population"); Garza, 918 F.2d at 772-73; Benavidez, 638 F. Supp. 2d at 729-30; Terrebonne Parish Branch $N A A C P, 399$ F. Supp. 3d at 614.

In this case, Plaintiffs' trial evidence will make clear that their claim is not dependent upon, or brought "under," any single source of population data. To show that at least one majority-HBA can be created, Plaintiffs plan to offer the reports and live testimony of their expert Anthony Fairfax, who has drawn illustrative district maps and calculated population metrics for those maps using multiple sets of ACS data, including 2014-2018 ACS 5-year estimates, as well as 2010 Census data. See Ex. 6 (Supplemental Report of Anthony Fairfax). Notably, in seeking dismissal of this case, Defendants raise no direct objection to Plaintiffs' long-disclosed intention to offer evidence derived from both the ACS and the decennial census. Nor could they, given the wealth of precedent making clear that courts in Section 2 cases may consider population evidence other than data from the latest decennial census. ${ }^{9}$

Because the decennial census is just one source of admissible population evidence among others, ${ }^{10}$ the Court may make findings about Virginia Beach's population on the record available

[^3] ACS.
as of October 2020, without worrying that a subsequent release of new decennial data will somehow render those factual findings legally invalid. The anticipated release of 2020 Census data in 2021 will simply produce more evidence about the City's population.

Accordingly, past courts have seen no mootness problem with adjudicating challenges to electoral systems late in a decennial census cycle. For example, in 1989, a district court ordered changes to the preexisting electoral system for the Council of Jefferson Parish, Louisiana-a partially at-large scheme which the court had previously found to violate Section 2. E. Jefferson Coal. for Leadership and Dev. v. Parish of Jefferson, 706 F. Supp. 470, 471-72, 471 n. 1 (E.D. La. 1989). By the time of that order, Jefferson Parish was not scheduled to elect councilmembers again until 1991-after the scheduled release of 1990 Census data. Id. at 472. The district court "realize[d] that the decennial census of 1990 could have some effect on the district lines" and clarified that the remedial district lines should be adjusted as necessary to account for the 1990 Census. Id. After an appeal and remand, but still before the release of 1990 Census data, the district court made a new factual finding that "the minority [group] is sufficiently large \& geographically compact to constitute a majority w/in a single-member district." Minute Entry, E. Jefferson Coal. for Leadership and Dev. v. Parish of Jefferson, No. 2:86-cv-03668-PB-RF, ECF No. 140 (E.D. La. May 17, 1990). Then, the district court—still without 1990 Census data-approved a new remedial plan. Minute Entry, Parish of Jefferson, No. 2:86-cv-03668-PB-RF, ECF No. 142 (E.D. La. June 5, 1990). The Fifth Circuit affirmed that order. E. Jefferson Coal. for Leadership and Dev. v. Parish of Jefferson, 926 F.2d 487, 494 (5th Cir. 1991). If the district court and the Fifth Circuit thought the forthcoming 1990 Census data mooted the case, they would have said so. See Mine Reclamation Corp. v. FERC, 30 F.3d 1519, 1522 (D.C. Cir. 1994) (court is "obliged to
address [mootness] sua sponte because mootness goes to the jurisdiction of [the] court"). Instead, they exercised jurisdiction and granted relief.

Similarly, in Reno v. Bossier Parish Sch. Bd., the Supreme Court held that a school board's claim for preclearance of its 1992 redistricting plan under Section 5 of the VRA was not moot, even though the Board was scheduled to redistrict with 2000 Census data before holding its next election. 528 U.S. 320, 327-28 (2000). The Court explained the 1992 plan would "serve as the baseline against which appellee's next voting plan will be evaluated for the purposes of preclearance." Id. at 328 . Thus, the 1992 plan remained the subject of a live case and controversyeven though it was, by its terms, less permanent than Virginia Beach's at-large electoral scheme. ${ }^{11}$ 12

Defendants fail to cite any authority directly supporting their mootness-by-forthcomingcensus theory. Instead, they rely on inapposite malapportionment case law for the uncontroversial proposition that existing redistricting plans typically must be redrawn after new decennial census data are released. See Defs. Mem. 3 (citing Georgia v. Ashcroft, 539 U.S. 461 (2003)); id. at 8

[^4](same). At most, this principle suggests that litigation challenging a specific redistricting plan may become moot at the end of the decade, if the record shows that the plan and its effects will terminate with the release of new census data. But see Reno, 528 U.S. at 327-28 (no mootness where the redistricting plan at issue would soon expire but its effects would continue). A challenge to an electoral system that will, unless enjoined, survive the release of census data does not become moot. Virginia Beach's at-large system is precisely the type of electoral scheme that can live forever, unaffected by decennial census results.

Defendants seek to avoid this conclusion by focusing their mootness argument on the timing of the remedy in this case. According to Defendants, a remedy would necessarily come after the release of 2020 Census data, and therefore the Court's post-trial findings of fact would amount to an "advisory opinion" on the moot questions of "whether districts created under census data from the 2010 decade would perform" and whether Virginia Beach could have drawn a majority-HBA district for its elections during the 2010 decade. Defs. Mem. 9-10, 13. This argument fails because it is wrong on the mootness doctrine, wrong on the VRA, and wrong on the facts of this case.

First, a case does not become moot simply because information that may affect the remedy is expected to emerge after the adjudication of liability. That is why the district court in Parish of Jefferson saw no defect in its jurisdiction, even as it explicitly recognized that 1990 Census data were forthcoming and might require adjustment of the court's remedy before it was implemented. 706 F. Supp. at 472. Looking outside the VRA context does not help Defendants' position, either. Indeed, a non-election hypothetical highlights the fallacy of Defendant's position. Imagine that an employee sues her employer under the Americans with Disabilities Act, seeking an injunction to require the employer to provide reasonable accommodation for her physical disability. See 42
U.S.C. § 12112(b)(5)(A). The employee goes to her healthcare provider for an annual physical exam every April; the case goes to trial in March. Under these circumstances, the employee's posttrial physical predictably may reveal new information that would be relevant to the determination of what reasonable accommodation (if any) the employer could make for the employee's disability. But no one, presumably, would call this hypothetical case "moot" on the theory that the plaintiff cannot obtain relief "under" her existing medical records.

Second, Defendants' argument rests on a misunderstanding of the role of illustrative remedial districts in VRA litigation. Plaintiffs' experts in VRA cases generally draw one or more hypothetical districts to demonstrate "the possibility of creating more than the existing number of reasonably compact districts with a sufficiently large minority population to elect candidates of its choice," as Gingles requires. Johnson v. De Grandy, 512 U.S. 997, 1008 (1994) (emphasis added). Defendants suggest the Court's post-trial opinion would be "advisory" because any conclusions the Court reaches about the demographics and performance metrics of the illustrative districts drawn by Plaintiffs' expert would later need to be reevaluated with 2020 Census data before the Court could implement any remedies. Defs. Mem. 9-10, 12-13. But the point of illustrative districts is not to dictate exactly how the court must craft its remedy. The point is, as the Court made clear in De Grandy, to show that it is possible to craft some redistricting plan that includes one or more performing majority-minority districts. See Terrebonne Parish Branch NAACP, 399 F. Supp. at 611 ("The Court found that the 'Illustrative Plan', offered by the Plaintiffs as part of their proof in the liability phase, demonstrated that 'the black population is sufficiently numerous and geographically compact . . . to comprise a majority of the voting age population in one single member district in a five-district plan.'").

Here, Plaintiffs' trial exhibits and expert testimony, including their numerous illustrative maps and reconstituted election analyses, will provide strong evidence that the current population of Virginia Beach-the very population being measured by the 2020 Census—lends itself easily to drawing two performing majority-HBA districts (or at least one). See Ex. 6 (Supplemental Report of Anthony Fairfax); Ex. 8 (Supplemental Report of Dr. Douglas M. Spencer). The Court has jurisdiction to make a factual finding to this effect. And that finding will not later be rendered "advisory" if the Court, after examining 2020 Census data, adopts a remedy that does not precisely track Plaintiffs' illustrative districts. See, e.g., Terrebonne Parish Branch NAACP, 399 F. Supp. 3d at 612, 617 (adopting remedial plan developed by special master, rather than illustrative plan offered by plaintiffs); Parish of Jefferson, 926 F.2d at 490-91 (noting that district court adopted remedial plan first offered during post-trial proceedings); United States v. Euclid City Sch. Bd., 632 F. Supp. 2d 740, 745, 771 (N.D. Oh. 2009) (adopting "limited voting" system rather than redistricting as remedy, and relying on ACS data that was not available at the liability stage). Insofar as Defendants assert that it will be impossible to draw valid remedial districts because the 2020 census will expose demographic shifts that will dramatically counter the most recent ACS datasets, see Defs. Mem. 13, that assertion is easily dismissible on three grounds: (1) Defendants offer no evidence to support it; (2) even if they did, their argument would go to the weight of Plaintiffs' evidence, not the Court's jurisdiction to decide the pertinent fact questions; and (3) it is contrary to uncontested population data showing the continued growth of the minority population in Virginia Beach over the past few decades.

Third, contrary to Defendants' suggestion, see Defs. Mem. 13, Plaintiffs can benefit from a victory in this case sooner than the first City Council election held under a redistricting plan drawn with 2020 Census data. Recently, Virginia Beach has held multiple special elections to fill
unscheduled vacancies on the City Council. ${ }^{13}$ This could easily happen again. If the Court rules for Plaintiffs on liability, and a City Council vacancy subsequently opens before the 2020 Census data arrive, Plaintiffs would benefit from the ability to seek an emergency remedy for the special election without needing to prove liability from scratch. Such a remedy need not even involve redistricting. The Court could order the City to adopt an interim system of electing councilmembers through citywide ranked-choice voting, which would provide increased opportunity for minority political viewpoints. See Holder v. Hall, 512 U.S. 874, 910 n. 16 (1994) (Thomas, J., concurring). ${ }^{14}$

Perhaps more important, a favorable ruling at trial would change the political dynamics of Virginia Beach in ways that would benefit Plaintiffs immediately, regardless of when and how the next election is conducted. By declaring that the current at-large system violates Section 2, see Am. Compl. at 16 (requesting declaratory relief), the Court would put councilmembers on notice that the Council will soon include one or more majority-HBA districts. This would create an incentive for responsiveness to the HBA community among politicians who see themselves as possible future candidates for election in a majority-HBA district.

[^5]The Court should thus reject Defendants' meritless argument that the forthcoming publication of 2020 Census data renders this case moot.

## 2. The Anticipated Release of Census Data Next Year Does Not Render This Case Unripe.

"The ripeness doctrine derives from Article III limitations on judicial review, and ensures that judicial intervention in a controversy is timed appropriately." NAACP v. Bureau of the Census, 945 F.3d 183, 192 (4th Cir. 2019). Courts determine whether claims are ripe based on "(1) the fitness of the issues presented for judicial review; and (2) the hardship that the parties would endure by delayed adjudication." Id. (citing Deal v. Mercer Cty. Bd. of Educ., 911 F.3d 183, 191 (4th Cir. 2018)). Both prongs of this test point to the conclusion that Plaintiffs' claim is ripe for adjudication, contrary to Defendants' argument that the Court must wait for 2020 Census data.

Plaintiffs' claim is that the at-large system deprives the HBA community of equal opportunity to elect candidates of choice right now. As discussed, ${ }^{15}$ this claim is not brought "under" any single dataset. Rather, Plaintiffs draw on multiple sources of evidence to fully support their claim, including evidence that the current population of Virginia Beach lends itself to drawing majority-HBA districts that would perform for the HBA community. See Ex. 6 (Fairfax Supp. Report) at 12 ("at least one majority-HBACVAP district can be easily drawn that contains both Plaintiffs' residences, and in fact all three modified Plans continue to include two majorityHBACVAP districts for the City of Virginia Beach"); Ex. 8 (Spencer Supp. Report) at 2 ("minority candidates of choice are usually not likely to be defeated due to white bloc voting in each set of majority-minority districts contained in the plans"). Courts have found vote dilution claims ripe on records far less robust than this, for example, where there was no reliable statistical evidence

[^6]to predict voting behavior, see Cane v. Worcester Cty., 35 F.3d 921, 925-26 (4th Cir. 1994) ("the two statistical methods ... failed to produce reliable statistical evidence because of the lack of available data and a truncated analysis..."), and where any majority-minority district would run contrary to traditional districting principles, see id. at 925 ("...the construction of a majority African-American district would necessarily entail the running of commissioner district lines across election districts and through at least two municipalities..."), or create logistical difficulties for election administration, see United States v. Vill. of Port Chester, 704 F. Supp. 2d 411, 422 (S.D.N.Y. 2010) ("...the district plans would create a system where the population of certain election precincts would be divided among one or more Trustee districts ... rais[ing] administrative and logistical concerns...").

Defendants, after trying in vain to convince this Court to discount Plaintiffs' evidence at the summary judgment stage, now argue that the claim is unfit for review because it rests on "contingent future events that may not occur as anticipated, or indeed may not occur at all"namely, the Census Bureau's publication of 2020 Census figures that support Plaintiffs' factual contentions about Virginia Beach's population. Defs. Mem. 12-14. That is false. Plaintiffs do not allege that their votes will be diluted based on future, unknown circumstances. Rather, they allege their votes are being diluted now, based on the population that currently exists and is being counted in the 2020 Census. The mere fact that a future event might (or might not) yield more information and might (or might not) alter the exact remedy in a case, does not make that case unripe. See, e.g., Colleton Cty. Council v. McConnell, 201 F. Supp. 2d 618, 627 (D.S.C. 2002), opinion clarified (Apr. 18, 2002) (implementing a remedial districting plan despite the possibility that a new plan would be adopted before the next relevant election two years later).

Courts have flatly rejected the proposition that nearing the end of a decennial census cycle renders Section 2 cases unsuitable for adjudication. In United States v. Town of Lake Park, for example, the defendants argued to no avail "that the action should be dismissed or stayed until after the 2010 U.S. Census data is released because the suit [was] based on the 2000 Census data," which the defendants said were "not as relevant as the 2010 Census data [would] be." No. 09-80507-CIV, 2009 WL 3667071, at *2 (S.D. Fla. Oct. 23, 2009). As the court recognized, any factual issues about the reliability of the available population evidence should be resolved at trial: "The appropriate method to challenge the rebuttable presumption of the evidentiary validity of the 2000 Census data is through a presentation of competent evidence to the contrary, either at the summary judgment or trial stage of the litigation." Id. at *4 (internal citation omitted); accord Vill. of Port Chester, 704 F. Supp. 2d at 424-25 (relying on 2000 Census data to adjudicate Section 2 liability, where Defendants tried unsuccessfully to prove at trial that those data were inaccurate and outdated).

Similarly, in Parish of Jefferson, the district court not only ruled that it was possible to design an appropriate remedy, but actually adopted one-even as the 1990 Census data were scheduled to be released before the next affected election. 706 F. Supp. at 472 . Neither the district court nor the Fifth Circuit raised any ripeness issue with adjudicating liability and remedies based on the best evidence available at the time. See Parish of Jefferson, 926 F.2d at 494 (affirming the district court's judgment).

Defendants offer no persuasive reason for the Court to depart from these precedents. In fact, absurd results would follow if the Court were to adopt Defendants' flawed logic and hold this case unripe because additional relevant evidence is expected to emerge in the next year. Given the ACS data release schedule, Virginia Beach, like many subdivisions in the United States, is never
more than a year away from receiving new data from the Census Bureau. ${ }^{16}$ Thus, it cannot be that a Section 2 claim is unripe simply because more evidence is on the horizon.

Defendants make much of the fact that any redistricting plan drawn to remedy the Section 2 violation in this case may eventually need to be reevaluated, and perhaps adjusted, to make sure the districts have sufficiently equal population as measured by the 2020 Census. See Defs. Mem. 12-13. But contrary to Defendants' suggestion, the Court does not need the 2020 Census results to decide by a preponderance of the evidence whether the City's current population lends itself to drawing at least one performing majority-HBA district. Defendants make no showing that waiting for the 2020 Census data would affect the outcome of this case. Nor could they. The record shows that the minority population in Virginia Beach has been growing for decades. While Hispanic and non-white residents made up just 21.2 percent of the City's population in 1990, the minority population climbed substantially by the 2010 Census, when Hispanic, Black alone, and Asian alone residents made up 31.6 percent of the population. Exs. 1, 2. This growth has continued, as shown by the three most recent releases of ACS 5-year estimates. See Exs. 3-5. Plaintiffs' unrebutted evidence, using the latest ACS and decennial census data, shows that it is now possible to draw two majority-HBA districts. See, e.g., Ex. 6. (Fairfax Supp. Report).

Given the pattern of population growth, the 2020 Census is very likely to show that, if anything, it is now even easier to draw one or more performing majority HBA districts. And even if the 2020 Census surprisingly were to show that the HBA population somehow shrank, it is vanishingly unlikely that it could have shrunk so drastically as to make it impossible to draw even
${ }^{16}$ American Community Survey Information Guide 12, U.S. Census Bureau, available at https://www.census.gov/content/dam/Census/programs-
surveys/acs/about/ACS_Information_Guide.pdf (describing how ACS data is released every year for all areas with populations of $20,000+$ ).
one remedial district. ${ }^{17}$ Defendants seek to surmount this common sense conclusion by improperly asking this Court to view the facts in the light least favorable to Plaintiffs-the inverse of the correct standard on a motion to dismiss. By speculating that Plaintiffs cannot win because the 2020 Census theoretically could later contradict their evidence, Defendants are effectively asking for a beyond-a-shadow-of-doubt standard of proof. Absent the unprecedented adoption of such a standard under these circumstances, Defendants cannot prevail. Defendants' suppositions and speculations roam far afield from subject matter jurisdiction.

To the extent Defendants suggest that the ripeness inquiry generally favors waiting for the 2020 Census data because decennial data are "better" than the ACS, that argument falls flat. "The appropriate method to challenge" Plaintiffs' population evidence "is through a presentation of competent evidence to the contrary" at trial, not in a motion to dismiss, and certainly not in a motion to dismiss for lack of subject matter jurisdiction. Town of Lake Park, 2009 WL 3667071, at *4. In any event, the decennial census does not contain every type of data that is found in ACS tables. For one thing, the ACS-unlike the P.L. 94-171 decennial census data-includes citizen voting age population (CVAP) data. Plaintiffs will use CVAP data at trial for good reason-to help demonstrate how their illustrative districts would perform. See Ex. 8 (Spencer Supp. Report) at 6 .

Finally, a delay in adjudicating liability would create unacceptable hardship for Plaintiffs. While this case may not be decided in time to impact the November 2020 election, the failure to adjudicate liability now may nonetheless lead to another City Council election in which Plaintiffs have their votes diluted, and in any event, will prolong the disproportionately diminished electoral

[^7]effectiveness of the minority community in Virginia Beach political life. The COVID-19 pandemic has disrupted 2020 Census operations and census data will be delayed until June or July 2021. If the Court delays adjudication of this case to await release of the 2020 Census, it is not difficult to envision a scenario in which Defendants seek yet again to delay or avoid a trial. This all would push up against the June 14, 2022 candidate filing deadline for the next scheduled Virginia Beach City Council general election. And that is all assuming that there will be no special election for Council in the interim-not a wise assumption given that Virginia Beach held special elections to fill Council seats in two of the last three years. ${ }^{18}$

A delay in adjudication would be especially unfair because Plaintiffs have acted diligently to move this case forward since Plaintiffs filed their current complaint over twenty months ago. Defendants, on the other hand, have now filed seven motions seeking patently unwarranted relief. For Defendants to argue that this case has become unripe in the time it took to rule on their motions, resolve discovery disputes, and schedule depositions of Defendants' witnesses, would validate their strategy of improper delay.

This case is ripe for resolution and should proceed to trial as scheduled.

## 3. The 2020 Census Does Not Remove Plaintiffs' Standing.

Defendants argue that Plaintiffs have not established the redressability element of standing because Plaintiffs cannot prove that they "could or likely would reside" in remedial districts drawn using 2020 Census data. Defs. Mem. 15-16. This argument fails for the same reasons as Defendants' other census-related contentions. Redressability requires only that it be "likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." Lujan $v$.

| 18 | Election | Information | $\&$ |
| :--- | :---: | :---: | :---: | | Results, |
| :---: | VBgov.com,

Defs. of Wildlife, 504 U.S. 555, 561 (1992). Plaintiffs' allegations and evidence easily satisfy this standard.

Plaintiffs have provided multiple illustrative majority-HBA districts based on population data from the 2010 Census and several years' worth of the Census Bureau's ACS statistics. Ex. 6 (Fairfax Supp. Rep.). All of these illustrative districts include Plaintiffs' residences. Id. Defendants have no basis for asserting that, simply because additional Census data is forthcoming, Plaintiffs' evidence cannot demonstrate a likelihood of redressability. As previously discussed, Virginia Beach receives updated ACS data annually, so it is hard to see how any plaintiff could ever establish standing under Defendants' theory if Plaintiffs must perpetually wait for new data that is just beyond the horizon.

Defendants also cite Gill v. Whitford to support their argument for dismissal. But the plaintiff in Gill conceded that remedial districting would not affect his ability to vote for his candidates of choice. 138 S. Ct. 1916, 1924-25 (2018). Plaintiffs here allege the opposite, Am. Compl. If 50, and they have provided expert evidence that they are likely to be included in remedial districts. Courts have repeatedly held that such allegations are sufficient to establish redressability for Section 2 claims. See Pope v. Cty. of Albany, No. 1:11-cv-0736 LEK/CFH, 2014 WL 316703, at *5 (N.D.N.Y. Jan. 28, 2014) ("[S]upported allegations that Plaintiffs reside in a reasonably compact area that could support additional MMDs sufficiently proves standing for a Section 2 claim for vote dilution"); see also Thompson v. Kemp, 309 F. Supp. 3d 1360, 1365 (N.D. Ga. 2018); Barnett v. City of Chicago, No. 92 C 1683, 1996 WL 34432, at *6 (N.D. Ill. Jan. 29, 1996). Thus, Plaintiffs have made more than a sufficient showing of standing to survive a motion to dismiss.

## B. Plaintiffs Have Standing to Challenge Dilution of the Cohesive HBA Community's Voting Strength.

Plaintiffs have also sustained an injury in fact that gives them standing to bring this vote dilution claim. The injury-in-fact requirement for standing allows Plaintiffs to sue only for "an invasion of a legally protected interest which is (a) concrete and particularized, and (b) actual or imminent, not conjectural or hypothetical." Lujan, 504 U.S. at 560 (internal citations omitted). Here, Plaintiffs are personally injured by the dilution of the HBA community's political strength.

