## IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF FLORIDA

Case No. 1:22-cv-24066-KMM
GRACE, INC., et al.,
Plaintiffs,
v.

CITY OF MIAMI,
Defendant.

## PLAINTIFFS' NOTICE OF FILING ADMITTED TRIAL EXHIBITS (VOLUME III of III)

Pursuant to Local Rule 5.3(b)(2) and the Court's Paperless Order Scheduling Trial (ECF
32), Plaintiffs file the attached exhibits admitted into evidence at trial:s

| Plfs.' <br> Tr. Ex. | Description |
| :---: | :--- |
| 60 | Yanelis Valdes State ID |
| 61 | Jared Johnson State ID |
| 62 | Alexandra Contreras Voter Card |
| 63 | Steven Miro Voter Card |
| 64 | 1997 Plan |
| 65 | 2003 Plan |
| 66 | 2013 Plan |
| 67 | 2022 Plan |
| 68 | Feb. 7, 2022 Draft |
| 69 | Feb. 22, 2022 Draft/Base Plan |
| 70 | Russell Sketch |
| 71 | Initial Russell Plan |
| 72 | Revised Russell Plan |
| 73 | Reyes Plan |
| 76 | 2023 Plan |
| 77 | Version 12 |
| 78 | D1 Alt Map (Version 14) |
| 79 | D2 Alt Map |
| 80 | D3 Alt Map v1 |


| 81 | D3 Alt Map v2 |
| :---: | :--- |
| 82 | D5 Alt Map |
| 83 | Areas Moved from 2022 Plan to 2023 Plan |
| 84 | Map Comparing Version 12 to 2023 Plan |
| 119 | Report of Dr. Bryant Moy |
| 120 | Dr. Bryant Moy's CV |
| 121 | Report of Dr. Carolyn Abott |
| 122 | Report of Dr. Cory McCartan |
| 123 | March 29, 2023 Preliminary Injunction Hearing Transcript Excerpt |

Respectfully submitted February 2, 2024,

## |s/ Caroline A. McNamara

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GRACE, INC., et al.,
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EXPERT REPORT OF DR. BRYANT MOY
[02/10/2023]

# Racially Polarized Voting in Miami, Florida 

Bryant J. Moy, PhD
February 10, 2023

## 1 Executive Summary

In this report, I examine past election data from the City of Miami, Florida, to determine whether and the extent to which racially polarized voting exists. Racially polarized voting (RPV) exists if minority voters systematically prefer one candidate and the majority ethnic group preferences another. I examine twenty elections between 2017 to 2021. Of the twenty elections, six were endogenous citywide elections, and fourteen were exogenous elections from the federal, county, or state levels. I conclude the following:

- Racially polarized voting exists in ten of the twenty elections studied.
- For endogenous (municipal) elections, two of six exhibited signs of racially polarized voting. In those contests, the Latino-preferred candidate prevailed over the Anglo-preferred candidate.
- For exogenous elections, eight of the fourteen exhibited signs of racially polarized voting. In five of those eight contests, the Latino-preferred candidate won, blocking either the Anglo-preferred candidate, the Black-preferred candidate or both.
- The Latino-preferred candidate won the majority of polarized races at 70\% (7/10). Black- and Anglopreferred candidates won $50 \%(4 / 8)$ and $33 \%(3 / 9)$ of the polarized contests they were involved in.
- Black and Anglo voters tended to have the same preferred candidates in six of the ten races with racially polarized voting. Alternatively, Black and Latino voters had the same candidate once in polarized races.


## 2 Background and Qualifications

I am a Data Science Faculty Fellow at the Center for Data Science and a Visiting Assistant Professor in the Wilf Family Department of Politics at New York University. ${ }^{1}$ I received a Ph.D. in Political Science from Washington University in St. Louis in 2022. My concentration in graduate school was American Politics and Political Methodology.

My current area of expertise is related to local government, race and ethnic politics, and the use of advanced statistical models to understand political phenomena. My research has been published in the Journal of Experimental Political Science and Political Behavior. Other writings have appeared in the Oxford Bibliographies in Political Science and the Political Science Educator.