At the outset, Defendants deploy their tried and untrue tactic of disputing the merits of Plaintiffs' claims or assuming the contrary position is true, in a procedural setting where such factual arguments and assumptions are improper. ${ }^{19}$ This Court must presume, for the purposes of ruling on Defendants' motion to dismiss, the truth of Plaintiffs' allegations. Plaintiffs claim that the HBA community votes cohesively for particular candidates of choice, but these shared political preferences are submerged by the at-large system. Am. Compl. TIII 7-8. Plaintiffs are, as no one disputes, members of the HBA community. The complaint alleges that as members of the HBA community, Plaintiffs have suffered dilution of their votes. That should end the injury-in-fact analysis on a motion to dismiss.

Yet, Defendants argue-without any evidentiary basis-that Plaintiffs do not have a "close" relationship with Asian or Latino/Hispanic voters and question whether Plaintiffs' claims have any merit. Defs. Mem. at 20. Defendants' latest attempt to assume the outcome of this Court's cohesiveness inquiry, this time to assert that Plaintiffs lack standing, places "the merits cart before the standing horse." Cooksey v. Futrell, 721 F.3d 226, 239 (4th Cir. 2013) (quoting Initiative and Referendum Inst. v. Walker, 450 F.3d 1082, 1093 (10th Cir. 2006)). Courts have routinely rejected

[^8]such attempts to assume the outcome of the argument on the merits to decide a standing question. See Flast v. Cohen, 392 U.S. 83, 106 (1968) ("While we express no view at all on the merits of appellants' claims in this case, their complaint contains sufficient allegations under the criteria we have outlined to give them standing to invoke a federal court's jurisdiction for an adjudication on the merits."); City of Waukesha v. EPA, 320 F.3d 228, 235 (D.C. Cir. 2003) ("‘I]n reviewing the standing question, the court must be careful not to decide the questions on the merits for or against the plaintiff, and must therefore assume that on the merits the plaintiffs would be successful in their claims."). If Defendants would like to argue that the HBA community is not cohesive, they of course may do so-at trial.

This Court has repeatedly and properly declined Defendants' inappropriate requests to reach the merits of Plaintiffs' claims. For example, this Court denied Defendants' motion for summary judgment because there is a genuine factual dispute, ECF No. 126, including the cohesiveness of the HBA community. The Court then twice denied Defendants' motions to bifurcate the trial to consider the Gingles conditions, in particular cohesiveness, before proceeding to any other issue. The Court rightly refused to "assume the conclusion of the Gingles inquiry for purposes of managing trial." ECF No. 136. This Court should deny Defendants' newest inappropriate invitation to reach the merits.

Assuming, as the Court must, that the HBA community is cohesive, Plaintiffs have clearly suffered a concrete and particularized injury from Defendants' continued use of a method of election for city council seats that results in vote dilution in violation of Section 2.

Defendants' contrary conclusion rests on inapposite cases. In Perry-Bey v. City of Norfolk, 678 F. Supp. 2d 348, 363 (E.D. Va. 2009), the plaintiff did not allege that she was a member of a minority group at all, and thus could not suffer a constitutional injury in fact. Here, Plaintiffs are

Black, and are thus members of a minority group that suffers injury in fact from having the votes of the HBA community diluted. In Clay v. Garth, No. 1:11-cv-00085, 2012 WL 4470289, at *2 (N.D. Miss. Sept. 27, 2012), the court found that a Black candidate did not have standing to allege that white votes were being diluted because Section 2 claims are limited to "'aggrieved persons,' and that category is confined to persons whose voting rights have been denied or impacted." (quoting Roberts v. Wamser, 883 F.2d 617, 621, 624 (8th Cir. 1989)). The court understandably held that the plaintiff was not a member of the class whose votes were being diluted. Here, taking Plaintiffs' complaint as true, it is beyond dispute that Plaintiffs have alleged they, along with other HBA voters in Virginia Beach as a cohesive group, have been injured. See, e.g., Am. Compl. II 8. In Greater Birmingham Ministries v. Alabama, 161 F. Supp. 3d 1104, 1114-15 (N.D. Ala. 2016), the plaintiffs failed to establish standing as organizational plaintiffs who represented affected "constituents." But that case is inapposite because Plaintiffs here do not allege that they possess organizational standing. Lastly, the plaintiffs in Fairley v. Patterson, 493 F.2d 598, 604 (5th Cir. 1974) lacked standing because they did not properly allege residence in one of the districts in which electors were underrepresented. ${ }^{20}$

Defendants' reliance on third-party standing doctrine is similarly misguided. Plaintiffs are not alleging third-party standing. Instead, Plaintiffs have standing in their own right as members of a cohesive HBA class that continues to have its political strength diluted because of Defendants' method of election. While the existence of vote dilution must always be analyzed with reference to groups, Section 2 case law makes clear that individual members of an injured class are

[^9]appropriate plaintiffs to bring a vote dilution claim. See, e.g., Kumar v. Frisco Independent School District, No. 4:19-CV-00284, 2020 WL 1083770 (E.D. Tex. Mar. 6, 2020) (district court denying motion to dismiss where single Indian plaintiff brought Section 2 claim alleging the votes of HBA residents were being diluted); see also Minute Entry, Kumar, No. 4:19-CV-00284, ECF No. 107 (E.D. Tex. May 26, 2020) (minute entry indicating that the case proceeded to trial). Section 2(b) defines the class of citizens who can sue as a class in which the "members have less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice." 52 U.S.C. 10301(b). The text therefore demonstrates that the shared disadvantage based on "race or color" defines the protected class, not the racial or ethnic commonality of the group. Thus, Plaintiffs do not need to rely on third-party standing to protect the rights of others in their protected class. Instead, the fact that Plaintiffs are members of a class of voters whose votes Defendants continue to dilute is enough. ${ }^{21}$ It makes no logical difference that the class victimized by Defendants' electoral scheme here is a multiracial community of color that includes members with different racial identities from Plaintiffs.

Defendants rely heavily on Kumar, 2020 WL 1083770, to argue that Plaintiffs' claims must be dismissed because they lack third-party standing. But this conclusion misreads Kumar and ignores its subsequent history. In Kumar, a single Indian voter brought a Section 2 claiming that

[^10]an at-large election system diluted the votes of the local HBA community. Id. In an order denying defendant's motion to dismiss, the court concluded that Kumar had constitutional standing but lacked prudential standing. The court reached this conclusion after wrestling with Kumar's "muddled" complaint. Id. at *7. From the court's view, it was not
readily apparent, from a plain reading of Kumar's First Amended Complaint, whom Kumar [was] attempting to represent-i.e., whether Kumar [was] just representing himself or attempting to represent entire minority communities in [the School District]. Thus, the Court must determine whether Kumar [was]: (1) simply trying to put on evidence of a minority coalition under [Gingles] to demonstrate how his personal legal interests have been injured; or (2) attempting to represent the collective interests of all African Americans, Hispanics, Asians, and other minorities who live in [the School District].

Id. at *8 (emphasis in original). The court ultimately gave Kumar 14 days to amend his complaint. Kumar then filed a second amended complaint where he remained the sole plaintiff and continued to allege that the relevant at-large system prevented minority-preferred candidates from being elected. Second Amended Complaint, Kumar, No. 4:19-CV-00284, ECF No. 81 (E.D. Tex. Mar. 20, 2020). The case then went on to trial. Minute Entry, Kumar, No. 4:19-CV-00284, ECF No. 107 (E.D. Tex. May 26, 2020).

Defendants have read Kumar to mean that Plaintiffs' claims must be dismissed when, in fact, the case further supports Plaintiffs' position: that even one member of the aggrieved class can bring a Section 2 claim regardless of the plaintiff's race or the composition of the rest of the coalition and then take that case to trial. Unlike the initial complaint in Kumar, the complaint here makes clear that Plaintiffs are "simply trying to put on evidence of a minority coalition under [Gingles] to demonstrate how [their] personal legal interests have been injured." 2020 WL 1083770, at *8. Therefore, Plaintiffs have standing to bring this Section 2 claim.

## CONCLUSION

This Court has jurisdiction to rule on Plaintiffs' challenge to the dilution of their political opportunity. The forthcoming release of 2020 Census data does not render Plaintiffs' claims moot or unripe, but will merely provide additional evidence that is likely to further support Plaintiffs' claims. Furthermore, because Plaintiffs are members of the aggrieved class of citizens, they are personally injured and have standing to bring this suit. Plaintiffs therefore respectfully request that this Court deny Defendants' Motion to Dismiss.

Dated: July 14, 2020

Ruth M. Greenwood
Campaign Legal Center
125 Cambridgepark Drive, Suite 301
Cambridge, MA 02140
rgreenwood@campaignlegal.org

Annabelle E. Harless
Campaign Legal Center
55 W. Monroe St., Ste. 1925
Chicago, IL 60603
(312) 312-2885
aharless@campaignlegal.org

Respectfully submitted,
/s/ J. Gerald Hebert
J. Gerald Hebert

VSB. No. 38432
Paul M. Smith
Robert Weiner
Danielle Lang
Christopher Lamar
CAmpaign Legal Center
1101 14th Street NW, Suite 400
Washington, DC 20005
(202) 736-2200 (Office)
(202) 736-2222 (Facsimile)
ghebert@campaignlegal.org
psmith@campaignlegal.org
rweiner@campaignlegal.org
dlang@campaignlegal.org
clamar@campaignlegal.org
Attorneys for Plaintiffs

## CERTIFICATE OF SERVICE

I hereby certify that on the July 14, 2020, I will electronically file the foregoing with the Clerk of the Court using the CM/ECF system, which will then send a notification of such filing to the following:

Mark D. Stiles (VSB No. 30683)
Christopher S. Boynton (VSB No. 38501)
Gerald L. Harris (VSB No. 80446)
Joseph M. Kurt (VSB No. 90854)
Office of the City Attorney
Municipal Center, Building One, Room 2602401 Courthouse Drive
Virginia Beach, Virginia 23456
(757) 385-8803 (Office)
(757) 385-5687 (Facsimile)
mstiles@vbgov.com
cboynton@vbgov.com
glharris@vbgov.com
jkurt@vbgov.com
Katherine L. McKnight (VSB No. 81482)
Richard B. Raile (VSB No. 84340)
BAKER \& HOSTETLER, LLP
Washington Square, Suite 1100
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036
Telephone: (202) 861-1500
Facsimile: (202) 861-1783
kmcknight@bakerlaw.com
rraile@bakerlaw.com
Patrick T. Lewis (pro hac vice pending)
BAKER \& HOSTETLER, LLP
127 Public Square, Suite 2000
Cleveland, OH 44114
Telephone: (216) 621-0200
Facsimile: (216) 696-0740
plewis@bakerlaw.com
/s/ Christopher Lamar
Counsel for Plaintiffs

# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

Table 47. Virginia - Race and Hispanic Origin for Selected Large Cities and Other Places: Earliest Census to 1990

| Census year (national rank through 100, state rank through 3) ${ }^{1}$ |  |  | Race |  |  |  |  |  |  |  |  |  | Hispanic origin (of any race) |  | White, not of Hispanic origin |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total population |  | White |  | Black |  | American Indian, Eskimo, and Aleut |  | Asian and Pacific Islander |  | Other race |  |  |  |  |  |
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Number Percent | Number | Percent |
| Alexandria ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (-, -) | 111183 | 100.0 | 76789 | 69.1 | 24339 | 21.9 | 333 | 0.3 | 4632 | 4.2 | 5090 | 4.6 | 10778 | 9.7 | 71486 | 64.3 |
| Sample.. | 111183 | 100.0 | 76907 | 69.2 | 24557 | 22.1 | 247 | 0.2 | 4687 | 4.2 | 4785 | 4.3 | 10440 | 9.4 | 71508 | 64.3 |
| 1980 (-, -) | 103217 | 100.0 | 74726 | 72.4 | 23006 | 22.3 | 269 | 0.3 | 2888 | 2.8 | 2328 | 2.3 | 4042 | 3.9 | 72061 | 69.8 |
| Sample. | 103217 | 100.0 | 74852 | 72.5 | 23073 | 22.4 | 309 | 0.3 | 3381 | 3.3 | 1602 | 1.6 | 4251 | 4.1 | 72160 | 69.9 |
| 1970 (-, -) | 110938 | 100.0 | 94233 | 84.9 | 15644 | 14.1 | 168 | 0.2 | 517 | 0.5 | 376 | 0.3 | 3332 | (NA) | (NA) | (NA) |
| $15 \%$ sample. | 110938 | 100.0 | $94514 \quad 85.2$ |  | 1555714.0 |  | $867 \quad 0.8$ |  |  |  |  |  | (NA) (NA) |  | $91510 \quad 82.5$ |  |
| 5\% sample.. | (NA) | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) |  |  | (NA) | (NA) |
| 1960 (-, -) | 91023 | 100.0 | 80388 | 88.3 | 10353 | 11.4 | 21 |  | 2250.2 |  | 36 - |  | (NA) (NA) |  | (NA) (NA) |  |
| 1950 (-, -) | 61787 | 100.0 | 54121 | 87.6 | 7622 | 12.3 | 7 |  | $31 \quad 0.1$ |  | 6 |  | (NA) (NA) |  | (NA) (NA) |  |
| 1940 (-, -) | 33523 | 100.0 | 28219 | 84.2 | 5281 | 15.8 | 1 |  | $22 \quad 0.1$ |  | (X) (X) |  | (NA) (NA) |  | (NA) (NA) |  |
| 1930 (-, -) | 24149 | 100.0 | 19230 | 79.6 | 4912 | 20.3 |  |  | 7 |  | (X) (X) |  | (NA) (NA) |  | (NA) (NA) |  |
| "Mexican" in Other race | 24149 | 100.0 | 19230 | 79.6 | 4912 | 20.3 |  |  | 7 |  | - |  | (NA) (NA) |  | (NA) (NA) |  |
| 1920 (-, -) | 18060 | 100.0 | 13936 | 77.2 | 4112 | 22.8 |  |  | 120.1 |  | (X) (X) |  | (NA) (NA) |  | (NA) (NA) |  |
| 1910 (-, -) | 15329 | 100.0 | 11132 | 72.6 | 4188 | 27.3 |  |  | 0.1 |  | (X) (X) |  | (NA) (NA) |  | (NA) (NA) |  |
| 1900 (-, -) | 14528 | 100.0 | 9986 | 68.7 | 4533 | 31.2 | - |  | $9 \quad 0.1$ |  | (X) (X) |  | (NA) (NA) |  | (NA) (NA) |  |
| 1890 (-, -) | 14339 | 100.0 | 9226 | 64.3 | 5113 | 35.7 | - |  | - |  | (X) (X) |  | (NA) (NA) |  | (NA) (NA) |  |
| 1880 (-, -) | 13659 | 100.0 | 8279 | 60.6 | 5380 | 39.4 |  |  |  |  | Black |  |  |  |  |  |
| 1870 (-, -) | 13570 | 100.0 | 8269 | 60.9 | 5300 | 39.1 | - |  | 1 |  | Total |  | Free |  | Slave |  |
| 1860 (74, -) | 12652 | 100.0 | 9851 | 77.9 | 2801 | 22.1 | - |  |  |  | 2801 100.0 |  | 14151283 | 50.5 | 138649.5 |  |
| 1850 (74, -) | 8734 | 100.0 | 6390 | 73.2 | 2344 | 26.8 | (NA) | (NA) | (NA) | (NA) | 2344 | 100.0 |  | 1283 54.7 | 1061 45.3 |  |
| 1840 (44, (X)) ${ }^{2}$ | 8459 | 100.0 | 5758 | 68.1 | 2701 | 31.9 | (NA) | (NA) | (NA) (NA) | (NA) | 2701 100.0 |  | 1627 60.2 |  | 107439.8 |  |
| 1830 (31, (X)) ${ }^{2}$ | 8241 | 100.0 | 5609 | 68.1 | 2632 | 31.9 | (NA) | (NA) | (NA) (NA) |  | 2632 100.0 |  | 137152.1 |  | 1261 47.9 |  |
| 1820 (17, (X)) ${ }^{2}$ | 8218 | 100.0 | 5615 | 68.3 | 2603 | 31.7 | (NA) | (NA) | (NA) (NA) |  | 2603100.0 |  | 116844.9 |  | $1435 \quad 55.1$ |  |
| 1810 (17, (X)) ${ }^{2}$ | 7227 | 100.0 | 4903 | 67.8 | 2324 | 32.2 | (NA) | (NA) | (NA) (NA) |  | 2324 100.0 |  | $836 \quad 36.0$ |  | 148864.0 |  |
| 1800 (22, (X)) ${ }^{2}$ | 4971 | 100.0 | 3727 | 75.0 | 1244 | 25.0 | (NA) | (NA) | (NA) (NA |  | 1244 100.0 |  | $369 \quad 29.7$ |  | $875 \quad 70.3$ |  |
| 1790 (22, -) .. | 2748 | 100.0 | 215378.3 |  | $595 \quad 21.7$ |  | (NA) (NA) |  |  |  | $595 \quad 100.0$ |  | $52 \quad 8.7$ |  | $543 \quad 91.3$ |  |
| Arlington ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (100, (X)) | 170936 | 100.0 | $130873 \quad 76.6$ |  | $17940 \quad 10.5$ |  | $\begin{array}{ll}537 & 0.3 \\ 465 & 0.3\end{array}$ |  | $\begin{array}{ll}11560 & 6.8 \\ 11596 & 688\end{array}$ |  | $\begin{array}{ll}10026 & 5.9 \\ 10183 & 6.0\end{array}$ |  | 23089 | 23089 13.5 | 118728 69.5 <br> 118559 69.4 <br> 120250  |  |
| Sample. | 170936 | 100.0 | $130745 \quad 76.5$ |  | $17947 \quad 10.5$ |  |  |  | 11596 6.8 |  |  |  | $22742 \quad 13.3$ |  |  |  |
| 1980 (-, (X)) | 152599 | 100.0 | $12612182.6$ |  | 14028 9.2 |  | $384-0.3$ |  | $\begin{array}{ll}6631 & 4.3 \\ 7684 & 5.0\end{array}$ |  | $\begin{array}{ll}5435 & 3.6 \\ 3262 & 2.1 \\ 1221\end{array}$ |  | 8863 5.8 |  | 118559 69.4 <br> 120250 78.8 |  |
| Sample.. | 152599 | 100.0 | $127413$ | 83.5 | $13907$ | 9.1 | 333 0.2 <br> 271 0.2 |  |  |  | $8781$ | $\begin{array}{ll} 120250 & 78.8 \\ 121409 & 79.6 \end{array}$ |  |  |  |
| 1970 (77, (X)) | 174284 | 100.0 | $161329 \quad 92.6$ |  | 10076 5.8 |  |  |  | 1387 0.8 |  |  |  | 3262 2.1 <br> 1221 0.7 |  | $\begin{array}{rr} \text { (NA) } & \text { (NA) } \\ 6315 & 3.6 \end{array}$ |  | (NA) (NA) |  |
| 15\% sample. | 174284 | 100.0 | $161822 \quad 92.8$ |  | 10048 5.8 |  | 2414 1.4 |  |  |  |  |  | $156128 \quad 89.6$ |  |  |  |
| $5 \%$ sample. | (NA) | 100.0 | (NA) | (NA) | $\begin{array}{lr}\text { (NA) } \\ 8590 & \text { (NA) } \\ 5.3\end{array}$ |  | (NA) (NA) |  |  | (NA) | (NA) (NA) |  | 4890 2.8 |  | (NA) <br> (NA) |  |
| 1960 (77, (X)) | 163401 | 100.0 | 15417294.4 |  |  |  | 52 <br> 52 |  | 437 | 0.3 | 150 | 0.1 |  | (NA) | (NA) | (NA) |
| 1950 (68, (X)) | 135449 | 100.0 | 12878095.1 |  | 6517 4.8 |  |  |  | 57 |  | 43 |  | (NA) | (NA) | (NA) | (NA) |
| 1940 (-, (X)) .. | 57040 | 100.0 | 51998 | 91.2 | 5032 | 8.8 |  | 10 | - |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1930 ((X), (X)) | 26615 | 100.0 | 23269 | 87.4 | 3337 | 12.5 | - |  | 9 |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| "Mexican" in Other race | 26615 | 100.0 | 23269 | 87.4 | 3337 | 12.5 |  |  | 9 |  |  |  | (NA) | (NA) | (NA) | (NA) |
| 1920 ((X), (X)) | 16040 | 100.0 | 13530 | 84.4 | 2507 | 15.6 | 2 |  | 1 |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1910 ((X), (X)) | 10231 | 100.0 | 7586 | 74.1 | 2645 | 25.9 | - |  | - |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1900 ((X), (X)) | 6430 | 100.0 | 3963 | 61.6 | 2467 | 38.4 | - |  | - |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| Chesapeake |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (-, -). | 151976 | 100.0 | 107399 | 70.7 | 41662 | 27.4 | 444 | 0.3 | 1899 | 1.2 | 572 | 0.4 | 1913 | 1.3 | 106310 | 70.0 |
| Sample... | 151976 | 100.0 | 107395 | 70.7 | 41643 | 27.4 | 529 | 0.3 | 1815 | 1.2 | 594 | 0.4 | 1575 | 1.0 | 106425 | 70.0 |
| 1980 (-, -) | 114486 | 100.0 | 81351 | 71.1 | 31600 | 27.6 | 248 | 0.2 | 958 | 0.8 | 329 | 0.3 | 1059 | 0.9 | 80809 | 70.6 |
| Sample... | 114486 | 100.0 | 81237 | 71.0 | 31557 | 27.6 | 316 | 0.3 | 1124 | 1.0 | 252 | 0.2 | 772 | 0.7 | 80763 | 70.5 |
| 1970 (-, -). | 89580 | 100.0 | 68582 | 76.6 | 20669 | 23.1 | 129 | 0.1 | 153 | 0.2 | 47 | 0.1 | (NA) | (NA) | (NA) | (NA) |
| 15\% sample. | 89580 | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 490 | 0.5 | (NA) | (NA) |
| 5\% sample.. | (NA) | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 638 | 0.7 | (NA) | (NA) |
| Hampton |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (-, -) | 133793 | 100.0 | 78149 | 58.4 | 51981 | 38.9 | 392 | 0.3 | 2339 | 1.7 | 932 | 0.7 | 2636 | 2.0 | 76909 | 57.5 |
| Sample... | 133793 | 100.0 | 78167 | 58.4 | 52176 | 39.0 | 360 | 0.3 | 2319 | 1.7 | 771 | 0.6 | 2506 | 1.9 | 76946 | 57.5 |
| 1980 (-, -) | 122617 | 100.0 | 78338 | 63.9 | 42072 | 34.3 | 241 | 0.2 | 1223 | 1.0 | 743 | 0.6 | 1703 | 1.4 | 77443 | 63.2 |
| Sample... | 122617 | 100.0 | 78638 | 64.1 | 42072 | 34.3 | 238 | 0.2 | 1140 | 0.9 | 529 | 0.4 | 1563 | 1.3 | 77826 | 63.5 |
| 1970 (-, -) | 120779 | 100.0 | 89376 | 74.0 | 30619 | 25.4 | 125 | 0.1 | 386 | 0.3 | 273 | 0.2 | (NA) | (NA) | (NA) | (NA) |
| 15\% sample. | 120779 | 100.0 | 89333 | 74.0 | 30616 | 25.3 |  |  | 830 | 0.7 |  |  | 1625 | 1.3 | 87868 | 72.8 |
| 5\% sample. | (NA) | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 1159 | 1.0 | (NA) | (NA) |
| 1960 (-, -) | 89258 | 100.0 | 70163 | 78.6 | 18851 | 21.1 | 47 | 0.1 | 144 | 0.2 | 53 | 0.1 | (NA) | (NA) | (NA) | (NA) |
| 1950 (-, -) | 5966 | 100.0 | 3744 | 62.8 | 2215 | 37.1 |  |  | 7 | 0.1 |  |  | (NA) | (NA) | (NA) | (NA) |
| 1940 (-, -) | 5898 | 100.0 | 4146 | 70.3 | 1752 | 29.7 | - |  |  |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1930 (-, -) .. | 6382 | 100.0 | 3574 | 56.0 | 2804 | 43.9 | - |  | 4 | 0.1 | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| "Mexican" in Other race | 6382 | 100.0 | 3574 | 56.0 | 2804 | 43.9 |  | - | 4 | 0.1 |  |  | (NA) | (NA) | (NA) | (NA) |
| 1920 (-, -) | 6138 | 100.0 | 3964 | 64.6 | 2169 | 35.3 |  | 5 | . 1 |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1910 (-, -) | 5505 | 100.0 | 3320 | 60.3 | 2182 | 39.6 |  | 3 | . 1 |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1900 (-, -) | 2764 | 100.0 | 1507 | 54.5 | 1249 | 45.2 | - |  | 8 | 0.3 | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1890 (-, -) | 2513 | 100.0 | 1183 | 47.1 | 1330 | 52.9 | - |  | - |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| Newport News |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (-, - - .. | 170045 | 100.0 | 106418 | 62.6 | 57077 | 33.6 | 579 | 0.3 | 3969 | 2.3 | 2002 | 1.2 | 4710 | 2.8 | 104424 | 61.4 |
| Sample.... | 170045 | 100.0 | 106558 | 62.7 | 56982 | 33.5 | 681 | 0.4 | 3981 | 2.3 | 1843 | 1.1 | 4562 | 2.7 | 104704 | 61.6 |
| 1980 (-, -) | 144903 | 100.0 | 95941 | 66.2 | 45584 | 31.5 | 323 | 0.2 | 1906 | 1.3 | 1149 | 0.8 | 2587 | 1.8 | 94633 | 65.3 |
| Sample... | 144903 | 100.0 | 95860 | 66.2 | 45704 | 31.5 | 454 | 0.3 | 1962 | 1.4 | 923 | 0.6 | 2615 | 1.8 | 94640 | 65.3 |
| 1970 (-, -) | 138177 | 100.0 | 97896 | 70.8 | 39196 | 28.4 | 193 | 0.1 | 440 | 0.3 | 452 | 0.3 | (NA) | (NA) | (NA) | (NA) |
| 15\% sample. | 138177 | 100.0 | 97843 | 70.8 | 39353 | 28.5 |  |  | 981 | 0.7 |  |  | 2091 | 1.5 | 95958 | 69.4 |
| 5\% sample. | (NA) | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 1785 | 1.3 | (NA) | (NA) |
| 1960 (-, -) | 113662 | 100.0 | 74602 | 65.6 | 38700 | 34.0 | 49 |  | 277 | 0.2 | 34 |  | (NA) | (NA) | (NA) | (NA) |
| 1950 (-, -) | 42358 | 100.0 | 24058 | 56.8 | 18214 | 43.0 | 9 | - | 50 | 0.1 | 27 | 0.1 | (NA) | (NA) | (NA) | (NA) |
| 1940 (-, -) | 37067 | 100.0 | 21772 | 58.7 | 15283 | 41.2 |  | 12 | - |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1930 (-, -) | 34417 | 100.0 | 21121 | 61.4 | 13281 | 38.6 | 2 |  | 13 |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| "Mexican" in Other race | 34417 | 100.0 | 21120 | 61.4 | 13281 | 38.6 | 2 |  | 13 |  | 1 |  | (NA) | (NA) | (NA) | (NA) |
| 1920 (-, -) | 35596 | 100.0 | 21466 | 60.3 | 14077 | 39.5 | - |  | 53 | 0.1 | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1910 (-, -) | 20205 | 100.0 | 12935 | 64.0 | 7259 | 35.9 | - |  | 11 | 0.1 | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1900 (-, -) | 19635 | 100.0 | 12789 | 65.1 | 6798 | 34.6 | - |  | 48 | 0.2 | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1890 (-, -) | 4449 | 100.0 | 1903 | 42.8 | 2546 | 57.2 | (NA) | (NA) | (NA) | (NA) | (X) | (X) | (NA) | (NA) | (NA) | (NA) |