My research has won the Best Poster Award from the Society of Political Methodology, and I have received the Susan Clarke Young Scholar Award from the Urban and Local Politics Section of the American Political Science Association. In addition, I provide a copy of my curriculum vitae in the Appendix of this report.

[^0]
## 3 Racially Polarized Voting

Racially polarized voting occurs when a minority group votes for one candidate and the dominant racial or ethnic group votes for an opposing candidate. For the City of Miami, Florida, we are interested in three ethnic groups: Anglos, Blacks, and Latinos. Indeed, according to the 2020 Census, Latinos of any race make up $70 \%$ of the population, while non-Hispanic whites - Anglos - and non-Hispanic Blacks make up $14 \%$ and $12 \%$, respectively. ${ }^{2}$

I classify the candidates as Latino-, Black-, or Anglo-preferred if there is sufficient evidence that the ethnic group votes in a cohesive block. For this report, I use the $60 \%$ threshold of support as a sign of cohesive voting. In other words, if a candidate receives higher than $60 \%$ support among members of the same ethnic group, that candidate is that group's preferred candidate. If racially polarized voting exists, I would expect to see the ethnic groups have different preferred candidates in large numbers.

To assess racially polarized voting patterns, I will rely on ecological inference. In the next section, I detail ecological inference and my approach.

## 4 Methodology: Ecological Inference

Researchers typically examine patterns of racial polarization by inferring individual voting behavior from aggregate data - also known as ecological inference. We infer an individual's voting behavior by examining voting patterns within and between precincts. Ecological inference estimates racial group-level preferences from aggregate precinct data.

I conduct this analysis using two approaches. First, I examine each election and present a bivariate scatterplot between the ethnic composition of the electorate and candidate vote share. In this analysis, each dot represents a precinct. The x-axis will indicate the electorate's composition, and the y -axis will indicate the candidates' vote share. I draw a fitted line and display the correlation coefficient and the corresponding p-value, which will indicate whether the correlation is statistically significant. For a racial group to have a preferred candidate, I expect the fitted line to fall over the $60 \%$ threshold of candidate vote share when the precincts are racially homogeneous. The fitted line extrapolates to racially homogeneous precincts even when no observed precinct exists. Second, I run an iterated ecological inference algorithm using eiCompare, which estimates a candidate's support among each ethnic group. ${ }^{3}$ This method is widely accepted to estimate candidate support among ethnic or racial groups (Collingwood et al. 2020; King and Roberts 2016; Lau, Moore, and Kellermann 2020).

Researchers typically use the voting age population or citizen voting age population estimate derived from the U.S. Census and predict the racial composition of voters in a given geographic area (i.e., precincts). Fortunately, Miami-Dade County provides a publicly available count of registered voters by precinct and racial/ethnic group using the information on their voter file. ${ }^{4}$ Using the Miami-Dade County data and voter file is preferable to the U.S. Census and prediction approach because it provides a more accurate measure of the racial composition of the electorate.

## 5 List of Elections Analyzed and Additional Statistics

I examine twenty elections, including six municipal-level (endogenous) contests and fourteen non-municipal (exogenous) contests. Endogenous elections originate from the city itself. This includes races for City Mayor and City Commissioner. Exogenous races are contests that overlap with Miami precincts but do not originate at the city level. Examples of exogenous races include contests for the President, Governor, and County Mayor. Analyzing exogenous races - alongside endogenous one - are essential because they provide

[^1]additional information about the nature of racially polarized voting. The exogenous contests examined in this report are similar to the city-level races in that most are non-partisan local contests. Yet, we benefit from the varying levels of competitiveness found in exogenous races. Indeed, most of the endogenous municipal contests were non-competitive. Thus, it is probative to endogenous and exogenous elections.

In my sample of elections, I include all municipal (endogenous) elections from 2017 to 2021. Beyond municipal elections, I include exogenous contests that have sufficient overlap with Miami precincts. In Table 1 I provide a full list of elections analyzed.

Table 2 shows the composition of the 2020 citizen voting age population using the district line from the 2013 plan. Similarly, Table 3 shows the 2020 citizen voting age population using the district lines from the current 2022 enacted plan.

Table 1: List of Elections Analyzed

| Year | Election | Endo/Exo | Office |
| :--- | :--- | :--- | :--- |
| 2021 | Municipal | Endogenous | City Mayor |
| 2021 | Municipal | Endogenous | City Comm. Dist. 3 |
| 2021 | Municipal | Endogenous | City Comm. Dist. 5 |
| 2017 | Municipal | Endogenous | City Mayor |
| 2017 | Municipal | Endogenous | City Comm. Dist. 3 |
| 2017 | Municipal | Enogenonos | City Comm. Dist. 4 |
| 2020 | General | Exogenous | Congress, 24 |
| 2020 | General | Exogenous | County Comm. Dist. 3 |
| 2020 | General | Exogenous | County Mayor |
| 2020 | General | Exogenous | Clerk of the Court |
| 2020 | General | Exogenous | President |
| 2020 | Primary | Exogenous | County Property Appraiser |
| 2020 | Primary | Exogenous | County Judge, Grp. 24 |
| 2020 | Primary | Exogenous | County Judge, Grp. 9 |
| 2020 | Primary | Exogenous | Circuit Judge, Grp. 75 |
| 2020 | Primary | Exogenous | Circuit Judge, Grp. 67 |
| 2020 | Primary | Exogenous | Circuit Judge, Grp. 65 |
| 2020 | Primary | Exogenous | Circuit Judge, Grp. 57 |
| 2020 | Primary | Exogenous | Circuit Judge, Grp. 55 |
| 2018 | General | Exogenous | Governor |

Table 2: Citizen Voting Age Population by District, 2013 Plan

| District | Map/Plan | Anglo | Black | Latino |
| :--- | :--- | :--- | :--- | :--- |
| District 1 | 2013 | $4.2 \%$ | $7.6 \%$ | $87.4 \%$ |
| District 2 | 2013 | $36.8 \%$ | $9.2 \%$ | $48.7 \%$ |
| District 3 | 2013 | $9.5 \%$ | $4.2 \%$ | $85.8 \%$ |
| District 4 | 2013 | $7.3 \%$ | $1 \%$ | $90.8 \%$ |
| District 5 | 2013 | $8 \%$ | $59.8 \%$ | $32.3 \%$ |

Table 3: Citizen Voting Age Population by District, 2022 Enacted Plan

| District | Map/Plan | Anglo | Black | Latino |
| :--- | :--- | :--- | :--- | :--- |
| District 1 | 2022 | $5 \%$ | $8.1 \%$ | $86 \%$ |
| District 2 | 2022 | $40.4 \%$ | $8.7 \%$ | $44 \%$ |
| District 3 | 2022 | $9.9 \%$ | $3.9 \%$ | $85.6 \%$ |
| District 4 | 2022 | $8.2 \%$ | $1.3 \%$ | $89.6 \%$ |
| District 5 | 2022 | $9 \%$ | $58.1 \%$ | $30.8 \%$ |

Table 4: 2020 Citizen Voting Age Population

| City | Anglo | Black | Latino |
| :--- | :--- | :--- | :--- |
| Miami | $14 \%$ | $17 \%$ | $67 \%$ |

## 6 Does RPV Exist Across Elections?

In this section, I examine twenty races in the City of Miami. The first six are municipal-level endogenous races, including the mayor and city commissioners. The next fourteen races are exogenous and include races for federal office (i.e., Congress and President), county offices (i.e., county commission, county mayor, county judge, and property appraiser), and state government (Governor).

### 6.1 Election 1: Mayor 2021

The 2021 Miami mayoral contest was between five candidates: Francis Suarez, Max Martinez, Marie Exantus, Anthony Dutrow, and Francisco Pichel. Francis Suarez won the race with overwhelming support by receiving $78.6 \%$ of the vote, with the next closest candidate - Max Martinez - receiving only $11.6 \%$ of the vote. Figure 1 shows the bivariate relationship between the precinct's demographic composition and Suarez's support. First, we can examine the fitted line in the scatterplot and extrapolate the estimated vote share of the candidate if there were homogeneous precincts (i.e., a precinct with all Anglos, Blacks, or Latinos). Across all groups, Suarez would have received higher than $60 \%$ of the vote. Second, these results are verified using the ecological inference algorithm to estimate the candidate's vote share if only one race or ethnic group voted (Collingwood et al. 2020; King and Roberts 2016; Lau, Moore, and Kellermann 2020). Indeed, Francis Suarez is estimated to receive over $70 \%$ support from all racial groups.