## 261229 <br> 261229 307951 307951 213513 144332 <br> | $\cdots . .$. | 12 |
| :---: | :---: |
| $\cdots$ | 11 | 129710 115777 <br> 46624 34871 21966

 1990 (62Sample...
$1970(47,1)$

$15 \%$ sample | 100.0 | 148228 |
| :--- | :--- |
| 100.0 | 148132 | | 266979 | 100.0 | 162300 |
| :--- | :--- | :--- | :--- |
| 266979 | 100.0 | 163052 |

Case 2:18-cv-00069-RAJ-DEM Document 156-1 Filed 07/14/20 Page 4 of 4 PageID\# 4963

| 1840 (20, 1) | 20153 | 100.0 | 10718 | 53.2 | 9435 | 46.8 | (NA) | (NA) | (NA) | (NA) | 9435 | 100.0 | 1926 | 20.4 | 7509 | 79.6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1830 (13, 1) | 16060 | 100.0 | 7755 | 48.3 | 8305 | 51.7 | (NA) | (NA) | (NA) | (NA) | 8305 | 100.0 | 1956 | 23.6 | 6349 | 76.4 |
| 1820 (12, 1) | 12067 | 100.0 | 6445 | 53.4 | 5622 | 46.6 | (NA) | (NA) | (NA) | (NA) | 5622 | 100.0 | 1235 | 22.0 | 4387 | 78.0 |
| 1810 (12, 1) | 9735 | 100.0 | 4798 | 49.3 | 4937 | 50.7 | (NA) | (NA) | (NA) | (NA) | 4937 | 100.0 | 1189 | 24.1 | 3748 | 75.9 |
| $1800(13,2)$ | 5737 | 100.0 | 2837 | 49.5 | 2900 | 50.5 | (NA) | (NA) | (NA) | (NA) | 2900 | 100.0 | 607 | 20.9 | 2293 | 79.1 |
| 1790 (18, 1) | 3761 | 100.0 | 2017 | 53.6 | 1744 | 46.4 | (NA) | (NA) | (NA) | (NA) | 1744 | 100.0 | 265 | 15.2 | 1479 | 84.8 |
| Roanoke |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (-, -) | 96397 | 100.0 | 71907 | 74.6 | 23395 | 24.3 | 165 | 0.2 | 717 | 0.7 | 213 | 0.2 | 665 | 0.7 | 71524 | 74.2 |
| Sample. | 96397 | 100.0 | 71982 | 74.7 | 23286 | 24.2 | 167 | 0.2 | 782 | 0.8 | 180 | 0.2 | 719 | 0.7 | 71590 | 74.3 |
| 1980 (-, -) | 100220 | 100.0 | 77494 | 77.3 | 22040 | 22.0 | 73 | 0.1 | 312 | 0.3 | 301 | 0.3 | 681 | 0.7 | 77081 | 76.9 |
| Sample. | 100220 | 100.0 | 77636 | 77.5 | 22030 | 22.0 | 78 | 0.1 | 329 | 0.3 | 147 | 0.1 | 582 | 0.6 | 77292 | 77.1 |
| 1970 (-, -) | 92115 | 100.0 | 74167 | 80.5 | 17784 | 19.3 | 27 | - | 62 | 0.1 | 75 | 0.1 | (NA) | (NA) | (NA) | (NA) |
| 15\% sample. | 92115 | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 354 | 0.4 | (NA) | (NA) |
| 5\% sample. | (NA) | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 277 | 0.3 | (NA) | (NA) |
| 1960 (-, -) | 97110 | 100.0 | 80568 | 83.0 | 16527 | 17.0 | 3 | - | 11 | - | 1 | - | (NA) | (NA) | (NA) | (NA) |
| 1950 (-, 3) | 91921 | 100.0 | 77329 | 84.1 | 14575 | 15.9 |  |  | 17 |  |  |  | (NA) | (NA) | (NA) | (NA) |
| 1940 (-, 3) | 69287 | 100.0 | 56472 | 81.5 | 12812 | 18.5 |  | 3 |  |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1930 (-, 3) | 69206 | 100.0 | 56834 | 82.1 | 12368 | 17.9 | - |  | 4 |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| "Mexican" in Other race | 69206 | 100.0 | 56834 | 82.1 | 12368 | 17.9 | - | - | 4 | - | - | - | (NA) | (NA) | (NA) | (NA) |
| 1920 (-, -) | 50842 | 100.0 | 41499 | 81.6 | 9331 | 18.4 | - | - | 12 | - | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1910 (-, 3) | 34874 | 100.0 | 26945 | 77.3 | 7924 | 22.7 | - | - | 5 | - | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1900 (-, -) | 21495 | 100.0 | 15654 | 72.8 | 5834 | 27.1 | - | - | 7 | - | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1890 (-, -) | 16159 | 100.0 | 11218 | 69.4 | 4929 | 30.5 | 6 | - | 6 | - | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| Virginia Beach |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 (37, 1) | 393069 | 100.0 | 316408 | 80.5 | 54671 | 13.9 | 1384 | 0.4 | 17025 | 4.3 | 3581 | 0.9 | 12137 | 3.1 | 309712 | 78.8 |
| Sample. | 393069 | 100.0 | 316290 | 80.5 | 54800 | 13.9 | 1612 | 0.4 | 16947 | 4.3 | 3420 | 0.9 | 12128 | 3.1 | 309570 | 78.8 |
| 1980 (56, 2) | 262199 | 100.0 | 226788 | 86.5 | 26291 | 10.0 | 633 | 0.2 | 6570 | 2.5 | 1917 | 0.7 | 5160 | 2.0 | 223860 | 85.4 |
| Sample. | 262199 | 100.0 | 227454 | 86.7 | 26266 | 10.0 | 630 | 0.2 | 6489 | 2.5 | 1360 | 0.5 | 5269 | 2.0 | 224287 | 85.5 |
| 1970 (79, 3) | 172106 | 100.0 | 154823 | 90.0 | 15693 | 9.1 | 186 | 0.1 | 1133 | 0.7 | 271 | 0.2 | (NA) | (NA) | (NA) | (NA) |
| 15\% sample. | 172106 | 100.0 | 155019 | 90.1 | 15726 | 9.1 |  |  | 1361 |  |  |  | 2292 | 1.3 | 152952 | 88.9 |
| 5\% sample. | (NA) | 100.0 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | 2294 | 1.3 | (NA) | (NA) |
| 1960 (-, -) | 8091 | 100.0 | 7557 | 93.4 | 515 | 6.4 |  |  | 19 |  |  |  | (NA) | (NA) | (NA) | (NA) |
| 1950 (-, -) | 5390 | 100.0 | 5147 | 95.5 | 241 | 4.5 |  |  | 2 |  |  |  | (NA) | (NA) | (NA) | (NA) |
| 1940 (-, -) | 2600 | 100.0 | 2240 | 86.2 | 356 | 13.7 |  | 4 |  |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| 1930 | 1719 | 100.0 | 1338 | 77.8 | 381 | 22.2 | - | - | - |  | (X) | (X) | (NA) | (NA) | (NA) | (NA) |
| "Mexican" in Other race | 1719 | 100.0 | 1338 | 77.8 | 381 | 22.2 | - | - | - | - | - | - | (NA) | (NA) | (NA) | (NA) |
|  |  |  |  |  |  |  |  |  |  |  |  |  | Bla |  |  |  |
| Wheeling ${ }^{5}$ |  |  |  |  |  |  |  |  |  |  | Tot |  | Fr |  | Sla |  |
| 1860 (63, X $)^{5}$, ${ }^{6}$ | (NA) | 100.0 | 13986 | (NA) | (NA) | (NA) | - | - | - | - | (NA) | (NA) | 97 | (NA) | (NA) | (NA) |
| 1850 (59, X $)^{5}$ | 11435 | 100.0 | 11179 | 97.8 | 256 | 2.2 | (NA) | (NA) | (NA) | (NA) | 256 | 100.0 | 212 | 82.8 | 44 | 17.2 |
| 1840 (51, X) ${ }^{5}$ | 7885 | 100.0 | 7512 | 95.3 | 373 | 4.7 | (NA) | (NA) | (NA) | (NA) | 373 | 100.0 | 266 | 71.3 | 107 | 28.7 |

- Represents zero or rounds to 0.0 in data cells. In first column, represents greater than 100 for national rank and greater than 3 for state rank. (X) Not applicable. (NA) Not available.
${ }^{1}$ Rank in population among urban places ( 2,500 or more population). Rank in state excludes unincorporated places. See text.
${ }^{2}$ Alexandria was in the District of Columbia from 1791 to 1846 . See also Alexandria, DC.
${ }^{3}$ Data are for Arlington County, which has been defined as an urban unincorporated place since 1940. The name was changed from Alexandria County in 1920. Data are shown for the county since 1900 when Alexandria city was first reported as independent of the county.
Total population shown as 5,668 in the urban place time series due to typesetting error in 1810 census report. See text.
${ }^{5}$ Wheeling was in Virginia until 1863. See also Wheeling, WV
${ }^{6}$ Data not available for the slave population, which was not published below the county level.
Internet Release Date: July 13, 2005


# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

Note: This is a modified view of the original table produced by the U.S. Census Bureau.

## Note: This download or printed version may have missing information from the original table.

## HISPANIC OR LATINO, AND NOT HISPANIC OR LATINO BY RACE

## Survey/Program:

Decennial Census
Universe:
Total population
Year:
2010

## Table ID:

P2

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation ). The effect of nonsampling error is not represented in these tables.

For more information on understanding race and Hispanic origin data, please see the Census 2010 Brief entitled, Overview of Race and Hispanic Origin: 2010 , issued March 2011. (pdf format)

While the 2014-2018 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:
An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.
An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An " + " following a median estimate means the median falls in the upper interval of an open-ended distribution.
An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
An " N " entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
$A n$ " $(X)$ " means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Virginia Beach city, Virginia


# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

## PLAINTIFFS' EXHIBIT 3

Selected 2016 ACS 5-Year Estimates

# Note: This download or printed version may have missing information from the original table. 

## ACS DEMOGRAPHIC AND HOUSING ESTIMATES

## Survey/Program:

American Community Survey
Year:
2016
Estimates:
5-Year
Table ID:
DP05

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An "-" entry in the estimate column indicates that either no sample observations or too few sample
observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.
An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.
An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
$A n$ " $N$ " entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
An "(X)" means that the estimate is not applicable or not available.
Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization. While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.For more information on understanding race and Hispanic origin data, please see the Census 2010 Brief entitled, Overview of Race and Hispanic Origin: 2010 , issued March 2011. (pdf format)Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables. Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Virginia Beach city, Virginia


| 7/9/2020 Case 2:18-cv-0006؛ | Docume | 14／20 | Page 3 of 3 PagelD\＃ | 969 |
| :---: | :---: | :---: | :---: | :---: |
| $\wedge$ Total population | 449，733 | ＊＊＊＊＊ | 449，733 |  |
| ヘ One race | 427，649 | ＋／－1，307 | 95．1\％ |  |
| ヘ Two or more races | 22，084 | ＋／－1，307 | 4．9\％ |  |
| $\wedge$ Race alone or in combination with one |  |  |  |  |
| $\checkmark$ HISPANIC OR LATINO AND RACE |  |  |  |  |
| $\checkmark$ Total population | 449，733 | ＊＊＊＊＊ | 449，733 |  |
| ヘ Hispanic or Latino（of any race） | 34，388 | ＊＊＊＊＊ | 7．6\％ |  |
| $\checkmark$ Not Hispanic or Latino | 415，345 | ＊＊＊＊＊ | 92．4\％ |  |
| White alone | 282，741 | ＋／－307 | 62．9\％ |  |
| Black or African American alone | 83，430 | ＋／－984 | 18．6\％ |  |
| American Indian and Alaska Native | 893 | ＋／－182 | 0．2\％ |  |
| Asian alone | 28，692 | ＋／－710 | 6．4\％ |  |
| Native Hawaiian and Other Pacific | 375 | ＋／－117 | 0．1\％ |  |
| Some other race alone | 853 | ＋／－310 | 0．2\％ |  |
| ＾Two or more races | 18，361 | ＋／－1，208 | 4．1\％ |  |
| Total housing units | 182，016 | ＋／－469 | （X） |  |
| $\checkmark$ CITIZEN，VOTING AGE POPULATION |  |  |  |  |
| $\checkmark$ Citizen， 18 and over population | 332，917 | ＋／－988 | 332，917 |  |
| Male | 162，024 | ＋／－634 | 48．7\％ |  |
| Female | 170，893 | ＋／－596 | 51．3\％ |  |

# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

## ACS DEMOGRAPHIC AND HOUSING ESTIMATES

## Survey/Program:

American Community Survey
Year:
2017
Estimates:
5-Year
Table ID:
DP05

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An "-" entry in the estimate column indicates that either no sample observations or too few sample
observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.
An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.
An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
$A n$ " $N$ " entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
An "(X)" means that the estimate is not applicable or not available.
Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization. While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.For more information on understanding race and Hispanic origin data, please see the Census 2010 Brief entitled, Overview of Race and Hispanic Origin: 2010 , issued March 2011. (pdf format)Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables. Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Virginia Beach city, Virginia


| $\wedge$ Total population | 450,057 | ***** | 450,057 |  |
| :---: | :---: | :---: | :---: | :---: |
| $\wedge$ Race alone or in combination with one o |  |  |  |  |
| $\checkmark$ HISPANIC OR LATINO AND RACE |  |  |  |  |
| $\checkmark$ Total population | 450,057 | ***** | 450,057 |  |
| ^ Hispanic or Latino (of any race) | 35,255 | ***** | 7.8\% |  |
| $\checkmark$ Not Hispanic or Latino | 414,802 | ***** | 92.2\% |  |
| White alone | 281,070 | +/-191 | 62.5\% |  |
| Black or African American alone | 82,987 | +/-977 | 18.4\% |  |
| American Indian and Alaska Native | 853 | +/-198 | 0.2\% |  |
| Asian alone | 29,055 | +/-656 | 6.5\% |  |
| Native Hawaiian and Other Pacific | 395 | +/-95 | 0.1\% |  |
| Some other race alone | 787 | +/-261 | 0.2\% |  |
| $\checkmark$ Two or more races | 19,655 | +/-1,265 | 4.4\% |  |
| Two races including Some other I | 404 | +/-194 | 0.1\% |  |
| Two races excluding Some other | 19,251 | +/-1,242 | 4.3\% |  |
| Total housing units | 182,723 | +/-402 | (X) |  |
| $\checkmark$ CITIZEN, VOTING AGE POPULATION |  |  |  |  |
| $\checkmark$ Citizen, 18 and over population | 334,514 | +/-1,059 | 334,514 |  |
| Male | 163,073 | +/-711 | 48.7\% |  |
| Female | 171,441 | +/-594 | 51.3\% |  |

# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

## PLAINTIFFS' EXHIBIT 5

Selected 2018 ACS 5-Year Estimates

# Note: This download or printed version may have missing information from the original table. 

## ACS DEMOGRAPHIC AND HOUSING ESTIMATES

## Survey/Program:

American Community Survey
Year:
2018
Estimates:
5-Year
Table ID:
DP05

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.Explanation of Symbols:

An "**" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
An "-" entry in the estimate column indicates that either no sample observations or too few sample
observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.
An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.
An "***" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
$A n$ " $N$ " entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
An "(X)" means that the estimate is not applicable or not available.
Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization. While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.For more information on understanding race and Hispanic origin data, please see the Census 2010 Brief entitled, Overview of Race and Hispanic Origin: 2010 , issued March 2011. (pdf format)Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables. Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Virginia Beach city, Virginia




# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al., Plaintiffs, v.

City of Virginia Beach, et al., Defendants.

REDACTED VERSION OF EXHIBIT 6 TO PLAINTIFFS' OPPOSITION TO DEFENDANTS' MOTION TO DISMISS (ECF No. 156-6)

## IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants
Civil Action No. 2:18-cv-0069

PLAINTIFFS' OPPOSITION TO DEFENDANTS' MOTION TO DISMISS

## PLAINTIFFS' EXHIBIT 6

Supplemental Report from Plaintiffs' Expert Anthony Fairfax

# Supplemental Expert Report <br> of 

Anthony E. Fairfax

Anthony E. Fairfax<br>16 Castle Haven Road<br>Hampton, VA 23666<br>March 16, 2020

## I. Introduction

I have been retained by Plaintiffs' counsel in this lawsuit (Holloway, et al., v. City of Virginia Beach, et al.,) to provide this report as a supplement to my earlier reports and my deposition testimony.

As a follow-up to my deposition testimony, this supplemental report clarifies that (1) none of the hypothetical redistricting plans in my previous report included Plaintiff Georgia Allen's address in a majority Hispanic, Black, and Asian ("HBA") Citizen Voting Age Population ("CVAP") district, ${ }^{1}$ but (2) it is feasible to include both Plaintiffs in one or more majority-HBACVAP districts, as demonstrated by the modified Illustrative Plan and modified Alternative Plans provided here.