I find no evidence of racially polarized voting in this election.

Figure 1: Scatterplot: Race/Ethnic Composition by Candidate Vote Share




Figure 2: Estimated Candidate Support by Race/Ethnicity




### 6.2 Election 2: District 32021

In 2021, the City of Miami held an election for District 3 City Commissioner between four candidates: Joe Carollo, Andriana Oliva, Quinn Smith, and Miguel Soliman. Joe Carollo won with $64.4 \%$ of the vote, while Quinn Smith received the second most votes at $21.8 \%$. Figure 3 depicts the bivariate relationship between the racial composition of the electorate and candidate choice. The Anglo-preferred candidate is Quinn Smith, as shown by the positive relationship between Anglo share of the electorate and Smith vote share. In contrast, as the share of Anglo voters increases, the share of Carollo votes declines. The Latino-preferred candidate is Joe Carollo. As the Latino share of the electorate increases, the share of Carollo votes increase, and the share of Smith votes decrease. I find no relationship between the Black share of the electorate and candidate vote choice. This finding (or lack of one) is driven by the low proportions of Black voters within the commission district. Indeed, the Black share of the electorate is lower than $5 \%$ across every precinct in this district.

I find evidence that racially polarized voting exists in this district between Anglos (who preferred Smith) and Latinos (who preferred Carollo). Joe Carollo - the Latino-preferred candidate - won the race.

Figure 3: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


### 6.3 Election 3: District 52021

The City of Miami held an election for District 5 City Commissioner between seven candidates: Francois Alexandre, Zico Fremont, Michael Hepburn, Christine King, Revran Lincoln, Stephanie Thomas, and Jeffrey Watson. Christine King won with $64.92 \%$ of the vote, with Jeffrey Watson receiving the second most votes at $15.81 \%$. Figure 4 depicts the bivariate relationship between electorate demographics and candidate vote choice. The Black-preferred candidate and the Latino-preferred candidate was Christine King. I find no evidence that Anglo support for any candidate reached the $60 \%$ threshold.

I find no evidence of racially polarized voting in this election.

Figure 4: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


### 6.4 Election 4: Mayor 2017

Miami held an election for Mayor in 2017 between four candidates: Francis Suarez, Williams Armbrister, Christian Canache, and Cynthia Jaquith. Francis Suarez won with $85.81 \%$ of the vote, with Cynthia Jaquith receiving $5.47 \%$ of the vote. Figure 5 depicts the bivariate relationship between electorate demographics and candidate choice. Across all racial and ethnic groups, Suarez was the preferred candidate.

I find no evidence of racially polarized voting in this contest.

Figure 5: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 6: Estimated Candidate Support by Race/Ethnicity




### 6.5 Election 5: City Commissioner District 32017

Miami held an election for District 3 City Commissioner on December 7th between seven candidates. This contest proceeded to a runoff election between Joe Carollo and Alfonzo Leon. I analyze the runoff election. Joe Carollo won with $52.7 \%$ of the vote. Alfonzo Leon was the Anglo- and Black-preferred candidate. Both groups were cohesive in their support ( $95.7 \%$ and $99 \%$ ). The Latino-preferred candidate was Joe Carollo. I estimate the Latino support for Carollo to be $60.8 \%$, which is near the threshold. It's important to note that most precincts in this district had a Latino super-majority. Indeed, no precinct in this district had less than $50 \%$ Latino share of the electorate.

I find evidence of racially polarized voting in this contest. The Latino-preferred candidate prevailed.

Figure 7: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 8: Estimated Candidate Support by Race/Ethnicity


### 6.6 Election 6: District 42017

Miami held an election for District 4 Commissioner between three candidates: Manolo Reyes, Ralph Rosado, and Denise Turros. Manolo Reyes won the election with $56.74 \%$ of the vote, with Ralph Rosado receiving the second most votes at $36.15 \%$. Figure 9 depicts the bivariate associations between the racial composition of the electorate and vote choice. No candidates were deeply preferred by any racial group, as shown by the lack of relationships throughout Figure 9. District 4 is a predominantly Latino district with all precincts having more than $70 \%$ Latino electorate.

I find no evidence of racially polarized voting in this election.

Figure 9: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


### 6.7 Election 7: Congress 242020

The northern part of Miami sat in Florida's 24th Congressional District prior to the 2022 redistricting. I examine precincts in the City of Miami. In the 2020 election, there were three candidates in the race: Frederica Wilson (Democrat), Lavern Spicer (Republican), and Christina Olivo (Independent). Frederica Wilson was the preferred candidate among Black voters. I do not find evidence that Anglo or Latino voters had a preferred candidate. As Figure 11 shows, support for Frederica Wilson was only greater than $60 \%$
among Black voters, even though all racial groups nominally supported Wilson. While the Miami portion of this congressional district was majority Black, Wilson won the plurality of the votes in both the Anglo and Latino majority precincts. Wilson won Miami precincts with $76.5 \%$ of the vote.

I find no evidence of racially polarized voting across the Miami precincts in this election.

Figure 10: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


Figure 11: Estimated Candidate Support by Race/Ethnicity




### 6.8 Election 8: County Commission 32020

The exogenous election of County Commissioner District 3 was between Keon Hardemon and Gepsie Metellus. If the election were held in Miami precincts, Hardemon would have won with $66.7 \%$. The Black-preferred and Latino-preferred candidate was Keon Hardemon, and the Anglo-preferred candidate was Gepsie Metellus.

I find evidence that racially polarized voting exists between the Miami precincts of County Commission 3. The Black and Latino preferred candidate (Keon Hardemon) won against the Anglo-preferred candidate (Gepsie Metellus).

Figure 12: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 13: Estimated Candidate Support by Race/Ethnicity




### 6.9 Election 9: County Mayor 2020

The 2020 Miami-Dade County Mayor race was between five candidates: Daniella Levine Cava, Esteban Bovo, Alex Penelas, Xavier Suarez, and Monique Barley. During the runoff election, Daniella Levine Cava won with $54 \%$ of the vote. I analyze the runoff results in the Miami precincts. Figure 14 depicts the bivariate association between the electorate's racial composition and the candidate's vote share. The Black- and Anglo-preferred candidate was Daniella Levine Cava. The Latino-preferred candidate was Esteban Bovo. Latino support for Bovo is estimated near the $60 \%$ threshold.

I find evidence of racially polarized voting in this contest. The Black- and Anglo-preferred candidate won.

Figure 14: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


Figure 15: Estimated Candidate Support by Race/Ethnicity


### 6.10 Election 10: Clerk 2020

The contest for the County Clerk of the Courts was between two candidates: Harvey Ruvin (Democrat) and Rubin Young (Independent). I use Miami precincts in this analysis. Harvey Ruvin won with $76.5 \%$ of the vote in Miami precincts. All racial and ethnic groups preferred Harvey Ruvin.

I find no evidence of racially polarized voting in this contest.

Figure 16: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 17: Estimated Candidate Support by Race/Ethnicity


### 6.11 Election 11: President 2020

The 2020 Presidential race was primarily between Donald Trump (Republican) and Joseph Biden (Democrat). I analyze Miami precincts only. Biden won Miami precincts with $59 \%$ of the vote. The Anglo and Black-preferred candidate was Joseph Biden, while the Latino-preferred candidate was Donald Trump. Latino cohesion was near the $60 \%$ threshold. Black and Anglo support for Biden was cohesive at an estimated $95 \%$ and $80 \%$, respectively.

I find evidence of racially polarized voting in this contest. The Black and Anglo-preferred candidate (Biden) won.