Additionally, this supplemental report updates my earlier reports by incorporating the latest American Community Survey (ACS) data (2014-2018), which the U.S. Census Bureau released on January 31, 2020. These new data estimates are included in the district statistics tables provided for the plans. I also report the 2013-2017 CVAP estimates in Appendix B.

## II. Background

The City of Virginia Beach, VA currently has an eleven-member City Council structure. Three (3) Council members and the Mayor serve "at large" with no district residency requirement. The other seven (7) council members are required to live in the district that they represent. However, all city council members are elected at large and not within the district that they represent.

On July 15, 2019 I submitted an expert report for this case that presented my finding that the minority population in the city of Virginia Beach, Virginia was sufficiently large and geographically compact to constitute two majority Hispanic, Black, and Asian combined districts. On August 12, 2019, Dr. Peter A. Morrison submitted his evaluation of my initial expert report. On August 26, 2019, I submitted my rebuttal report to Dr. Morrison's expert report. On September 24, 2019, I was deposed by Defendants' counsel, who asked me several questions about the location of Plaintiffs in the Illustrative and Alternative Plans. In addition, Plaintiffs' counsel notified me that Plaintiff Latasha Holloway recently obtained a new address.

## III. Software, Data, and Technical Process Utilized

My opinions are based upon the same software and technical processes that were utilized in my initial and rebuttal expert reports. Addresses of the Plaintiffs were acquired from counsel and geocoded via ArcGIS World Geocoding Services using ArcGIS ArcMap software.

[^11]
## IV. Summary of Opinions

A summary of my conclusions and opinions for this report include the following:
a) Plaintiff Latasha Holloway's old and new addresses are both contained within a majorityHBACVAP district in the Illustrative Plan and all five Alternative Plans from my initial and rebuttal reports in this lawsuit. Unintentionally, Plaintiff Georgia Allen's address was not contained within a majority-HBACVAP district in any of the Plans.
b) With minor modifications and insignificant district statistical alterations, the current addresses of both Plaintiff Georgia Allen and Plaintiff Latasha Holloway could, at least, be contained within majority-HBACVAP District 2 of the Illustrative Plan as well as District 2 in Alternative Plan 1 and Alternative Plan 2. I did not attempt to modify Alternative Plans 3, 4, or 5 for this supplemental report.

## V. Methodology

## A. Location of Plaintiffs Addresses with Respect to Illustrative and Alternative Plans

First, I generated maps including the Plaintiffs' addresses to determine whether each Plaintiff is contained within one of the majority-HBACVAP districts for each of the previously developed demonstrative plans. The following addresses of the Plaintiffs were analyzed:

| Table 1 - Plaintiff Addresses Analyzed |  |
| :--- | :--- |
| Name | Address |
| Georgia Allen | 4649 Merrimac Lane, Virginia Beach, VA 23455 |
| Latasha Holloway's old address | 819 Tuition Court, Virginia Beach, VA 23462 |
| Latasha Holloway's new address |  |

Georgia Allen's address is depicted in the Plans by a pink star.
(see Figure 1 and 2 below). ${ }^{2}$


Figure 1 - Zoom of Latasha Holloway's Addresses


Figure 2 - Zoom of Georgia Allen's Address

## B. Review and Modify (Where Necessary) the Illustrative or Alternative Plans to Contain Both Plaintifs in One of the Majority-HBACVAP Districts

After plotting the Plaintiffs' addresses, I next reviewed the Illustrative Plan and all Alternative Plans to see if both Plaintiffs' addresses were included in one of the majority-HBACVAP districts. Where necessary, I then modified the Illustrative Plan, Alternative Plan 1, and Alternative Plan 2 to contain both Plaintiffs' addresses in either of the majority-HBACVAP districts and generated maps to confirm the results.

## VI. Results

## A. Location of Plaintiffs' Addresses in the Illustrative Plan and Alternative Plans 1-5

Latasha Holloway's old and new addresses have always been contained within a majorityHBACVAP district in the Illustrative Plan as well as all five Alternative Plans. Unintentionally, Georgia Allen's address was not contained within a majority-HBACVAP district in any of the Plans. The maps in Appendix A depict each majority-HBACVAP district in the six plans, along with the location of the Plaintiffs' addresses.

## B. Review and Modify (Where Necessary) the Illustrative and Two Alternative Plans to Contain Both Plaintiffs in One of the Majority-HBACVAP Districts

Since Georgia Allen's address was the only residence that was not contained within a majorityHBACVAP district, the plan modifications focused on including her address. The Illustrative Plan, Alternative Plan 1, and Alternative Plan $2^{3}$ were easily modified to include Georgia Allen (see Appendixes A and B for maps and statistics).

Ms. Allen' address was in close proximity to majority-HBACVAP District 2 in many of the plans in my initial and rebuttal reports. Thus, the simplest modification centered on including her address within this district. It was not necessary to alter District 1, the other majority-HBACVAP district.

## i. Demographic District Statistics

The modifications of District 2 to include Georgia Allen in the Illustrative Plan, Alternative Plan 1, and Alternative Plan 2 did not alter District 2's population deviation and HBACVAP percentages significantly from the previously developed Plans. In all three modified Plans, District 2 is closer to the ideal district size than it was before modification (i.e., District 2's percent deviation decreased slightly).

Reviewing the HBACVAP percentage, there is $0.79 \%$ or less difference for any of the three Plans (from original to modified). The HBACVAP percentage increased in District 2 of the Illustrative Plan after the modifications while the Alternative Plans decreased slightly. Table 2 displays the Citizen Voting Age Population results for each modified plan.

| District | \% Dev | $\begin{gathered} \% \\ \text { HCVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ | $\begin{gathered} \% \\ \text { WCVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ | $\begin{gathered} \% \\ \text { BCVAP } \\ 14-18 \\ \text { ACS } \\ \hline \end{gathered}$ | $\begin{gathered} \% \\ \text { ACVAP } \\ 14-18 \\ \text { ACS } \\ \hline \end{gathered}$ | $\begin{gathered} \% \\ \text { HBA } \\ \text { CVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Illust Dst 2 | -4.77\% | 7.73\% | 46.44\% | 38.58\% | 4.43\% | 50.75\% |
| Alt 1 Dst 2 | -4.16\% | 8.15\% | 45.20\% | 39.58\% | 4.47\% | 52.16\% |
| Alt 2 Dst 2 | -4.39\% | 8.47\% | 45.14\% | 39.55\% | 4.09\% | 52.11\% |
| Illust Mod Dst 2 | 0.61\% | 7.97\% | 46.22\% | 38.52\% | 4.39\% | 50.93\% |
| Alt 1 Mod Dst 2 | 0.11\% | 8.05\% | 45.81\% | 38.94\% | 4.41\% | 51.37\% |
| Alt 2 Mod Dst 2 | 1.61\% | 8.87\% | 45.91\% | 38.60\% | 3.91\% | 51.38\% |

Note: 14-18 ACS is 2014-2018 5-Year ACS. Total Hispanic (HCVAP), Black (BCVAP), and Asian (ACVAP) may not sum to $\mathrm{HBACVAP} \%$ due to summing totals prior to disaggregation

Source: U.S. Census Bureau 2014-2018 5-Yr ACS Block Group data, Maptitude for Redistricting Illustrative Plans

[^12]When Black and White (mixed race) CVAP data is considered, the HBACVAP percentages for the modified District 2 in the Illustrative, Alternative 1, and Alternative 2 Plans are $52.02 \%$, $52.47 \%$, and $52.45 \%$ respectively.

Since newly-updated CVAP estimates for 2014-2018 were released in January 2020, I also analyzed District 1 statistics with this data. Reviewing the 2014-2018 5-Year ACS HBACVAP percentage for District 1, HBACVAP percentages for District 1 (which was not modified) for the Illustrative, Alternative 1, and Alternative 2 Plans are $51.77 \%, 53.07 \%$, and $52.72 \%$ respectively. Table 3 displays the Citizen Voting Age Population results for District 1 in both the original and modified Plans.

| District | \% Dev | $\begin{gathered} \% \\ \text { HCVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ | $\%$ WCVAP $14-18$ ACS | $\begin{gathered} \text { \% } \\ \text { BCVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ | $\begin{gathered} \% \\ \text { ACVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ | $\begin{gathered} \% \\ \text { HBACVAP } \\ 14-18 \\ \text { ACS } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Illust Dst 1 Both | -.36\% | 7.49\% | 44.02\% | 31.57\% | 12.67\% | 51.77\% |
| Alt 1 Dst 1 Both | -4.77\% | 7.67\% | 42.66\% | 32.55\% | 12.89\% | 53.07\% |
| Alt 2 Dst 1 Both | -4.84\% | 7.36\% | 43.10\% | 32.48\% | 12.89\% | 52.72\% |

Note: 14-18 ACS is 2014-2018 5-Year ACS. Total Hispanic (HCVAP), Black (BCVAP), and Asian (ACVAP) may not sum to HBACVAP\% due to summing totals prior to disaggregation

Source: U.S. Census Bureau 2014-2018 5-Yr ACS Block Group data, Maptitude for Redistricting Illustrative Plans
When Black and White (mixed race) CVAP data is included in the HBACVAP percentage, the HBACVAP percentages for the modified District 1 in the Illustrative, Alternative 1, and Alternative 2 Plans are $52.91 \%, 54.31 \%$, and $52.94 \%$, respectively.

It is also noteworthy that all three modified Plans showed an increase in HBACVAP percentage from the 2013-2017 to 2014-2018 ACS datasets. Finally, all of the modified Plans for Districts 1 and District 2 remain above the $50 \%$ threshold whether the 2013-2017 or 2014-2018 ACS data is used. The modified Illustrative, Alternative 1, and Alternative 2 Plan's HBACVAP percentages using the 2013-20175-Year ACS for District 1 were $50.03 \%$, $51.50 \%$, and $51.04 \%$, respectively, and $50.24 \%, 50.87 \%$, and $50.71 \%$, respectively for District 2 .

## ii. Compactness Measures

Compactness scores for the modified version of District 2, using the Reock, Polsby-Popper, and Convex Hull measures, also did not change significantly when compared to the original Illustrative, Alternative 1, and Alternative 2 Plans (see Table 4).

| Table 4 - District 2 Illustrative, Alt 1, Alt 2 \& Mod. Plans Compactness Measurements |  |  |  |
| :---: | :---: | :---: | :---: |
| District | Reock | Polsby-Popper | Convex Hull |
| Illust Dst 2 | 0.24 | 0.20 | 0.58 |
| Alt 1 Dst 2 | 0.20 | 0.16 | 0.54 |
| Alt 2 Dst 2 | 0.20 | 0.15 | 0.49 |
| Illust Mod Dst 2 | 0.21 | 0.16 | 0.53 |
| Alt 1 Mod Dst 2 | 0.21 | 0.15 | 0.51 |
| Alt 2 Mod Dst 2 | 0.20 | 0.14 | 0.47 |

Source: Maptitude for Redistricting Compactness reports for Modified Illustrative, Alt 1, and Alt 2 Plans.

## iii. Political Subdivision Splits

Once again, the political subdivision splits of District 2 in the Illustrative, Alternative 1, and Alternative 2 Plans $^{4}$ were also not significantly altered after modifying the Plans (see Table 5). The total political subdivision splits remained less for the modified Illustrative, Alternative 1, and Alternative 2 Plans (at 15, 23, and 23 splits respectively, full reports in Appendix B) than the current residency plan, which contains 28 splits (full report on pages 78-79 in the Appendix to my July 15, 2019 Report).

| Table 5 - District 2 Illustrative, Alt 1, Alt 2 \& Mod. Plans Split VTDs |  |
| :---: | :---: |
| Plan | District 2 |
| Illust Dst 2 | 5 |
| Alt 1 Dst 2 | 7 |
| Alt 2 Dst 2 | 10 |
| Illust Mod Dst 2 | 7 |
| Alt 1 Mod Dst 2 | 8 |
| Alt 2 Mod Dst 2 | 10 |

Source: Maptitude for Redistricting Political Subdivision Splits report for the Illustrative Plans.
The following figures display the locations of Latasha Holloway's new and old addresses (which have not been changed in any maps) and Georgia Allen's residence in the modified Illustrative and Alternative Plans.

[^13]Figures 3 and 4 show the Modified Illustrative Plan's District 2, which contains both Latasha Holloway's new and old addresses and Georgia Allen's residence.


Figure 3 - Virginia Beach Illustrative Plan Modification with Plaintiffs' Addresses
$\square$
Figure 4 - Virginia Beach Illustrative Plan Modification Zoom with Plaintiffs' Addresses

Figures 5 and 6 show the Modified Alternative 1 Plan's District 2, which contains both Latasha Holloway's new and old addresses and Georgia Allen's residence.


Figure 5 - Virginia Beach Illustrative Alt 1 Plan Modification with Plaintiffs’ Addresses


Figure 6 - Virginia Beach Illustrative Alt 1 Plan Modification Zoom with Plaintiffs’ Addresses

Figures 7 and 8 show the Modified Alternative 2 Plan's District 2, which contains both Latasha Holloway's new and old addresses and Georgia Allen's residence.


Figure 7 - Virginia Beach Illustrative Alt 2 Plan Modification with Plaintiffs' Addresses


Figure 8 - Virginia Beach Illustrative Alt 2 Plan Modification Zoom with Plaintiffs' Addresses

## VII. Conclusions

Plaintiff Latasha Holloway's new and old addresses have always been in one of the majorityHBACVAP districts in the original Illustrative Plan and the five (5) Alternative Plans. Plaintiff Georgia Allen's address was not contained within any of the original demonstrative plans, but at least three of the plans can be easily modified to include both Ms. Allen and Ms. Holloway in majority-HBACVAP District 2, as demonstrated in this report.

After modifying the Illustrative, Alternative 1, and Alternative 2 Plans, it is clear that both Latasha Holloway's new and old addresses, as well as Georgia Allen's address, can be included within District 2 of the analyzed plans. In addition, after the plan modifications, the redistricting criteria of equal population, compactness, and political subdivision splits were reasonable and did not change significantly from the original plans. Finally, the HBACVAP percentages for each modification of District 2 are still above $50 \%$ HBACVAP, whether including or excluding Black and White (mixed race) CVAP. Therefore, I conclude that at least one majorityHBACVAP district can be easily drawn that contains both Plaintiffs' residences, and in fact all three modified Plans continue to include two majority-HBACVAP districts for the City of Virginia Beach.

I, Anthony E. Fairfax, am over the age of 18 and fully competent to make this declaration. I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.


Date: $\qquad$ 3/16/2020

## Appendix A

Illustrative and Alternative Plans 1-5 Maps With Plaintiffs Residences

## Appendix B

## Modified Illustrative and Alternative 1-2 Plan Maps

Modified Illustrative and Alternative 1-2 Plan District Statistics

Case 2:18-cv-00069-RAJ-DEM Document 156-6 Filed 07/14/20 Page 30 of 48 PageID\# 5005

## Virginia Beach, VA

Illustrative Plan -10 Districts Statistics w/ACS18

| District | Population | Deviation | \% Deviation | Hispanic | \% Hispanic | NH_Wht | \% NH_Wht | NH_Blk | \% NH_Blk | NH_Asn | \% NH_Asn | HBATTL | HBATTL\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 43956 | 157 | 0.36\% | 4125 | 9.38\% | 18743 | 42.64\% | 13540 | 30.80\% | 5378 | 12.24\% | 23043 | 52.42\% |
| 02 | 41709 | -2090 | -4.77\% | 2958 | 7.09\% | 18166 | 43.55\% | 17211 | 41.26\% | 1736 | 4.16\% | 21905 | 52.52\% |
| 03 | 43643 | -156 | -0.36\% | 2940 | 6.74\% | 22948 | 52.58\% | 10175 | 23.31\% | 5611 | 12.86\% | 18726 | 42.91\% |
| 04 | 44629 | 830 | 1.90\% | 2539 | 5.69\% | 28841 | 64.62\% | 8129 | 18.21\% | 3332 | 7.47\% | 14000 | 31.37\% |
| 05 | 43278 | -521 | -1.19\% | 2424 | 5.60\% | 32507 | 75.11\% | 4901 | 11.32\% | 1971 | 4.55\% | 9296 | 21.48\% |
| 06 | 44273 | 474 | 1.08\% | 2551 | 5.76\% | 33614 | 75.92\% | 5017 | 11.33\% | 1632 | 3.69\% | 9200 | 20.78\% |
| 07 | 44872 | 1073 | 2.45\% | 2499 | 5.57\% | 36743 | 81.88\% | 3429 | 7.64\% | 922 | 2.05\% | 6850 | 15.27\% |
| 08 | 43295 | -504 | -1.15\% | 3399 | 7.85\% | 27381 | 63.24\% | 8158 | 18.84\% | 2345 | 5.42\% | 13902 | 32.11\% |
| 09 | 43366 | -433 | -0.99\% | 3408 | 7.86\% | 29275 | 67.51\% | 7556 | 17.42\% | 1232 | 2.84\% | 12196 | 28.12\% |
| 10 | 44973 | 1174 | 2.68\% | 2144 | 4.77\% | 34252 | 76.16\% | 5094 | 11.33\% | 2153 | 4.79\% | 9391 | 20.88\% |


| District | 18+_Pop | Deviation | \% Deviation | H18+_Pop | \% H18+_Pop | NH18+_Wht | \% NH18+_Wht | NH18+_Blk | \% NH18+_BIk | NH18+_Asn | \% NH18+_Asn | HBAVAP | HBAVAP\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 31790 | 157 | 0.36\% | 2639 | 8.30\% | 14545 | 45.75\% | 9381 | 29.51\% | 4202 | 13.22\% | 16222 | 51.03\% |
| 02 | 31433 | -2090 | -4.77\% | 1925 | 6.12\% | 15081 | 47.98\% | 12138 | 38.62\% | 1416 | 4.50\% | 15479 | 49.24\% |
| 03 | 32329 | -156 | -0.36\% | 1804 | 5.58\% | 17682 | 54.69\% | 7402 | 22.90\% | 4559 | 14.10\% | 13765 | 42.58\% |
| 04 | 34105 | 830 | 1.90\% | 1654 | 4.85\% | 23004 | 67.45\% | 5864 | 17.19\% | 2680 | 7.86\% | 10198 | 29.90\% |
| 05 | 34460 | -521 | -1.19\% | 1654 | 4.80\% | 26721 | 77.54\% | 3717 | 10.79\% | 1571 | 4.56\% | 6942 | 20.15\% |
| 06 | 34100 | 474 | 1.08\% | 1726 | 5.06\% | 26549 | 77.86\% | 3762 | 11.03\% | 1288 | 3.78\% | 6776 | 19.87\% |
| 07 | 36351 | 1073 | 2.45\% | 1699 | 4.67\% | 30571 | 84.10\% | 2562 | 7.05\% | 763 | 2.10\% | 5024 | 13.82\% |
| 08 | 31972 | -504 | -1.15\% | 2122 | 6.64\% | 20991 | 65.65\% | 5941 | 18.58\% | 1900 | 5.94\% | 9963 | 31.16\% |
| 09 | 32796 | -433 | -0.99\% | 2184 | 6.66\% | 23354 | 71.21\% | 5318 | 16.22\% | 992 | 3.02\% | 8494 | 25 90\% |
| 10 | 33409 | 1174 | 2.68\% | 1358 | 4.06\% | 25690 | 76.90\% | 4127 | 12.35\% | 1607 | 4.81\% | 7092 | 21.23\% |


| District | CVAP17 | Deviation | \% Deviation | HCVAP17 | \% HCVAP17 | WCVAP17 | \% WCVAP17 | BCVAP17 | \% BCVAP17 | ACVAP17 | \% ACVAP17 | HBACVAP17 | \% HBACVAP17 | HBAWCVP17 | \% HBAWCVP17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 29761 | 157 | 0.36\% | 2176 | 7.31\% | 13730 | 46.13\% | 9135 | 30.69\% | 3566 | 11.98\% | 14888 | 50.03\% | 15210 | 51.11\% |
| 02 | 32804 | -2090 | -4.77\% | 2235 | 6.81\% | 15543 | 47.38\% | 12810 | 39.05\% | 1367 | 4.17\% | 16415 | 50.04\% | 16755 | 51.08\% |
| 03 | 31960 | -156 | -0.36\% | 2542 | 7.95\% | 17346 | 54.27\% | 7413 | 23.19\% | 3403 | 10.65\% | 13365 | 41.82\% | 13569 | 42.46\% |
| 04 | 33802 | 830 | 1.90\% | 1839 | 5.44\% | 22251 | 65.83\% | 6098 | 18.04\% | 2684 | 7.94\% | 10612 | 31.39\% | 10730 | 31.74\% |
| 05 | 34689 | -521 | -1.19\% | 1911 | 5.51\% | 26622 | 76.74\% | 4042 | 11.65\% | 1182 | 3.41\% | 7133 | 20.56\% | 7247 | 20.89\% |
| 06 | 34447 | 474 | 1.08\% | 1899 | 5.51\% | 25733 | 74.70\% | 4107 | 11.92\% | 1431 | 4.15\% | 7430 | 21.57\% | 7538 | 21.88\% |
| 07 | 35686 | 1073 | 2.45\% | 1150 | 3.22\% | 29635 | 83.04\% | 3279 | 9.19\% | 799 | 2.24\% | 5228 | 14.65\% | 5398 | 15.13\% |
| 08 | 33660 | -504 | -1.15\% | 2522 | 7.49\% | 22645 | 67.28\% | 5319 | 15.80\% | 1815 | 5.39\% | 9658 | 28.69\% | 10079 | 29.94\% |
| 09 | 32843 | -433 | -0.99\% | 2417 | 7.36\% | 22753 | 69.28\% | 5572 | 16.97\% | 878 | 2.67\% | 8863 | 26.99\% | 9218 | 28.07\% |
| 10 | 34848 | 1174 | 2.68\% | 1532 | 4.40\% | 26347 | 75.61\% | 4353 | 12.49\% | 1675 | 4.81\% | 7559 | 21.69\% | 7749 | 22.24\% |


| District | CVAP18 | Deviation | \% Deviation | HCVAP18 | \% HCVAP18 | WCVAP18 | \% WCVAP18 | BCVAP18 | \% BCVAP18 | ACVAP18 | \% ACVAP18 | HBACVAP18 | \% HBACVAP18 | HBAWCVAP18 | \% HBAWCVAP18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 30189 | 157 | 0.36\% | 2261 | 7.49\% | 13290 | 44.02\% | 9531 | 31.57\% | 3824 | 12.67\% | 15628 | 51.77\% | 15974 | 52.91\% |
| 02 | 33500 | -2090 | -4.77\% | 2588 | 7.73\% | 15557 | 46.44\% | 12923 | 38.58\% | 1485 | 4.43\% | 17002 | 50.75\% | 17381 | 51.88\% |
| 03 | 32546 | -156 | -0.36\% | 2496 | 7.67\% | 17100 | 52.54\% | 8104 | 24.90\% | 3533 | 10.86\% | 14137 | 43.44\% | 14416 | 44.29\% |
| 04 | 33558 | 830 | 1.90\% | 1874 | 5.58\% | 22436 | 66.86\% | 6139 | 18.29\% | 2409 | 7.18\% | 10411 | 31.02\% | 10456 | 31.16\% |
| 05 | 33563 | -521 | -1.19\% | 1750 | 5.21\% | 26252 | 78.22\% | 3505 | 10.44\% | 1247 | 3.72\% | 6500 | 19.37\% | 6625 | 19.74\% |
| 06 | 34422 | 474 | 1.08\% | 2039 | 5.92\% | 25613 | 74.41\% | 4190 | 12.17\% | 1354 | 3.93\% | 7577 | 22.01\% | 7685 | 22.33\% |
| 07 | 35416 | 1073 | 2.45\% | 1264 | 3.57\% | 29450 | 83.15\% | 3153 | 8.90\% | 835 | 2.36\% | 5252 | 14.83\% | 5412 | 15.28\% |
| 08 | 32727 | -504 | -1.15\% | 2497 | 7.63\% | 21568 | 65.90\% | 5471 | 16.72\% | 1798 | 5.49\% | 9764 | 29.83\% | 10128 | 30.95\% |
| 09 | 33178 | -433 | -0.99\% | 2219 | 6.69\% | 23167 | 69.83\% | 5753 | 17.34\% | 854 | 2.57\% | 8822 | 26.59\% | 9112 | 27.46\% |
| 10 | 35581 | 1174 | 2.68\% | 1570 | 4.41\% | 27127 | 76.24\% | 3961 | 11.13\% | 1818 | 5.11\% | 7352 | 20.66\% | 7575 | 21.29\% |

Note: Variables with 17 \& 18 suffix denote 2013-2017 \& 2014-2018 5-Year ACS; HBAWCVP includes Hispanic, Black, and Asian CVAP plus Black and White CVAP mixed persons
Source: Maptitude for Redistricting District Statistics window using U.S. Census Bureau 2010 Census Data and 2013-2017 \& 2014-2018 5-Year ACS Data

Case 2:18-cv-00069-RAJ-DEM Document 156-6 Filed 07/14/20 Page 31 of 48 PageID\# 5006

## Virginia Beach, VA

Illustrative Plan Modification-10 Districts Statistics w/ACS18

| District | Population | Deviation | \% Deviation | Hispanic | \% Hispanic | NH Wht | \% NH Wht | NH Blk | \% NH Blk | NH Asn | \% NH Asn | HBATTL | HBATTL\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 43956 | 157 | 0.36\% | 4125 | 9.38\% | 18743 | 42.64\% | 13540 | 30.80\% | 5378 | 12.24\% | 23043 | 52.42\% |
| 02 | 44068 | 269 | 0.61\% | 3149 | 7.15\% | 19279 | 43.75\% | 18010 | 40.87\% | 1888 | 4.28\% | 23047 | 52.30\% |
| 03 | 43643 | -156 | -0.36\% | 2940 | 6.74\% | 22948 | 52.58\% | 10175 | 23.31\% | 5611 | 12.86\% | 18726 | 42.91\% |
| 04 | 44911 | 1112 | 2.54\% | 2558 | 5.70\% | 29055 | 64.69\% | 8159 | 18.17\% | 3337 | 7.43\% | 14054 | 31.29\% |
| 05 | 43218 | -581 | -1.33\% | 2416 | 5.59\% | 32858 | 76.03\% | 4537 | 10.50\% | 1939 | 4.49\% | 8892 | 20.57\% |
| 06 | 41692 | -2107 | -4.81\% | 2349 | 5.63\% | 31936 | 76.60\% | 4552 | 10.92\% | 1507 | 3.61\% | 8408 | 20.17\% |
| 07 | 44872 | 1073 | 2.45\% | 2499 | 5.57\% | 36743 | 81.88\% | 3429 | 7.64\% | 922 | 2.05\% | 6850 | 15.27\% |
| 08 | 43295 | -504 | -1.15\% | 3399 | 7.85\% | 27381 | 63.24\% | 8158 | 18.84\% | 2345 | 5.42\% | 13902 | 32.11\% |
| 09 | 43366 | -433 | -0.99\% | 3408 | 7.86\% | 29275 | 67.51\% | 7556 | 17.42\% | 1232 | 2.84\% | 12196 | 28.12\% |
| 10 | 44973 | 1174 | 2.68\% | 2144 | 4.77\% | 34252 | 76.16\% | 5094 | 11.33\% | 2153 | 4.79\% | 9391 | 20.88\% |


| District | 18+ Pop | Deviation | \% Deviation | H18+ Pop | \% H18+ Pop | NH18+ Wht | \% NH18+ Wht | NH18+ BIk | \% NH18+ Blk | NH18+ Asn | \% NH18+ Asn | HBAVAP | HBAVAP\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 31790 | 157 | 0.36\% | 2639 | 8.30\% | 14545 | 45.75\% | 9381 | 29.51\% | 4202 | 13.22\% | 16222 | 51.03\% |
| 02 | 33289 | 269 | 0.61\% | 2071 | 6.22\% | 16015 | 48.11\% | 12727 | 38.23\% | 1541 | 4.63\% | 16339 | 49.08\% |
| 03 | 32329 | -156 | -0.36\% | 1804 | 5.58\% | 17682 | 54.69\% | 7402 | 22.90\% | 4559 | 14.10\% | 13765 | 42.58\% |
| 04 | 34329 | 1112 | 2.54\% | 1663 | 4.84\% | 23180 | 67.52\% | 5889 | 17.15\% | 2685 | 7.82\% | 10237 | 29.82\% |
| 05 | 34346 | -581 | -1.33\% | 1636 | 4.76\% | 26960 | 78.50\% | 3436 | 10.00\% | 1538 | 4.48\% | 6610 | 19.25\% |
| 06 | 32134 | -2107 | -4.81\% | 1589 | 4.94\% | 25200 | 78.42\% | 3429 | 10.67\% | 1191 | 3.71\% | 6209 | 19.32\% |
| 07 | 36351 | 1073 | 2.45\% | 1699 | 4.67\% | 30571 | 84.10\% | 2562 | 7.05\% | 763 | 2.10\% | 5024 | 13.82\% |
| 08 | 31972 | -504 | -1.15\% | 2122 | 6.64\% | 20991 | 65.65\% | 5941 | 18.58\% | 1900 | 5.94\% | 9963 | 31.16\% |
| 09 | 32796 | -433 | -0.99\% | 2184 | 6.66\% | 23354 | 71.21\% | 5318 | 16.22\% | 992 | 3.02\% | 8494 | 25.90\% |
| 10 | 33409 | 1174 | 2.68\% | 1358 | 4.06\% | 25690 | 76.90\% | 4127 | 12.35\% | 1607 | 4.81\% | 7092 | 21.23\% |


| District | CVAP17 | Deviation | \% Deviation | HCVAP17 | \% HCVAP17 | WCVAP17 | \% WCVAP17 | BCVAP17 | \% BCVAP17 | ACVAP17 | \% ACVAP17 | HBACVAP17 | \% HBACVAP17 | HBAWCVP17 | \% HBAWCVP17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 29761 | 157 | 0.36\% | 2176 | 7.31\% | 13730 | 46.13\% | 9135 | 30.69\% | 3566 | 11.98\% | 14888 | 50.03\% | 15210 | 51.11\% |
| 02 | 34338 | 269 | 0.61\% | 2415 | 7.03\% | 16185 | 47.13\% | 13451 | 39.17\% | 1375 | 4.00\% | 17251 | 50.24\% | 17592 | 51.23\% |
| 03 | 31960 | -156 | -0.36\% | 2542 | 7.95\% | 17346 | 54.27\% | 7413 | 23.19\% | 3403 | 10.65\% | 13365 | $4182 \%$ | 13569 | 42.46\% |
| 04 | 34013 | 1112 | 2.54\% | 1841 | 5.41\% | 22411 | 65.89\% | 6137 | 18.04\% | 2689 | 7.91\% | 10661 | 31.34\% | 10779 | 31.69\% |
| 05 | 35107 | -581 | -1.33\% | 1928 | 5.49\% | 27132 | 77.28\% | 3875 | 11.04\% | 1248 | 3.55\% | 7039 | 20.05\% | 7153 | 20.37\% |
| 06 | 32284 | -2107 | -4.81\% | 1700 | 5.27\% | 24421 | 75.64\% | 3594 | 11.13\% | 1352 | 4.19\% | 6639 | 20.56\% | 6746 | 20.90\% |
| 07 | 35686 | 1073 | 2.45\% | 1150 | 3.22\% | 29635 | 83.04\% | 3279 | 9.19\% | 799 | 2.24\% | 5228 | 14.65\% | 5398 | 15.13\% |
| 08 | 33660 | -504 | -1.15\% | 2522 | 7.49\% | 22645 | 67.28\% | 5319 | 15.80\% | 1815 | 5.39\% | 9658 | $2869 \%$ | 10079 | 29.94\% |
| 09 | 32843 | -433 | -0.99\% | 2417 | 7.36\% | 22753 | 69.28\% | 5572 | 16.97\% | 878 | 2.67\% | 8863 | 26 99\% | 9218 | 28.07\% |
| 10 | 34848 | 1174 | 2.68\% | 1532 | 4.40\% | 26347 | 75.61\% | 4353 | 12.49\% | 1675 | 4.81\% | 7559 | 21.69\% | 7749 | 22.24\% |


| District | CVAP18 | Deviation | \% Deviation | HCVAP18 | \% HCVAP18 | WCVAP18 | \% WCVAP18 | BCVAP18 | \% BCVAP18 | ACVAP18 | \% ACVAP18 | HBACVAP18 | \% HBACVAP18 | HBAWCVP18 | \% HBAWCVP18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 30189 | 157 | 0.36\% | 2261 | 7.49\% | 13290 | 44.02\% | 9531 | 31.57\% | 3824 | 12.67\% | 15628 | 51.77\% | 15974 | 52.91\% |
| 02 | 35194 | 269 | 0.61\% | 2804 | 7.97\% | 16265 | 46.22\% | 13557 | 38.52\% | 1546 | 4.39\% | 17925 | 50.93\% | 18307 | 52.02\% |
| 03 | 32546 | -156 | -0.36\% | 2496 | 7.67\% | 17100 | 52.54\% | 8104 | 24.90\% | 3533 | 10.86\% | 14137 | 43.44\% | 14416 | 44.29\% |
| 04 | 33741 | 1112 | 2.54\% | 1874 | 5.55\% | 22591 | 66.95\% | 6167 | 18.28\% | 2409 | 7.14\% | 10439 | 30.94\% | 10484 | 31.07\% |
| 05 | 33918 | -581 | -1.33\% | 1749 | 5.16\% | 26892 | 79.29\% | 3262 | 9.62\% | 1226 | 3.61\% | 6222 | $1834 \%$ | 6346 | 18.71\% |
| 06 | 32190 | -2107 | -4.81\% | 1824 | 5.67\% | 24110 | 74.90\% | 3771 | 11.71\% | 1314 | 4.08\% | 6904 | 21.45\% | 7010 | 21.78\% |
| 07 | 35416 | 1073 | 2.45\% | 1264 | 3.57\% | 29450 | 83.15\% | 3153 | 8.90\% | 835 | 2.36\% | 5252 | 14.83\% | 5412 | 15.28\% |
| 08 | 32727 | -504 | -1.15\% | 2497 | 7.63\% | 21568 | 65.90\% | 5471 | 16.72\% | 1798 | 5.49\% | 9764 | $2983 \%$ | 10128 | 30.95\% |
| 09 | 33178 | -433 | -0.99\% | 2219 | 6.69\% | 23167 | 69.83\% | 5753 | 17.34\% | 854 | 2.57\% | 8822 | 26.59\% | 9112 | 27.46\% |
| 10 | 35581 | 1174 | 2.68\% | 1570 | 4.41\% | 27127 | 76.24\% | 3961 | 11.13\% | 1818 | 5.11\% | 7352 | 20.66\% | 7575 | 21.29\% |

Note: Variables with 17 \& 18 suffix denote 2013-2017 \& 2014-2018 5-Year ACS; HBAWCVP includes Hispanic, Black, and Asian CVAP plus Black and White CVAP mixed persons

Source: Maptitude for Redistricting District Statistics window using U.S. Census Bureau 2010 Census Data and 2013-2017 \& 2014-2018 5-Year ACS Data

User:
Plan Name: VAB Illustr Plan 10 Dist Mod
Plan Type:

## Measures of Compactness Report

| Wednesday, December 4, 2019 |  |  |  |  | 10:16 AM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sum | N/A | 0.00 | N/A | N/A |  |
| Min | 0.21 | N/A | 0.16 | 0.53 |  |
| Max | 0.56 | N/A | 0.56 | 0.90 |  |
| Mean | 0.39 | N/A | 0.37 | 0.76 |  |
| Std. Dev. | 0.12 | N/A | 0.13 | 0.12 |  |
| District | Reock | Perimeter | PolsbyPopper | MinConvexPoly |  |
| 01 | 0.36 |  | 0.31 | 0.67 |  |
| 02 | 0.21 |  | 0.16 | 0.53 |  |
| 03 | 0.43 |  | 0.46 | 0.79 |  |
| 04 | 0.56 |  | 0.41 | 0.82 |  |
| 05 | 0.38 |  | 0.40 | 0.85 |  |
| 06 | 0.28 |  | 0.30 | 0.74 |  |
| 07 | 0.53 |  | 0.56 | 0.86 |  |
| 08 | 0.24 |  | 0.20 | 0.58 |  |
| 09 | 0.41 |  | 0.40 | 0.81 |  |
| 10 | 0.53 |  | 0.53 | 0.90 |  |


| User: |
| :--- |
| Plan Name: VAB Illustr Plan 10 Dist Mod |
| Plan Type: |
| Political Subdivison Splits Between Districts |
| Wednesday, December 4, 2019 |
| Total number of subdivisions: |
| County |
| Voting District |
| Number of subdivisions split into more than one district: |
| County |
| Voting District |
| Number of splits involving no population: |
| County |
| Voting District |
|  |
| County |
| Cases where an area is split among 10 Districts: 1 |
| Voting District |
| Cases where an area is split among 2 Districts: 15 |

County Voting District $\quad$ District $\quad$ Population

| Split Counties: |  |  |  |
| :--- | :--- | :--- | ---: |
| Virginia Beach City VA | 01 | 43,956 |  |
| Virginia Beach City VA | 02 | 44,068 |  |
| Virginia Beach City VA | 03 | 43,643 |  |
| Virginia Beach City VA | 04 | 44,911 |  |
| Virginia Beach City VA | 05 | 43,218 |  |
| Virginia Beach City VA |  | 06 | 41,692 |
| Virginia Beach City VA |  | 07 | 44,872 |
| Virginia Beach City VA |  | 08 | 43,295 |
| Virginia Beach City VA |  | 09 | 43,366 |
| Virginia Beach City VA |  | 10 | 44,973 |
| Split VTDs: |  |  |  |
| Virginia Beach City VA | Aragona | 02 | 2,246 |
| Virginia Beach City VA | Aragona | 06 | 5,034 |
| Virginia Beach City VA | Arrowhead | 02 | 2,949 |
| Virginia Beach City VA | Arrowhead | 04 | 1,767 |
| Virginia Beach City VA | Bayside | 02 | 899 |
| Virginia Beach City VA | Bayside | 05 | 1,462 |
| Virginia Beach City VA | Bonney | 02 | 688 |
| Virginia Beach City VA | Bonney | 06 | 2,754 |
| Virginia Beach City VA | Dahlia | 01 | 6,293 |
| Virginia Beach City VA | Dahlia | 04 | 1,417 |
| Virginia Beach City VA | Holland | 01 | 4,420 |
| Virginia Beach City VA | Holland | 08 | 3,400 |
| Virginia Beach City VA | Magic Hollow | 01 | 3,396 |


| County | Voting District | District | Population |
| :--- | :--- | ---: | ---: |
| Virginia Beach City VA | Magic Hollow | 08 | 3,913 |
| Virginia Beach City VA | Old Donation | 02 | 773 |
| Virginia Beach City VA | Old Donation | 05 | 4,843 |
| Virginia Beach City VA | Pembroke | 05 | 2,179 |
| Virginia Beach City VA | Pembroke | 06 | 3,826 |
| Virginia Beach City VA | Point O' View | 02 | 180 |
| Virginia Beach City VA | Point O' View | 04 | 3,164 |
| Virginia Beach City VA | Rosemont Forest | 01 | 1,770 |
| Virginia Beach City VA | Rosemont Forest | 03 | 3,953 |
| Virginia Beach City VA | Shannon | 04 | 2,877 |
| Virginia Beach City VA | Shannon | 08 | 451 |
| Virginia Beach City VA | Shelton Park | 02 | 1,466 |
| Virginia Beach City VA | Shelton Park | 05 | 2,528 |
| Virginia Beach City VA | Timberlake | 01 | 4,350 |
| Virginia Beach City VA | Timberlake | 04 | 2,184 |
| Virginia Beach City VA | Windsor Oaks | 01 | 1,197 |
| Virginia Beach City VA | Windsor Oaks | 08 | 5,310 |

Case 2:18-cv-00069-RAJ-DEM Document 156-6 Filed 07/14/20 Page 37 of 48 PageID\# 5012
Virginia Beach, VA
Illustrative Alternative 1 Plan-10 Districts Statistics w/ACS18

| District | Population | Deviation | \% Deviation | Hispanic | \% Hispanic | NH Wht | \% NH Wht | NH Blk | \% NH BIk | NH Asn | \% NH Asn | HBATTL | HBATTL\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 41708 | -2091 | -4.77\% | 4047 | 9.70\% | 17702 | 42.44\% | 12966 | 31.09\% | 4924 | 11.81\% | 21937 | 52.60\% |
| 02 | 41977 | -1822 | -4.16\% | 3060 | 7.29\% | 17939 | 42.74\% | 17449 | 41.57\% | 1872 | 4.46\% | 22381 | 53.32\% |
| 03 | 43433 | -366 | -0.84\% | 2926 | 6.74\% | 22810 | 52.52\% | 10160 | 23.39\% | 5571 | 12.83\% | 18657 | 42.96\% |
| 04 | 45650 | 1851 | 4.23\% | 2559 | 5.61\% | 29816 | 65.31\% | 8118 | 17.78\% | 3343 | 7.32\% | 14020 | 30.71\% |
| 05 | 42745 | -1054 | -2.41\% | 2239 | 5.24\% | 33115 | 77.47\% | 4162 | 9.74\% | 1836 | 4.30\% | 8237 | 19.27\% |
| 06 | 43282 | -517 | -1.18\% | 2584 | 5.97\% | 32170 | 74.33\% | 5457 | 12.61\% | 1592 | 3.68\% | 9633 | 22.26\% |
| 07 | 44872 | 1073 | 2.45\% | 2499 | 5.57\% | 36743 | 81.88\% | 3429 | 7.64\% | 922 | 2.05\% | 6850 | 15.27\% |
| 08 | 44996 | 1197 | 2.73\% | 3475 | 7.72\% | 28877 | 64.18\% | 8206 | 18.24\% | 2403 | 5.34\% | 14084 | 31.30\% |
| 09 | 44507 | 708 | 1.62\% | 3472 | 7.80\% | 30186 | 67.82\% | 7645 | 17.18\% | 1281 | 2.88\% | 12398 | 27.86\% |
| 10 | 44824 | 1025 | 2.34\% | 2126 | 4.74\% | 33112 | 73.87\% | 5618 | 12.53\% | 2568 | 5.73\% | 10312 | 23.01\% |


| District | 18+ Pop | Deviation | \% Deviation | H18+ Pop | \% H18+ Pop | NH18+ Wht | \% NH18+ Wht | NH18+ BIk | \% NH18+ Blk | NH18+ Asn | \% NH18+ Asn | HBAVAP | HBAVAP\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 30303 | -2091 | -4.77\% | 2602 | 8.59\% | 13837 | 45.66\% | 9039 | 29.83\% | 3834 | 12.65\% | 15475 | 51.07\% |
| 02 | 31775 | -1822 | -4.16\% | 2021 | 6.36\% | 14958 | 47.07\% | 12364 | 38.91\% | 1529 | 4.81\% | 15914 | 50.08\% |
| 03 | 32241 | -366 | -0.84\% | 1799 | 5.58\% | 17630 | 54.68\% | 7375 | 22.87\% | 4549 | 14.11\% | 13723 | 42.56\% |
| 04 | 34845 | 1851 | 4.23\% | 1657 | 4.76\% | 23741 | 68.13\% | 5847 | 16.78\% | 2690 | 7.72\% | 10194 | 29.26\% |
| 05 | 33983 | -1054 | -2.41\% | 1511 | 4.45\% | 27109 | 79.77\% | 3171 | 9.33\% | 1449 | 4.26\% | 6131 | 18.04\% |
| 06 | 33263 | -517 | -1.18\% | 1744 | 5.24\% | 25442 | 76.49\% | 4034 | 12.13\% | 1264 | 3.80\% | 7042 | 21.17\% |
| 07 | 36351 | 1073 | 2.45\% | 1699 | 4.67\% | 30571 | 84.10\% | 2562 | 7.05\% | 763 | 2.10\% | 5024 | 13.82\% |
| 08 | 33115 | 1197 | 2.73\% | 2166 | 6.54\% | 22018 | 66.49\% | 5967 | 18.02\% | 1944 | 5.87\% | 10077 | 30.43\% |
| 09 | 33642 | 708 | 1.62\% | 2229 | 6.63\% | 24028 | 71.42\% | 5394 | 16.03\% | 1034 | 3.07\% | 8657 | 25.73\% |
| 10 | 33227 | 1025 | 2.34\% | 1337 | 4.02\% | 24854 | 74.80\% | 4459 | 13.42\% | 1922 | 5.78\% | 7718 | 23.23\% |


| District | CVAP17 | Deviation | \% Deviation | HCVAP17 | \% HCVAP17 | WCVAP17 | \% WCVAP17 | BCVAP17 | \% BCVAP17 | ACVAP17 | \% ACVAP17 | HBACVAP17 | \% HBACVAP17 | HBAWCVP17 | \% HBAWCVP17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28300 | -2091 | -4.77\% | 2119 | 7.49\% | 12609 | 44.55\% | 9056 | 32.00\% | 3407 | 12.04\% | 14575 | 51.50\% | 14898 | 52.64\% |
| 02 | 32634 | -1822 | -4.16\% | 2346 | 7.19\% | 15004 | 45.98\% | 13141 | 40.27\% | 1387 | 4.25\% | 16851 | 51.64\% | 17171 | 52.62\% |
| 03 | 31770 | -366 | -0.84\% | 2629 | 8.28\% | 17380 | 54.71\% | 7171 | 22.57\% | 3380 | 10.64\% | 13179 | 41.48\% | 13368 | 42.08\% |
| 04 | 34584 | 1851 | 4.23\% | 1811 | 5.24\% | 22925 | 66.29\% | 6175 | 17.86\% | 2689 | 7.78\% | 10696 | 30.93\% | 10814 | 31.27\% |
| 05 | 34580 | -1054 | -2.41\% | 1808 | 5.23\% | 27115 | 78.41\% | 3540 | 10.24\% | 1142 | 3.30\% | 6511 | 18.83\% | 6623 | 19.15\% |
| 06 | 33756 | -517 | -1.18\% | 1873 | 5.55\% | 24990 | 74.03\% | 4184 | 12.39\% | 1418 | 4.20\% | 7460 | 22.10\% | 7590 | 22.48\% |
| 07 | 35686 | 1073 | 2.45\% | 1150 | 3.22\% | 29635 | 83.04\% | 3279 | 9.19\% | 799 | 2.24\% | 5228 | 14.65\% | 5398 | 15.13\% |
| 08 | 34775 | 1197 | 2.73\% | 2545 | 7.32\% | 23660 | 68.04\% | 5408 | 15.55\% | 1822 | 5.24\% | 9765 | 28.08\% | 10185 | 29.29\% |
| 09 | 33676 | 708 | 1.62\% | 2464 | 7.32\% | 23435 | 69.59\% | 5628 | 16.71\% | 922 | 2.74\% | 8998 | 26.72\% | 9354 | 27.78\% |
| 10 | 34739 | 1025 | 2.34\% | 1478 | 4.25\% | 25852 | 74.42\% | 4546 | 13.09\% | 1834 | 5.28\% | 7888 | 22.71\% | 8092 | 23.29\% |


| District | CVAP18 | Deviation | \% Deviation | HCVAP18 | \% HCVAP18 | WCVAP18 | \% WCVAP18 | BCVAP18 | \% BCVAP18 | ACVAP18 | \% ACVAP18 | HBACVAP18 | \% HBACVAP18 | HBAWCVAP18 | \% HBAWCVAP18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28327 | -2091 | -4.77\% | 2174 | 7.67\% | 12083 | 42.66\% | 9220 | 32.55\% | 3650 | 12.89\% | 15034 | 53.07\% | 15385 | 54.31\% |
| 02 | 33521 | -1822 | -4.16\% | 2733 | 8.15\% | 15152 | 45.20\% | 13269 | 39.58\% | 1500 | 4.47\% | 17484 | 52.16\% | 17844 | 53.23\% |
| 03 | 32462 | -366 | -0.84\% | 2498 | 7.70\% | 17113 | 52.72\% | 8033 | 24.75\% | 3530 | 10.87\% | 14061 | 43.32\% | 14330 | 44.14\% |
| 04 | 34325 | 1851 | 4.23\% | 1844 | 5.37\% | 23089 | 67.27\% | 6221 | 18.12\% | 2419 | 7.05\% | 10498 | 30.58\% | 10543 | 30.72\% |
| 05 | 33407 | -1054 | -2.41\% | 1605 | 4.80\% | 26752 | 80.08\% | 3013 | 9.02\% | 1205 | 3.61\% | 5848 | 17.51\% | 5970 | 17.87\% |
| 06 | 33595 | -517 | -1.18\% | 2015 | 6.00\% | 24767 | 73.72\% | 4237 | 12.61\% | 1328 | 3.95\% | 7562 | 22.51\% | 7692 | 22.90\% |
| 07 | 35416 | 1073 | 2.45\% | 1264 | 3.57\% | 29450 | 83.15\% | 3153 | 8.90\% | 835 | 2.36\% | 5252 | 14.83\% | 5412 | 15.28\% |
| 08 | 33873 | 1197 | 2.73\% | 2524 | 7.45\% | 22598 | 66.71\% | 5511 | 16.27\% | 1816 | 5.36\% | 9839 | 29.05\% | 10202 | 30.12\% |
| 09 | 34054 | 708 | 1.62\% | 2272 | 6.67\% | 23884 | 70.14\% | 5806 | 17.05\% | 887 | 2.60\% | 8950 | 26.28\% | 9240 | 27.13\% |
| 10 | 35700 | 1025 | 2.34\% | 1629 | 4.56\% | 26672 | 74.71\% | 4267 | 11.95\% | 1987 | 5.57\% | 7917 | 22.18\% | 8146 | 22.82\% |

[^14]Source: Maptitude for Redistricting District Statistics window using U.S. Census Bureau 2010 Census Data and 2013-2017 \& 2014-2018 5-Year ACS Data

Case 2:18-cv-00069-RAJ-DEM Document 156-6 Filed 07/14/20 Page 38 of 48 PageID\# 5013
Virginia Beach, VA
Illustrative Plan Alt 1 Modification-10 Districts Statistics w/ACS18

| District | Population | Deviation | \% Deviation | ispanic Orig | Hispanic Orig | NH_Wht | \% NH_Wht | NH_BIk | \% NH_Blk | NH_Asn | \% NH_Asn | HBATTL | HBATTL\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 41708 | -2091 | -4.77\% | 4047 | 9.70\% | 17702 | 42.44\% | 12966 | 31.09\% | 4924 | 11.81\% | 21937 | 52.60\% |
| 02 | 43847 | 48 | 0.11\% | 3192 | 7.28\% | 18797 | 42.87\% | 18138 | 41.37\% | 1980 | 4.52\% | 23310 | 53.16\% |
| 03 | 43433 | -366 | -0.84\% | 2926 | 6.74\% | 22810 | 52.52\% | 10160 | 23.39\% | 5571 | 12.83\% | 18657 | 42.96\% |
| 04 | 45742 | 1943 | 4.44\% | 2560 | 5.60\% | 29901 | 65.37\% | 8123 | 17.76\% | 3343 | 7.31\% | 14026 | 30.66\% |
| 05 | 41972 | -1827 | -4.17\% | 2190 | 5.22\% | 32631 | 77.74\% | 4017 | 9.57\% | 1771 | 4.22\% | 7978 | 19.01\% |
| 06 | 42093 | -1706 | -3.90\% | 2500 | 5.94\% | 31711 | 75.34\% | 4908 | 11.66\% | 1549 | 3.68\% | 8957 | 21.28\% |
| 07 | 44872 | 1073 | 2.45\% | 2499 | 5.57\% | 36743 | 81.88\% | 3429 | 7.64\% | 922 | 2.05\% | 6850 | 15.27\% |
| 08 | 44996 | 1197 | 2.73\% | 3475 | 7.72\% | 28877 | 64.18\% | 8206 | 18.24\% | 2403 | 5.34\% | 14084 | 31.30\% |
| 09 | 44507 | 708 | 1.62\% | 3472 | 7.80\% | 30186 | 67.82\% | 7645 | 17.18\% | 1281 | 2.88\% | 12398 | 27.86\% |
| 10 | 44824 | 1025 | 2.34\% | 2126 | 4.74\% | 33112 | 73.87\% | 5618 | 12.53\% | 2568 | 5.73\% | 10312 | 23.01\% |


| District | 18+_Pop | Deviation | \% Deviation | H18+_Pop | \% H18+_Pop | NH18+_Wht | \% NH18+_Wht | NH18+_Blk | \% NH18+_Blk | NH18+_Asn | \% NH18+_Asn | HBAVAP | HBAVAP\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 30303 | -2091 | -4.77\% | 2602 | 8.59\% | 13837 | 45.66\% | 9039 | 29.83\% | 3834 | 12.65\% | 15475 | 51.07\% |
| 02 | 33114 | 48 | 0.11\% | 2100 | 6.34\% | 15644 | 47.24\% | 12818 | 38.71\% | 1614 | 4.87\% | 16532 | 49.92\% |
| 03 | 32241 | -366 | -0.84\% | 1799 | 5.58\% | 17630 | 54.68\% | 7375 | 22.87\% | 4549 | 14.11\% | 13723 | 42.56\% |
| 04 | 34915 | 1943 | 4.44\% | 1658 | 4.75\% | 23807 | 68.19\% | 5850 | 16.76\% | 2690 | 7.70\% | 10198 | 29.21\% |
| 05 | 33389 | -1827 | -4.17\% | 1480 | 4.43\% | 26722 | 80.03\% | 3064 | 9.18\% | 1399 | 4.19\% | 5943 | 17.80\% |
| 06 | 32448 | -1706 | -3.90\% | 1695 | 5.22\% | 25077 | 77.28\% | 3684 | 11.35\% | 1229 | 3.79\% | 6608 | 20.36\% |
| 07 | 36351 | 1073 | 2.45\% | 1699 | 4.67\% | 30571 | 84.10\% | 2562 | 7.05\% | 763 | 2.10\% | 5024 | 13.82\% |
| 08 | 33115 | 1197 | 2.73\% | 2166 | 6.54\% | 22018 | 66.49\% | 5967 | 18.02\% | 1944 | 5.87\% | 10077 | 30.43\% |
| 09 | 33642 | 708 | 1.62\% | 2229 | 6.63\% | 24028 | 71.42\% | 5394 | 16.03\% | 1034 | 3.07\% | 8657 | 25.73\% |
| 10 | 33227 | 1025 | 2.34\% | 1337 | 4.02\% | 24854 | 74.80\% | 4459 | 13.42\% | 1922 | 5.78\% | 7718 | 23.23\% |


| District | CVAP17 | Deviation | \% Deviation | HCVAP17 | \% HCVAP17 | WCVAP17 | \% WCVAP17 | BCVAP17 | \% BCVAP17 | ACVAP17 | \% ACVAP17 | HBACVAP17 | \% HBACVAP17 | HBAWCVP17 | \% HBAWCVP17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28300 | -2091 | -4.77\% | 2119 | 7.49\% | 12609 | 44.55\% | 9056 | 32.00\% | 3407 | 12.04\% | 14575 | 51.50\% | 14898 | 52.64\% |
| 02 | 34061 | 48 | 0.11\% | 2427 | 7.13\% | 15847 | 46.53\% | 13522 | 39.70\% | 1388 | 4.08\% | 17326 | 50.87\% | 17669 | 51.87\% |
| 03 | 31770 | -366 | -0.84\% | 2629 | 8.28\% | 17380 | 54.71\% | 7171 | 22.57\% | 3380 | 10.64\% | 13179 | 41.48\% | 13368 | 42.08\% |
| 04 | 34654 | 1943 | 4.44\% | 1813 | 5.23\% | 22983 | 66.32\% | 6181 | 17.84\% | 2691 | 7.77\% | 10707 | 30.90\% | 10825 | 31.24\% |
| 05 | 34065 | -1827 | -4.17\% | 1777 | 5.22\% | 26830 | 78.76\% | 3372 | 9.90\% | 1141 | 3.35\% | 6308 | 18.52\% | 6420 | 18.85\% |
| 06 | 32774 | -1706 | -3.90\% | 1821 | 5.56\% | 24374 | 74.37\% | 3965 | 12.10\% | 1416 | 4.32\% | 7177 | 21.90\% | 7284 | 22.22\% |
| 07 | 35686 | 1073 | 2.45\% | 1150 | 3.22\% | 29635 | 83.04\% | 3279 | 9.19\% | 799 | 2.24\% | 5228 | 14.65\% | 5398 | 15.13\% |
| 08 | 34775 | 1197 | 2.73\% | 2545 | 7.32\% | 23660 | 68.04\% | 5408 | 15.55\% | 1822 | 5.24\% | 9765 | 28.08\% | 10185 | 29.29\% |
| 09 | 33676 | 708 | 1.62\% | 2464 | 7.32\% | 23435 | 69.59\% | 5628 | 16.71\% | 922 | 2.74\% | 8998 | 26.72\% | 9354 | 27.78\% |
| 10 | 34739 | 1025 | 2.34\% | 1478 | 4.25\% | 25852 | 74.42\% | 4546 | 13.09\% | 1834 | 5.28\% | 7888 | 22.71\% | 8092 | 23.29\% |


| District | CVAP18 | Deviation | \% Deviation | HCVAP18 | \% HCVAP18 | WCVAP18 | \% WCVAP18 | BCVAP18 | \% BCVAP18 | ACVAP18 | \% ACVAP18 | HBACVAP18 | \% HBACVAP18 | HBAWCVP18 | \% HBAWCVP18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28327 | -2091 | -4.77\% | 2174 | 7.67\% | 12083 | 42.66\% | 9220 | 32.55\% | 3650 | 12.89\% | 15034 | 53.07\% | 15385 | 54.31\% |
| 02 | 34905 | 48 | 0.11\% | 2809 | 8.05\% | 15990 | 45.81\% | 13592 | 38.94\% | 1540 | 4.41\% | 17932 | 51.37\% | 18316 | 52.47\% |
| 03 | 32462 | -366 | -0.84\% | 2498 | 7.70\% | 17113 | 52.72\% | 8033 | 24.75\% | 3530 | 10.87\% | 14061 | 43.32\% | 14330 | 44.14\% |
| 04 | 34398 | 1943 | 4.44\% | 1847 | 5.37\% | 23144 | 67.28\% | 6228 | 18.11\% | 2423 | 7.04\% | 10514 | 30.57\% | 10559 | 30.70\% |
| 05 | 32849 | -1827 | -4.17\% | 1584 | 4.82\% | 26432 | 80.47\% | 2869 | 8.73\% | 1164 | 3.54\% | 5636 | 17.16\% | 5758 | 17.53\% |
| 06 | 32696 | -1706 | -3.90\% | 1957 | 5.99\% | 24194 | 74.00\% | 4051 | 12.39\% | 1325 | 4.05\% | 7310 | 22.36\% | 7416 | 22.68\% |
| 07 | 35416 | 1073 | 2.45\% | 1264 | 3.57\% | 29450 | 83.15\% | 3153 | 8.90\% | 835 | 2.36\% | 5252 | 14.83\% | 5412 | 15.28\% |
| 08 | 33873 | 1197 | 2.73\% | 2524 | 7.45\% | 22598 | 66.71\% | 5511 | 16.27\% | 1816 | 5.36\% | 9839 | 29.05\% | 10202 | 30.12\% |
| 09 | 34054 | 708 | 1.62\% | 2272 | 6.67\% | 23884 | 70.14\% | 5806 | 17.05\% | 887 | 2.60\% | 8950 | 26.28\% | 9240 | 27.13\% |
| 10 | 35700 | 1025 | 2.34\% | 1629 | 4.56\% | 26672 | 74.71\% | 4267 | 11.95\% | 1987 | 5.57\% | 7917 | 22.18\% | 8146 | 22.82\% |

Note: Variables with 17 \& 18 suffix denote 2013-2017 \& 2014-2018 5-Year ACS; HBAWCVP includes Hispanic, Black, and Asian CVAP plus Black and White CVAP mixed persons
Source: Maptitude for Redistricting District Statistics window using U.S. Census Bureau 2010 Census Data and 2013-2017 \& 2014-2018 5-Year ACS Data

User:
Plan Name: VAB Illustr Plan 10 Dist Alt 1 Mod
Plan Type:

## Measures of Compactness Report

| Wednesday, December 4, 2019 |  |  |  |  | 10:28 AM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sum | N/A | 0.00 | N/A | N/A |  |
| Min | 0.21 | N/A | 0.15 | 0.51 |  |
| Max | 0.56 | N/A | 0.56 | 0.88 |  |
| Mean | 0.38 | N/A | 0.36 | 0.75 |  |
| Std. Dev. | 0.12 | N/A | 0.14 | 0.13 |  |
| District | Reock | Perimeter | PolsbyPopper | MinConvexPoly |  |
| 01 | 0.31 |  | 0.20 | 0.58 |  |
| 02 | 0.21 |  | 0.15 | 0.51 |  |
| 03 | 0.41 |  | 0.38 | 0.76 |  |
| 04 | 0.56 |  | 0.46 | 0.86 |  |
| 05 | 0.38 |  | 0.40 | 0.86 |  |
| 06 | 0.27 |  | 0.29 | 0.72 |  |
| 07 | 0.53 |  | 0.56 | 0.86 |  |
| 08 | 0.26 |  | 0.23 | 0.62 |  |
| 09 | 0.41 |  | 0.40 | 0.81 |  |
| 10 | 0.50 |  | 0.50 | 0.88 |  |

User:
Plan Name: VAB Illustr Plan 10 Dist Alt 1 Mod
Plan Type:

## Political Subdivison Splits Between Districts

Wednesday, December 4, 2019
Total number of subdivisions:

| County | 0 |
| :--- | ---: |
| Voting District | 71 |

Number of subdivisions split into more than one district:

| County | 1 |
| :--- | ---: |
| Voting District | 23 |

Number of splits involving no population:
County

## Split Counts

## County

Cases where an area is split among 10 Districts: 1
Voting District
Cases where an area is split among 2 Districts: 21
Cases where an area is split among 3 Districts: 2

| County | Voting District | District | Population |
| :--- | :--- | ---: | ---: |
| Split Counties: |  | 01 |  |
| Virginia Beach City VA |  | 02 | 41,708 |
| Virginia Beach City VA |  | 03 | 43,847 |
| Virginia Beach City VA |  | 04 | 43,433 |
| Virginia Beach City VA | 05 | 45,742 |  |
| Virginia Beach City VA |  | 06 | 41,972 |
| Virginia Beach City VA |  | 07 | 42,093 |
| Virginia Beach City VA |  | 08 | 44,872 |
| Virginia Beach City VA |  | 09 | 44,996 |
| Virginia Beach City VA |  | 10 | 44,507 |
| Virginia Beach City VA |  | 44,824 |  |
| Split VTDs: |  | 02 |  |
| Virginia Beach City VA | Aragona | 06 | 2,330 |
| Virginia Beach City VA | Aragona | 02 | 4,950 |
| Virginia Beach City VA | Arrowhead | 04 | 2,833 |
| Virginia Beach City VA | Arrowhead | 02 | 1,883 |
| Virginia Beach City VA | Avalon | 04,637 |  |
| Virginia Beach City VA | Avalon | 04 | 950 |
| Virginia Beach City VA | Bayside | 02 | 804 |
| Virginia Beach City VA | Bayside | 05 | 1,557 |
| Virginia Beach City VA | Bonney | 02 | 688 |
| Virginia Beach City VA | Bonney | 06 | 2,754 |
| Virginia Beach City VA | Buckner | 01 | 4,515 |
| Virginia Beach City VA | Buckner | 03 | 230 |


| County | Voting District | District | Population |
| :---: | :---: | :---: | :---: |
| Virginia Beach City VA | Cromwell | 01 | 660 |
| Virginia Beach City VA | Cromwell | 10 | 2,561 |
| Virginia Beach City VA | Dahlia | 01 | 6,293 |
| Virginia Beach City VA | Dahlia | 04 | 1,417 |
| Virginia Beach City VA | Glenwood | 01 | 1,203 |
| Virginia Beach City VA | Glenwood | 10 | 3,132 |
| Virginia Beach City VA | Holland | 01 | 4,741 |
| Virginia Beach City VA | Holland | 08 | 3,079 |
| Virginia Beach City VA | Hunt | 08 | 2,022 |
| Virginia Beach City VA | Hunt | 10 | 1,703 |
| Virginia Beach City VA | Kingston | 05 | 1,694 |
| Virginia Beach City VA | Kingston | 06 | 812 |
| Virginia Beach City VA | Magic Hollow | 01 | 3,396 |
| Virginia Beach City VA | Magic Hollow | 08 | 3,913 |
| Virginia Beach City VA | Old Donation | 02 | 773 |
| Virginia Beach City VA | Old Donation | 05 | 4,843 |
| Virginia Beach City VA | Point O' View | 02 | 180 |
| Virginia Beach City VA | Point O' View | 04 | 3,164 |
| Virginia Beach City VA | Rock Lake | 01 | 4,811 |
| Virginia Beach City VA | Rock Lake | 03 | 315 |
| Virginia Beach City VA | Rock Lake | 10 | 542 |
| Virginia Beach City VA | Rosemont Forest | 01 | 1,770 |
| Virginia Beach City VA | Rosemont Forest | 03 | 3,953 |
| Virginia Beach City VA | Round Hill | 01 | 1,318 |
| Virginia Beach City VA | Round Hill | 03 | 5,890 |
| Virginia Beach City VA | Shannon | 04 | 2,877 |
| Virginia Beach City VA | Shannon | 08 | 451 |
| Virginia Beach City VA | Shelton Park | 02 | 2,322 |
| Virginia Beach City VA | Shelton Park | 05 | 1,672 |
| Virginia Beach City VA | Timberlake | 01 | 4,022 |
| Virginia Beach City VA | Timberlake | 03 | 563 |
| Virginia Beach City VA | Timberlake | 04 | 1,949 |
| Virginia Beach City VA | Upton | 09 | 1,141 |
| Virginia Beach City VA | Upton | 10 | 3,955 |
| Virginia Beach City VA | Windsor Oaks | 01 | 1,197 |
| Virginia Beach City VA | Windsor Oaks | 08 | 5,310 |

Case 2:18-cv-00069-RAJ-DEM Document 156-6 Filed 07/14/20 Page 44 of 48 PageID\# 5019
Virginia Beach, VA
Illustrative Alternative 2 Plan - 10 Districts Statistics w/ACS18

| District | Population | Deviation | \% Deviation | Hispanic | \% Hispanic | NH Wht | \% NH Wht | NH Blk | \% NH Blk | NH Asn | \% NH Asn | HBATTL | HBATTL\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 41681 | -2118 | -4.84\% | 4024 | 9.65\% | 17709 | 42.49\% | 12968 | 31.11\% | 4921 | 11.81\% | 21913 | 52.57\% |
| 02 | 41875 | -1924 | -4.39\% | 3013 | 7.20\% | 17868 | 42.67\% | 17612 | 42.06\% | 1725 | 4.12\% | 22350 | 53.37\% |
| 03 | 44521 | 722 | 1.65\% | 3007 | 6.75\% | 23324 | 52.39\% | 10429 | 23.42\% | 5742 | 12.90\% | 19178 | 43.08\% |
| 04 | 44576 | 777 | 1.77\% | 2542 | 5.70\% | 28833 | 64.68\% | 8091 | 18.15\% | 3318 | 7.44\% | 13951 | 31.30\% |
| 05 | 44624 | 825 | 1.88\% | 2370 | 5.31\% | 34307 | 76.88\% | 4473 | 10.02\% | 2025 | 4.54\% | 8868 | 19.87\% |
| 06 | 42579 | -1220 | -2.79\% | 2517 | 5.91\% | 32032 | 75.23\% | 5010 | 11.77\% | 1575 | 3.70\% | 9102 | 21.38\% |
| 07 | 44872 | 1073 | 2.45\% | 2499 | 5.57\% | 36743 | 81.88\% | 3429 | 7.64\% | 922 | 2.05\% | 6850 | 15.27\% |
| 08 | 44996 | 1197 | 2.73\% | 3475 | 7.72\% | 28877 | 64.18\% | 8206 | 18.24\% | 2403 | 5.34\% | 14084 | 31.30\% |
| 09 | 44507 | 708 | 1.62\% | 3472 | 7.80\% | 30186 | 67.82\% | 7645 | 17.18\% | 1281 | 2.88\% | 12398 | 27.86\% |
| 10 | 43763 | -36 | -0.08\% | 2068 | 4.73\% | 32591 | 74.47\% | 5347 | 12.22\% | 2400 | 5.48\% | 9815 | 22.43\% |


| District | 18+ Pop | Deviation | \% Deviation | H18+ Pop | \% H18+ Pop | NH18+ Wht | \% NH18+ Wht | NH18+ BIk | \% NH18+ Blk | NH18+ Asn | \% NH18+ Asn | HBAVAP | HBAVAP\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 30278 | -2118 | -4.84\% | 2581 | 8.52\% | 13847 | 45.73\% | 9021 | 29.79\% | 3847 | 12.71\% | 15449 | 51.02\% |
| 02 | 31584 | -1924 | -4.39\% | 1981 | 6.27\% | 14864 | 47.06\% | 12444 | 39.40\% | 1408 | 4.46\% | 15833 | 50.13\% |
| 03 | 33023 | 722 | 1.65\% | 1851 | 5.61\% | 18004 | 54.52\% | 7590 | 22.98\% | 4668 | 14.14\% | 14109 | 42.72\% |
| 04 | 33982 | 777 | 1.77\% | 1646 | 4.84\% | 22935 | 67.49\% | 5832 | 17.16\% | 2668 | 7.85\% | 10146 | 29.86\% |
| 05 | 35490 | 825 | 1.88\% | 1600 | 4.51\% | 28119 | 79.23\% | 3385 | 9.54\% | 1607 | 4.53\% | 6592 | 18.57\% |
| 06 | 32810 | -1220 | -2.79\% | 1706 | 5.20\% | 25332 | 77.21\% | 3755 | 11.44\% | 1249 | 3.81\% | 6710 | 20.45\% |
| 07 | 36351 | 1073 | 2.45\% | 1699 | 4.67\% | 30571 | 84.10\% | 2562 | 7.05\% | 763 | 2.10\% | 5024 | 13.82\% |
| 08 | 33115 | 1197 | 2.73\% | 2166 | 6.54\% | 22018 | 66.49\% | 5967 | 18.02\% | 1944 | 5.87\% | 10077 | 30.43\% |
| 09 | 33642 | 708 | 1.62\% | 2229 | 6.63\% | 24028 | 71.42\% | 5394 | 16.03\% | 1034 | 3.07\% | 8657 | 25.73\% |
| 10 | 32470 | -36 | -0.08\% | 1306 | 4.02\% | 24470 | 75.36\% | 4262 | 13.13\% | 1790 | 5.51\% | 7358 | 22.66\% |


| District | CVAP17 | Deviation | \% Deviation | HCVAP17 | \% HCVAP17 | WCVAP17 | \% WCVAP17 | BCVAP17 | \% BCVAP17 | ACVAP17 | \% ACVAP17 | HBACVAP17 | \% HBACVAP17 | HBAWCVP17 | \% HBAWCVP17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28225 | -2118 | -4.84\% | 2135 | 7.56\% | 12750 | 45.17\% | 8865 | 31.41\% | 3405 | 12.06\% | 14405 | 51.04\% | 14719 | 52.15\% |
| 02 | 32395 | -1924 | -4.39\% | 2265 | 6.99\% | 15025 | 46.38\% | 13080 | 40.38\% | 1200 | 3.70\% | 16545 | 51.07\% | 16885 | 52.12\% |
| 03 | 32616 | 722 | 1.65\% | 2642 | 8.10\% | 17751 | 54.42\% | 7494 | 22.98\% | 3463 | 10.62\% | 13595 | 41.68\% | 13799 | 42.31\% |
| 04 | 33849 | 777 | 1.77\% | 1777 | 5.25\% | 22287 | 65.84\% | 6150 | 18.17\% | 2679 | 7.91\% | 10611 | 31.35\% | 10729 | 31.70\% |
| 05 | 36137 | 825 | 1.88\% | 1929 | 5.34\% | 28144 | 77.88\% | 3732 | 10.33\% | 1339 | 3.71\% | 7016 | 19.42\% | 7130 | 19.73\% |
| 06 | 33173 | -1220 | -2.79\% | 1867 | 5.63\% | 24578 | 74.09\% | 4078 | 12.29\% | 1418 | 4.27\% | 7346 | 22.14\% | 7454 | 22.47\% |
| 07 | 35686 | 1073 | 2.45\% | 1150 | 3.22\% | 29635 | 83.04\% | 3279 | 9.19\% | 799 | 2.24\% | 5228 | 14.65\% | 5398 | 15.13\% |
| 08 | 34775 | 1197 | 2.73\% | 2545 | 7.32\% | 23660 | 68.04\% | 5408 | 15.55\% | 1822 | 5.24\% | 9765 | 28.08\% | 10185 | 29.29\% |
| 09 | 33676 | 708 | 1.62\% | 2464 | 7.32\% | 23435 | 69.59\% | 5628 | 16.71\% | 922 | 2.74\% | 8998 | 26.72\% | 9354 | 27.78\% |
| 10 | 33968 | -36 | -0.08\% | 1449 | 4.27\% | 25340 | 74.60\% | 4414 | 12.99\% | 1753 | 5.16\% | 7642 | 22.50\% | 7840 | 23.08\% |


| District | CVAP18 | Deviation | \% Deviation | HCVAP18 | \% HCVAP18 | WCVAP18 | \% WCVAP18 | BCVAP18 | \% BCVAP18 | ACVAP18 | \% ACVAP18 | HBACVAP18 | \% HBACVAP18 | HBAWCVAP18 | \% HBAWCVAP18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28280 | -2118 | -4.84\% | 2080 | 7.36\% | 12190 | 43.10\% | 9185 | 32.48\% | 3645 | 12.89\% | 14910 | 52.72\% | 15255 | 53.94\% |
| 02 | 33360 | -1924 | -4.39\% | 2825 | 8.47\% | 15060 | 45.14\% | 13195 | 39.55\% | 1365 | 4.09\% | 17385 | 52.11\% | 17765 | 53.25\% |
| 03 | 33227 | 722 | 1.65\% | 2617 | 7.88\% | 17470 | 52.58\% | 8193 | 24.66\% | 3617 | 10.89\% | 14424 | 43.41\% | 14703 | 44.25\% |
| 04 | 33309 | 777 | 1.77\% | 1602 | 4.81\% | 22414 | 67.29\% | 6170 | 18.52\% | 2395 | 7.19\% | 10172 | 30.54\% | 10217 | 30.67\% |
| 05 | 35084 | 825 | 1.88\% | 1764 | 5.03\% | 27869 | 79.44\% | 3219 | 9.18\% | 1364 | 3.89\% | 6364 | 18.14\% | 6488 | 18.49\% |
| 06 | 33095 | -1220 | -2.79\% | 2006 | 6.06\% | 24417 | 73.78\% | 4156 | 12.56\% | 1328 | 4.01\% | 7471 | 22.57\% | 7579 | 22.90\% |
| 07 | 35416 | 1073 | 2.45\% | 1264 | 3.57\% | 29450 | 83.15\% | 3153 | 8.90\% | 835 | 2.36\% | 5252 | 14.83\% | 5412 | 15.28\% |
| 08 | 33873 | 1197 | 2.73\% | 2524 | 7.45\% | 22598 | 66.71\% | 5511 | 16.27\% | 1816 | 5.36\% | 9839 | 29.05\% | 10202 | 30.12\% |
| 09 | 34054 | 708 | 1.62\% | 2272 | 6.67\% | 23884 | 70.14\% | 5806 | 17.05\% | 887 | 2.60\% | 8950 | 26.28\% | 9240 | 27.13\% |
| 10 | 34982 | -36 | -0.08\% | 1604 | 4.59\% | 26208 | 74.92\% | 4142 | 11.84\% | 1905 | 5.45\% | 7678 | 21.95\% | 7903 | 22.59\% |

[^15]Case 2:18-cv-00069-RAJ-DEM Document 156-6 Filed 07/14/20 Page 45 of 48 PageID\# 5020
Virginia Beach, VA
Illustrative Plan Alt 2 Modification - 10 Districts Statistics /ACS18

| District | Population | Deviation | \% Deviation | Hispanic | \% Hispanic | NH Wht | \% NH Wht | NH BIk | \% NH Blk | NH Asn | \% NH Asn | HBATTL | HBATTL\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 41681 | -2118 | -4.84\% | 4024 | 9.65\% | 17709 | 42.49\% | 12968 | 31.11\% | 4921 | 11.81\% | 21913 | 52.57\% |
| 02 | 44503 | 704 | 1.61\% | 3217 | 7.23\% | 19584 | 44.01\% | 18107 | 40.69\% | 1815 | 4.08\% | 23139 | 51.99\% |
| 03 | 44521 | 722 | 1.65\% | 3007 | 6.75\% | 23324 | 52.39\% | 10429 | 23.42\% | 5742 | 12.90\% | 19178 | 43.08\% |
| 04 | 44576 | 777 | 1.77\% | 2542 | 5.70\% | 28833 | 64.68\% | 8091 | 18.15\% | 3318 | 7.44\% | 13951 | 31.30\% |
| 05 | 43303 | -496 | -1.13\% | 2305 | 5.32\% | 33297 | 76.89\% | 4310 | 9.95\% | 1989 | 4.59\% | 8604 | 19.87\% |
| 06 | 41723 | -2076 | -4.74\% | 2451 | 5.87\% | 31432 | 75.33\% | 4905 | 11.76\% | 1541 | 3.69\% | 8897 | 21.32\% |
| 07 | 44872 | 1073 | 2.45\% | 2499 | 5.57\% | 36743 | 81.88\% | 3429 | 7.64\% | 922 | 2.05\% | 6850 | 15.27\% |
| 08 | 44545 | 746 | 1.70\% | 3402 | 7.64\% | 28771 | 64.59\% | 7979 | 17.91\% | 2383 | 5.35\% | 13764 | 30.90\% |
| 09 | 43366 | -433 | -0.99\% | 3408 | 7.86\% | 29275 | 67.51\% | 7556 | 17.42\% | 1232 | 2.84\% | 12196 | 28.12\% |
| 10 | 44904 | 1105 | 2.52\% | 2132 | 4.75\% | 33502 | 74.61\% | 5436 | 12.11\% | 2449 | 5.45\% | 10017 | 22.31\% |


| District | 18+ Pop | Deviation | \% Deviation | H18+ Pop | \% H18+ Pop | NH18+ Wht | \% NH18+ Wht | NH18+ Blk | \% NH18+ BIk | NH18+ Asn | \% NH18+ Asn | HBAVAP | HBAVAP\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 30278 | -2118 | -4.84\% | 2581 | 8.52\% | 13847 | 45.73\% | 9021 | 29.79\% | 3847 | 12.71\% | 15449 | 51.02\% |
| 02 | 33643 | 704 | 1.61\% | 2118 | 6.30\% | 16281 | 48.39\% | 12819 | 38.10\% | 1481 | 4.40\% | 16418 | 48.80\% |
| 03 | 33023 | 722 | 1.65\% | 1851 | 5.61\% | 18004 | 54.52\% | 7590 | 22.98\% | 4668 | 14.14\% | 14109 | 42.72\% |
| 04 | 33982 | 777 | 1.77\% | 1646 | 4.84\% | 22935 | 67.49\% | 5832 | 17.16\% | 2668 | 7.85\% | 10146 | 29.86\% |
| 05 | 34430 | -496 | -1.13\% | 1557 | 4.52\% | 27289 | 79.26\% | 3252 | 9.45\% | 1575 | 4.57\% | 6384 | 18.54\% |
| 06 | 32132 | -2076 | -4.74\% | 1660 | 5.17\% | 24831 | 77.28\% | 3670 | 11.42\% | 1228 | 3.82\% | 6558 | 20.41\% |
| 07 | 36351 | 1073 | 2.45\% | 1699 | 4.67\% | 30571 | 84.10\% | 2562 | 7.05\% | 763 | 2.10\% | 5024 | 13.82\% |
| 08 | 32794 | 746 | 1.70\% | 2118 | 6.46\% | 21932 | 66.88\% | 5810 | 17.72\% | 1924 | 5.87\% | 9852 | 30.04\% |
| 09 | 32796 | -433 | -0.99\% | 2184 | 6.66\% | 23354 | 71.21\% | 5318 | 16.22\% | 992 | 3.02\% | 8494 | 25.90\% |
| 10 | 33316 | 1105 | 2.52\% | 1351 | 4.06\% | 25144 | 75.47\% | 4338 | 13.02\% | 1832 | 5.50\% | 7521 | 22.57\% |


| District | CVAP17 | Deviation | \% Deviation | HCVAP17 | \% HCVAP17 | WCVAP17 | \% WCVAP17 | BCVAP17 | \% BCVAP17 | ACVAP17 | \% ACVAP17 | HBACVAP17 | \% HBACVAP17 | HBAWCVP17 | \% HBAWCVP17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28225 | -2118 | -4.84\% | 2135 | 7.56\% | 12750 | 45.17\% | 8865 | 31.41\% | 3405 | 12.06\% | 14405 | 51.04\% | 14719 | 52.15\% |
| 02 | 34905 | 704 | 1.61\% | 2645 | 7.58\% | 16305 | 46.71\% | 13805 | 39.55\% | 1250 | 3.58\% | 17700 | 50.71\% | 18040 | 51.68\% |
| 03 | 32616 | 722 | 1.65\% | 2642 | 8.10\% | 17751 | 54.42\% | 7494 | 22.98\% | 3463 | 10.62\% | 13595 | 41.68\% | 13799 | 42.31\% |
| 04 | 33849 | 777 | 1.77\% | 1777 | 5.25\% | 22287 | 65.84\% | 6150 | 18.17\% | 2679 | 7.91\% | 10611 | 31.35\% | 10729 | 31.70\% |
| 05 | 34815 | -496 | -1.13\% | 1753 | 5.04\% | 27369 | 78.61\% | 3460 | 9.94\% | 1289 | 3.70\% | 6510 | 18.70\% | 6624 | 19.03\% |
| 06 | 32240 | -2076 | -4.74\% | 1684 | 5.22\% | 24208 | 75.09\% | 3691 | 11.45\% | 1433 | 4.44\% | 6802 | 21.10\% | 6910 | 21.43\% |
| 07 | 35686 | 1073 | 2.45\% | 1150 | 3.22\% | 29635 | 83.04\% | 3279 | 9.19\% | 799 | 2.24\% | 5228 | 14.65\% | 5398 | 15.13\% |
| 08 | 34520 | 746 | 1.70\% | 2524 | 7.31\% | 23525 | 68.15\% | 5342 | 15.48\% | 1807 | 5.23\% | 9660 | 27.98\% | 10080 | 29.20\% |
| 09 | 32843 | -433 | -0.99\% | 2417 | 7.36\% | 22753 | 69.28\% | 5572 | 16.97\% | 878 | 2.67\% | 8863 | 26.99\% | 9218 | 28.07\% |
| 10 | 34801 | 1105 | 2.52\% | 1496 | 4.30\% | 26022 | 74.77\% | 4470 | 12.84\% | 1797 | 5.16\% | 7777 | 22.35\% | 7976 | 22.92\% |


| District | CVAP18 | Deviation | \% Deviation | HCVAP18 | \% HCVAP18 | WCVAP18 | \% WCVAP18 | BCVAP18 | \% BCVAP18 | ACVAP18 | \% ACVAP18 | HBACVAP18 | \% HBACVAP18 | HBAWCVP18 | \% HBAWCVP18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 | 28280 | -2118 | -4.84\% | 2080 | 7.36\% | 12190 | 43.10\% | 9185 | 32.48\% | 3645 | 12.89\% | 14910 | 52.72\% | 15255 | 53.94\% |
| 02 | 35675 | 704 | 1.61\% | 3165 | 8.87\% | 16380 | 45.91\% | 13770 | 38.60\% | 1395 | 3.91\% | 18330 | 51.38\% | 18710 | 52.45\% |
| 03 | 33227 | 722 | 1.65\% | 2617 | 7.88\% | 17470 | 52.58\% | 8193 | 24.66\% | 3617 | 10.89\% | 14424 | 43.41\% | 14703 | 44.25\% |
| 04 | 33309 | 777 | 1.77\% | 1602 | 4.81\% | 22414 | 67.29\% | 6170 | 18.52\% | 2395 | 7.19\% | 10172 | 30.54\% | 10217 | 30.67\% |
| 05 | 34022 | -496 | -1.13\% | 1630 | 4.79\% | 27142 | 79.78\% | 3065 | 9.01\% | 1343 | 3.95\% | 6044 | 17.77\% | 6168 | 18.13\% |
| 06 | 32121 | -2076 | -4.74\% | 1832 | 5.70\% | 23977 | 74.65\% | 3801 | 11.83\% | 1336 | 4.16\% | 6964 | 21.68\% | 7076 | 22.03\% |
| 07 | 35416 | 1073 | 2.45\% | 1264 | 3.57\% | 29450 | 83.15\% | 3153 | 8.90\% | 835 | 2.36\% | 5252 | 14.83\% | 5412 | 15.28\% |
| 08 | 33594 | 746 | 1.70\% | 2492 | 7.42\% | 22445 | 66.81\% | 5445 | 16.21\% | 1799 | 5.36\% | 9721 | 28.94\% | 10080 | 30.01\% |
| 09 | 33178 | -433 | -0.99\% | 2219 | 6.69\% | 23167 | 69.83\% | 5753 | 17.34\% | 854 | 2.57\% | 8822 | 26.59\% | 9112 | 27.46\% |
| 10 | 35858 | 1105 | 2.52\% | 1657 | 4.62\% | 26925 | 75.09\% | 4195 | 11.70\% | 1938 | 5.40\% | 7806 | 21.77\% | 8031 | 22.40\% |


Source: Maptitude for Redistricting District Statistics window using U.S. Census Bureau 2010 Census Data and 2014-2018 5-Year ACS Data

User:
Plan Name: VAB Illustr Plan 10 Dist Alt 2 Mod
Plan Type:

## Measures of Compactness Report

| Wednesday, December 4, 2019 |  |  |  |  | 10:56 AM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sum | N/A | 0.00 | N/A | N/A |  |
| Min | 0.20 | N/A | 0.14 | 0.47 |  |
| Max | 0.53 | N/A | 0.56 | 0.88 |  |
| Mean | 0.39 | N/A | 0.37 | 0.74 |  |
| Std. Dev. | 0.11 | N/A | 0.14 | 0.14 |  |
| District | Reock | Perimeter | PolsbyPopper | MinConvexPoly |  |
| 01 | 0.32 |  | 0.21 | 0.61 |  |
| 02 | 0.20 |  | 0.14 | 0.47 |  |
| 03 | 0.43 |  | 0.43 | 0.77 |  |
| 04 | 0.51 |  | 0.46 | 0.84 |  |
| 05 | 0.38 |  | 0.42 | 0.86 |  |
| 06 | 0.28 |  | 0.30 | 0.70 |  |
| 07 | 0.53 |  | 0.56 | 0.86 |  |
| 08 | 0.29 |  | 0.24 | 0.63 |  |
| 09 | 0.41 |  | 0.40 | 0.81 |  |
| 10 | 0.50 |  | 0.50 | 0.88 |  |

User:
Plan Name: VAB Illustr Plan 10 Dist Alt 2 Mod
Plan Type:

## Political Subdivison Splits Between Districts

Wednesday, December 4, 2019
Total number of subdivisions:

| County | 0 |
| :--- | ---: |
| Voting District | 71 |

Number of subdivisions split into more than one district:

| County | 1 |
| :--- | ---: |
| Voting District | 23 |

Number of splits involving no population:
County

## Split Counts

## County

Cases where an area is split among 10 Districts: 1
Voting District
Cases where an area is split among 2 Districts: 20
Cases where an area is split among 3 Districts: 3

| County | Voting District | District | Population |
| :--- | :--- | ---: | ---: |
| Split Counties: |  | 01 |  |
| Virginia Beach City VA | 02 | 41,681 |  |
| Virginia Beach City VA |  | 03 | 44,503 |
| Virginia Beach City VA |  | 04 | 44,521 |
| Virginia Beach City VA |  | 05 | 44,576 |
| Virginia Beach City VA |  | 06 | 43,303 |
| Virginia Beach City VA |  | 07 | 41,723 |
| Virginia Beach City VA |  | 08 | 44,872 |
| Virginia Beach City VA |  | 09 | 44,545 |
| Virginia Beach City VA |  | 10 | 43,366 |
| Virginia Beach City VA |  | 44,904 |  |
| Split VTDs: |  | 02 |  |
| Virginia Beach City VA | Aragona | 06 | 2,125 |
| Virginia Beach City VA | Aragona | 02 | 5,155 |
| Virginia Beach City VA | Arrowhead | 04 | 2,324 |
| Virginia Beach City VA | Arrowhead | 2,392 |  |
| Virginia Beach City VA | Avalon | 02 | 4,441 |
| Virginia Beach City VA | Avalon | 04 | 146 |
| Virginia Beach City VA | Bayside | 02 | 595 |
| Virginia Beach City VA | Bayside | 05 | 1,766 |
| Virginia Beach City VA | Bonney | 02 | 688 |
| Virginia Beach City VA | Bonney | 06 | 2,754 |
| Virginia Beach City VA | Cromwell | 01 | 660 |
| Virginia Beach City VA | Cromwell | 10 | 2,561 |


| County | Voting District | District | Population |
| :---: | :---: | :---: | :---: |
| Virginia Beach City VA | Dahlia | 01 | 6,293 |
| Virginia Beach City VA | Dahlia | 04 | 1,417 |
| Virginia Beach City VA | Glenwood | 01 | 2,264 |
| Virginia Beach City VA | Glenwood | 10 | 2,071 |
| Virginia Beach City VA | Holland | 01 | 4,741 |
| Virginia Beach City VA | Holland | 08 | 3,079 |
| Virginia Beach City VA | Hunt | 08 | 2,022 |
| Virginia Beach City VA | Hunt | 10 | 1,703 |
| Virginia Beach City VA | Kingston | 05 | 1,694 |
| Virginia Beach City VA | Kingston | 06 | 812 |
| Virginia Beach City VA | Magic Hollow | 01 | 3,396 |
| Virginia Beach City VA | Magic Hollow | 08 | 3,913 |
| Virginia Beach City VA | Old Donation | 02 | 2,149 |
| Virginia Beach City VA | Old Donation | 05 | 3,467 |
| Virginia Beach City VA | Pembroke | 02 | 644 |
| Virginia Beach City VA | Pembroke | 05 | 382 |
| Virginia Beach City VA | Pembroke | 06 | 4,979 |
| Virginia Beach City VA | Point O' View | 02 | 1,051 |
| Virginia Beach City VA | Point O' View | 04 | 2,293 |
| Virginia Beach City VA | Providence | 03 | 0 |
| Virginia Beach City VA | Providence | 04 | 3,920 |
| Virginia Beach City VA | Rock Lake | 01 | 4,811 |
| Virginia Beach City VA | Rock Lake | 03 | 315 |
| Virginia Beach City VA | Rock Lake | 10 | 542 |
| Virginia Beach City VA | Rosemont Forest | 01 | 1,770 |
| Virginia Beach City VA | Rosemont Forest | 03 | 3,953 |
| Virginia Beach City VA | Shannon | 04 | 2,877 |
| Virginia Beach City VA | Shannon | 06 | 451 |
| Virginia Beach City VA | Shell | 02 | 3,256 |
| Virginia Beach City VA | Shell | 05 | 1,260 |
| Virginia Beach City VA | Shelton Park | 02 | 1,466 |
| Virginia Beach City VA | Shelton Park | 05 | 2,528 |
| Virginia Beach City VA | Timberlake | 01 | 4,022 |
| Virginia Beach City VA | Timberlake | 03 | 563 |
| Virginia Beach City VA | Timberlake | 04 | 1,949 |
| Virginia Beach City VA | Windsor Oaks | 01 | 1,197 |
| Virginia Beach City VA | Windsor Oaks | 08 | 5,310 |

# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION 

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

## PLAINTIFFS' EXHIBIT 7

Chart Prepared by Defendants' Expert Kimball Brace
VABCC2000.xis


## IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA NORFOLK DIVISION

Latasha Holloway, et al.,
Plaintiffs,
v.

City of Virginia Beach, et al.,
Defendants

## PLAINTIFFS' EXHIBIT 8

Supplemental Report From Plaintiffs' Expert Dr. Doug Spencer

## Supplemental Expert Report

Holloway, et al. v. City of Virginia Beach, et al., Civil Action No. 2:18-cv-0069

## Douglas M. Spencer

Professor of Law \& Public Policy
University of Connecticut
Visiting Professor of Law
Yale Law School

## SUMMARY

I provide this supplemental expert report to update my earlier reports in this litigation, and to supplement the answers to certain questions asked at my deposition on October 1, 2019.

As an update to my earlier reports, I analyzed the performance of three modified illustrative plans for Virginia Beach City Council elections produced by Plaintiffs' expert Dr. Anthony Fairfax in his supplemental expert report. Given that these modified illustrative plans were disclosed in Dr. Fairfax's supplemental report (contemporaneous with this report), they were not available when I wrote my earlier reports. I find that the Modified Illustrative Plan, the Modified Alternative Plan 1 and the Modified Alternative Plan 2 "perform," meaning that minority voters would be able to elect their candidates of choice. In other words, minority candidates of choice are usually not likely to be defeated due to white bloc voting in each set of majority-minority districts contained in the plans.

As a supplement to my deposition testimony, I also confirm certain findings of my original report by providing additional supporting information which I reserved my right to provide during the deposition. See Spencer Dep. at 95:22-96:21. Specifically, I have confirmed that there is not statistically significant evidence that minority voters preferred George Furman over Louis Jones in the 2010 election. This finding supports the opinions I have expressed in my earlier reports regarding which candidates were minority candidates of choice.

## ANALYSIS OF MODIFIED PLANS

In this section I analyze the potential cohesion in, and ameliorative effect of, three sets of possible majority-minority districts in Virginia Beach. This analysis supplements the performance analysis of Illustrative Districts that I provided in my original and rebuttal reports. A map of the Modified Illustrative Plan, Modified Alternative Plan 1, and Modified Illustrative Plan 2 are presented on the next page. Each plan has ten districts, marked by thick dark gray lines, overlaid on a map of current voting precincts. The two majority-minority districts in each modified illustrative plan are shaded green and orange.

On pp. 3-4 below I analyze the expected election totals in illustrative majority-minority districts for all candidates in races that featured a minority candidate, excluding George Furman. ${ }^{1}$ I estimate the predicted vote totals by aggregating the vote totals in the precincts within each district. There is evidence that the majority-minority districts in the Modified Illustrative Plan, Modified Alternative Plan 1, and Modified Alternative Plan 2 perform, meaning most minority candidates of choice that lost their election under the current at-large system would have won had they run in these alternative districts.

[^16]Finally, the minority candidate(s) of choice for each election are shaded. These candidates of choice represent individuals who received the strongest support among all minority voters, which I estimate in my original expert report and rebuttal report.


## DISTRICT 1



Notes: Actual election returns are reported as "At-large" elections.
Shaded rows indicate minority candidates of choice identified in my original and rebuttal reports.

* indicates minority candidate.


## DISTRICT 2

|  |  | At-Large | Modified Illustrative Plan | Modified <br> Alternative Plan 1 | Modified <br> Alternative Plan 2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 AL | Rouse* | 54.5 | 60.1 | 60.3 | 60.1 |
|  | Moss | 45.3 | 33.2 | 33.1 | 33.9 |
|  | Oliver | 45.2 | 44.6 | 43.9 | 43.7 |
|  | White | 27.4 | 32.6 | 33.0 | 32.5 |
|  | Bright* | 17.7 | 20.0 | 20.2 | 20.2 |
|  | Hubbard | 10.1 | 9.5 | 9.6 | 9.6 |
| 2016 KE | Abbott | 59.4 | 47.3 | 47.1 | 48.3 |
|  | Ross-Hammond* | 40.6 | 52.7 | 52.9 | 51.7 |
| 2014 RH |  | 48.3 | 36.3 | 36.1 | 36.9 |
|  | Johnston | 17.5 | 15.5 | 15.4 | 15.5 |
|  | Browder | 17.3 | 17.8 | 17.8 | 18.0 |
|  | Cabiness* | 16.8 | 30.4 | 30.8 | 29.5 |
| 2011 AL | Moss | 37.0 | 33.3 | 33.1 | 34.0 |
|  | Free | 33.2 | 24.1 | 23.9 | 24.5 |
|  | Sherrod* | 25.9 | 38.9 | 39.3 | 37.6 |
| 2010 AL | Bellitto | 49.4 | 39.9 | 39.7 | 40.0 |
|  | DeSteph | 44.8 | 34.0 | 33.8 | 34.5 |
|  | Moss | 30.1 | 27.2 | 26.9 | 27.5 |
|  | Erb | 22.5 | 19.6 | 19.5 | 20.6 |
|  | Redmond | 21.4 | 14.2 | 14.1 | 14.6 |
|  | Jackson ${ }^{*}$ | 20.3 | 42.5 | 43.1 | 41.7 |
|  | Cabiness* | 11.3 | 22.6 | 22.9 | 21.2 |
| 2010 PA | Henley | 54.4 | 46.6 | 46.4 | 47.5 |
|  | Bullock | 45.6 | 53.4 | 53.6 | 52.5 |
| 2008 AL | Wilson | 44.1 | 32.9 | 32.7 | 33.4 |
|  | Allen | 34.6 | 47.5 | 47.7 | 46.7 |

Notes: Actual election returns are reported as "At-large' elections.
Shaded rows indicate minority candidates of choice identified in my original and rebuttal reports.

* indicates minority candidate.


## FINDINGS

In the panel of figures below, I plot voter support for each of the minority candidates of choice that lost between 2008-2018 against the minority CVAP based on the 2014-2018 American Community Survey (ACS). Because there are so few precincts in these districts, I use a locally weighted smoother "loess" line that is flexible and represents how the data are actually structured. The gray regions are $95 \%$ confidence intervals. The plots that are shaded in red signal that the candidate would have won an election in these new districts based on the same voting patterns of their original elections.



To compare the performance of the majority-minority districts in each of the Illustrative Plan (that I evaluated in my original and rebuttal reports), the Modified Illustrative Plan, and the Modified Alternative Plans 1 and 2, I plot the margin of victory/defeat for each of the candidates of choice identified in my prior reports. With one exception (Bellitto in 2010), every minority candidate of choice performed better under all of the illustrative plans than under the at-large system of their original election, meaning the candidates would either increase their margin of victory, shrink their margin of defeat, or flip the result of their election from defeat to victory.

## 2018 At-Large Election

Note that two candidates were elected in this race. Under the current at-large system, Aaron Rouse earned the most votes out of six candidates and won the race by $9 \%$. Under the Illustrative Plan, Modified Illustrative Plan, Modified Alternative Plans 1 and 2, Rouse's margin of victory increased to $21 \%$ in District 1 and as much as $27 \%$ in District 2 .

Rouse
(District 1)


Rouse
(District 2)


Under the current at-large system, the second minority candidate of choice, Allison White, came in fourth out of six candidates and lost by $18 \%$. Under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, White's loss margin shrunk to 4-5 percent in District 1 and 10-12 percent in District 2.


2016 Kempsville District Election
Under the current at-large system, Amelia Ross-Hammond (the minority candidate of choice) was defeated by Jessica Abbott. Under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, Abbott would still have defeated Ross-Hammond in District 1, but Ross-Hammond would have won election in District 2.

Ross-Hammond (District 1)


Ross-Hammond
(District 2)


## 2014 Rose Hall District Election

Under the current at-large system, minority candidate of choice James Cabiness lost by 31.5 percent, earning fewer votes than three other candidates. Under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, Cabiness would have come in second (of four candidates) and would lose by 13-17 percent in District 1 and by just 3-7 percent in District 2.


## 2011 At-Large (Special Election)

Under the current at-large system, minority candidate of choice Prescott Sherrod lost by 11 percent and was defeated by two candidates. However, under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, Sherrod would have won his election in both District

## 1 and District 2.

## Sherrod <br> (District 1)



Sherrod
(District 2)


2010 At-Large Election
Note: two candidates were elected in this race. Under the current at-large system, the first minority candidate of choice was Rita Bellitto, a white female, who won the most votes of seven candidates and was elected. Under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, Bellitto would still win a seat in Districts 1 and 2.

## Bellitto <br> (District 1)



Bellitto
(District 2)


The second minority candidate of choice was Andrew Jackson, a black male, who came in 6th of seven candidates under the current at-large system. However, under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, Jackson would have won the most votes in District 2 (even more than Bellitto) and come in third in District 1, losing by 6-8 percent.


2010 Princess Anne District Election
Under the current at-large system, Barbara Henley defeated Tanya Bullock, who was the minority candidate of choice. However, under the Modified Illustrative Plan and the Modified Alternative Plans 1 and 2, Bullock would have won her election by $\mathbf{1 6 \%}$ in District 1 and by 5-7\% in District 2.

Bullock
(District 1)


## Bullock

(District 2)


2008 At-Large Election
Under the current at-large system, the minority candidate of choice Georgia Allen was defeated by Wilson. However, under the Modified Illustrative Plan, and the Modified Alternative Plans 1 and 2, Allen would have won her election by $\mathbf{9} \mathbf{- 1 0 \%}$ in District 1 and 13-15\% in District 2.


Allen (District 1)

Allen
(District 2)

## DEPOSITION FOLLOW-UP

With regard to the 2010 race between Louis Jones and George Furman, I stated during my deposition that I reserved the right to confirm whether there was a statistically significant difference between the estimated support of minority voters before being able to give a final answer to a question I was asked.

## p. 96 lines 6-21:

Q: If that race was deemed probative, you would agree that Mr. Jones was the minority candidate of choice in your original report?
A: I have checked that box, and I - but I would reserve the right to confirm that. If you'll note that these estimates don't have asterisks next to them, which is my designation that there's a statistically significant difference between vote totals, and I'd want to confirm that they're actually different.
Q: And if they're different, that might suggest that Furman was actually the minority candidate of choice in that race?
A: No. If they were different, it would suggest Furman definitely wasn't the candidate of choice.

I have confirmed that the estimated support among minority voters for Jones and Furman in 2010 is not statistically significantly different. According to King's Ecological Inference (EI), support for Mr. Jones was $56 \% \pm 14 \%$ while support for Mr. Furman was $44 \% \pm 16 \%$. All three methods of evaluation, including homogeneous precinct analysis, ecological regression, and King's EI, show that minority support for Jones was higher than for Furman, although the differences are not statistically significantly different. Thus, while I cannot say with statistical certainty that minority support for Jones is higher than for Furman, the statistical trends suggest that minority candidates preferred Jones over Furman.

I, Douglas M. Spencer, am over the age of 18 and fully competent to make this declaration. I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.

Date: March 16, 2020


Douglas M. Spencer, Ph.D
Professor of Law \& Public Policy
University of Connecticut
Visiting Professor of Law
Yale Law School


[^0]:    ${ }^{1}$ Under the "extremely unusual" current election system for city council in Virginia Beach, ECF No. 118-7 at 152:19-21, it is possible for candidates to lose their own "residency district," yet still win election to the Council, because the city votes at-large for candidates. See, e.g., id. at 156:321.

[^1]:    ${ }^{2}$ See U.S. Census Bureau, 2010 Census National Summary File of Redistricting Data 12 (2011), https://www2.census.gov/programs-surveys/decennial/2010/technical-documentation/complete-tech-docs/summary-file/nsfrd.pdf.
    ${ }^{3}$ See 2020 Census Operational Adjustments Due to COVID-19, U.S. Census Bureau, https://2020census.gov/en/news-events/operational-adjustments-covid-19.html (last visited June 28, 2020).
    ${ }^{4}$ Hansi Lo Wang (@hansilowang), Twitter (July 13, 2020, 11:59 PM), https://twitter.com/hansilowang/status/1282887389006966789.
    ${ }^{5}$ See U.S. Census Bureau, Understanding and Using American Community Survey Data: What All Data Users Need to Know, 1 (2018), https://www.census.gov/content/dam/Census/library/publications/2018/acs/acs_general_handboo k_2018.pdf.
    ${ }^{6}$ See id. at 6.
    ${ }^{7}$ See Citizen Voting Age Population (CVAP) Special Tabulation From the 2014-2018 5-Year American Community Survey (ACS), U.S. Census Bureau (2020),

[^2]:    ${ }^{8}$ Absent unusual circumstances, a showing that all three Gingles preconditions are satisfied suffices to demonstrate that a performing remedial district is possible. See Harding v. County of Dallas, 948 F.3d 302, 308 (5th Cir. 2020) ("[I]t is hard to see how the Gingles factors could be met if the alternative to the districting decision at issue would not enhance the ability of minority voters to elect the candidates of their choice." (internal quotation marks and citation omitted)). After all, the Gingles preconditions exist to ensure that Section 2 liability does not attach if the minority group in question cannot actually benefit from a change to single-member districts. Gingles, 478 U.S. at $49-51,50 \mathrm{n} .17$. In any event, Plaintiffs here are prepared to prove affirmatively that Virginia Beach could draw single-member districts that would perform for the HBA community by permitting the minority community to elect candidates of their choice.

[^3]:    ${ }^{9}$ Of course, Plaintiffs also intend to offer evidence at trial regarding electoral data in Virginia Beach that will demonstrate the political cohesiveness of the HBA community.
    ${ }^{10}$ This is not to minimize the importance of decennial census data as evidence in Section 2 litigation. Courts regard the decennial data as "presumptively accurate until proven otherwise." Benavidez, 638 F. Supp. 2d at 729. But this presumption is rebuttable. See id. And the presumption of an accurate decennial census in no way prevents courts from crediting other datasets that complement the decennial figures by providing additional detail, such as CVAP statistics from the

[^4]:    ${ }^{11}$ Yet another VRA case demonstrating the continued justiciability of Plaintiffs' claim is United States v. Blaine Cty., 157 F. Supp. 2d 1145 (D. Mont. 2001). As late as July 2001-after the release of 2000 Census data - the parties had submitted only pre-2000 population data. Id. at 1147, 1147 n.1. Yet, the district court expressed no doubt as to its jurisdiction in denying the defendant's motion for summary judgment. Id. at 1152. Clearly, the court in Blaine County did not regard the case as limited to the issue of whether the minority vote was diluted "under" 1990 Census data, and thus did not think the case became moot once 2000 Census data were available.
    ${ }^{12}$ Similarly, Virginia Beach's current residency district plan (developed using 2010 Census data), whether replaced by this litigation or in its original form, will also serve as a baseline for the creation of the City's new residency district plan (even though the city does not currently need to seek preclearance). For example, Kimball Brace, the consultant hired to draw the City's residency plan following the 2010 Census, clearly used 2000 Census data as a baseline when drawing the city's residency districts in 2011. Ex. 7 (Brace Chart). Thus, even the City's own historical practice shows that 2010 Census data does not become irrelevant to map drawing following the next decennial census.

[^5]:    ${ }^{13}$ See Alissa Skelton \& Stacy Parker, Guy Tower prevails in Beach District; Michael Berlucchi wins Rose Hall council seat in Virginia Beach, Virginian-Pilot (Nov. 5, 2019), https://www.pilotonline.com/government/elections/vp-nw-elx 19-vb-council-1106-20191106-jply66r7hbhnpbuskqxu5azefa-story.html.
    ${ }^{14}$ The Court could potentially order an interim ranked-choice-voting remedy that takes effect as soon as the November 2020 election. This remedy could be fashioned without using any census data, as it does not involve drawing districts. While Plaintiffs take no position at this time on whether the Court should order interim relief for the November 2020 election, Plaintiffs note that the Court would have jurisdiction to do so. Even in cases where courts find that it is too close to an election to order relief, they do so in an exercise of discretion, not because the impending election presents a jurisdictional problem. See Benisek v. Lamone, 138 S. Ct. 1942, 1944-45 (2018) (interest in avoiding disruption of impending election "supported the District Court's discretionary decision to deny a preliminary injunction and to stay the proceedings").

[^6]:    ${ }^{15}$ Supra Section III.A.I.

[^7]:    ${ }^{17}$ Plaintiffs have also provided evidence that it is possible to draw at least one district based on Hispanic and African-American residents. See ECF No. 115, Exhibit 2 at 10.

[^8]:    ${ }^{19}$ See, e.g., ECF No. 118 at 20 (Plaintiffs noting that Defendants' "battle-of-the-experts" arguments at the summary judgment stage were inappropriate).

[^9]:    ${ }^{20}$ This is even assuming that Fairley remains good law. Notably, the Fifth Circuit decided this case in 1974-and relied on standing elements that are no longer in use-long before the Supreme Court decided the seminal Section 2 case, Thornburg v. Gingles, 478 U.S. 30 (1986) and the seminal case on standing, Lujan, 504 U.S. at 555.

[^10]:    ${ }^{21}$ Furthermore, Virginia Beach itself has treated the HBA community as cohesive. In 2011, for example, the city touted the City Council's attempt to create a majority-minority district (albeit one that only dictates the residence of the candidate, not the voters that may cast ballots in that district). ECF No. 118-9 (City Atty. Letter to Andrew Jackson). That district, the Centerville District, is comprised of Hispanic, Black, and Asian voters. ECF No. 118-10 (Virginian-Pilot article); ECF No. 118-11 (Robert Dyer Dep.) at 39:2-16. In fact, the Centerville District is just shy of being a majority-minority district, with $45.91 \%$ HBA CVAP. ECF No. 115-1 at 69. But plainly, the city saw those minority groups as a cohesive group such that the creation of a district in which there was an HBA majority would satisfy those communities. See, e.g., ECF No. 118-11 (Robert Dyer Dep.) at 39:2-16.

[^11]:    ${ }^{1}$ As in my two prior reports, in this supplemental report I include the HBACVAP percentages for both Hispanic, Black alone, and Asian alone individuals as well as Hispanic, Black and white (mixed race), and Asian alone individuals. The numbers referred to in the text and tables are the Hispanic, Black alone, and Asian alone percentages unless specifically noted otherwise.

[^12]:    ${ }^{3}$ Alternative Plan 2 continues to consist of only Block Groups for District 1 and 2 and thus CVAP calculations for these districts do not require disaggregation and aggregation of ACS data.

[^13]:    ${ }^{4}$ Political subdivision splits in this context refer to Voting Tabulation Districts (VTDs).

[^14]:    Note: Variables with 17 \& 18 suffix denote 2013-2017 \& 2014-2018 5-Year ACS; HBAWCVP includes Hispanic, Black, and Asian CVAP plus Black and White CVAP mixed persons

[^15]:    Note: Variables with 17 \& 18 suffix denote 2013-2017 \& 2014-2018 5-Year ACS; HBAWCVP includes Hispanic, Black, and Asian CVAP plus Black and White CVAP mixed persons

[^16]:    ${ }^{1}$ As I explain in my original expert report, rebuttal report, and deposition (see Spencer Dep. at 85-87) I exclude George Furman from my analysis because in three races against seven different candidates, Mr. Furman always came in last and never earned the support of minority voters. Elections featuring Mr. Furman thus do not provide a setting that is probative of the preferences of minority voters in Virginia Beach.