Figure 18: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 19: Estimated Candidate Support by Race/Ethnicity




### 6.12 Election 12: County Property Appraiser 2020

The County Property Appraiser election was between Pedro Garcia and Marisol Zenteno. While the Anglopreferred candidate was Marisol Zenteno, I fail to find evidence that Latinos or Black greatly preferred either. In other words, while Latinos nominally supported Garcia ( $58 \%$ ) and Blacks supported Zenteno ( $53 \%$ ), neither Latino nor Black preferred a candidate over $60 \%$ (See Figure 21). Zenteno won Miami precincts with $51 \%$ of the vote.

I find no evidence of racially polarized voting in this contest.

Figure 20: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 21: Estimated Candidate Support by Race/Ethnicity




### 6.13 Election 13: County Judge 242020

The County Judge Group 24 election was between Christine Bandin and Shaun Spector. Analyzing Miami precincts only, Christine Bandin won the race with $78 \%$ of the vote. Bandin was the preferred candidate by all racial and ethnic groups.

I find no evidence of racially polarized voting in this contest.

Figure 22: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 23: Estimated Candidate Support by Race/Ethnicity




### 6.14 Election 14: County Judge 92020

The County Judge (Group 9) election was between Joseph Mansfield and Miguel Mirabal. In the Miami precincts, Miguel Mirabal won the race with $53 \%$ of the vote. The Black and Anglo-preferred candidate was Mansfield, while the Latino-preferred candidate was Mirabal.

I find evidence of racially polarized voting in this contest with the Black and Anglo-preferred candidates losing.

Figure 24: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 25: Estimated Candidate Support by Race/Ethnicity




### 6.15 Election 15: Circuit Judge 752020

The Circuit Judge (Group 75) race was between Rosy Aponte and Dava Tunis. Aponte won the Miami precincts with $56 \%$ of the vote. I find no clear evidence that Black voters preferred Aponte to Tunis. Aponte support among Black voters was $58 \%$, which is lower than the $60 \%$ threshold. The Anglo-preferred candidate was Dava Tunis. The Latino-preferred candidate was Rosy Aponte.

I find evidence of racially polarized voting in this contest. The Latino-preferred candidate won.

Figure 26: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 27: Estimated Candidate Support by Race/Ethnicity


### 6.16 Election 16: Circuit Judge (Group 67) 2020

The Circuit Judge (Group 67) contest was between Marcia Hansen and Mavel Ruiz. In Miami precincts, Mavel Ruiz won with $56.8 \%$ of the vote. The Black-preferred candidate was Hansen, while the Latinopreferred candidate was Ruiz. Anglos slightly preferred Ruiz ( $55 \%$ ), but the evidence is inconclusive as it did not reach the threshold of $60 \%$.

I find evidence of racially polarized voting in this contest. The Latino-preferred candidate won.

Figure 28: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


Figure 29: Estimated Candidate Support by Race/Ethnicity




### 6.17 Election 17: Circuit Judge (Group 65) 2020

The Circuit Judge (Group 65) election was between Denise Martinez-Scanziani and Thomas Rebull. If the contest was held in only Miami precincts, Martinez-Scanziani would have won with $51 \%$ of the vote. The Black-preferred candidate was Rebull, winning $59.8 \%$ of their vote. I do not find clear evidence that Latinos or Anglos had a preferred candidate. As shown in Figure 31, Anglos supported Rubell at 51.2\%, and Latinos preferred Martinez-Scanziani at $56.5 \%$. In all cases, support for the preferred candidate did not reach $60 \%$.

I find no evidence of racially polarized voting in this contest.

Figure 30: Scatterplot: Race/Ethnic Composition by Candidate Vote Share


Figure 31: Estimated Candidate Support by Race/Ethnicity



### 6.18 Election 18: Circuit Judge (Group 57) 2020

The Circuit Judge (Group 57) election was between Carmen Cabarga and Roderick Vereen. Carmen Cabarga won Miami precincts with $56.6 \%$ of the vote. The Black and Anglo-preferred candidate was Roderick Vereen, while the Latino-preferred candidate was Carmen Cabarga.

I find evidence of racially polarized voting in this contest. The Latino-preferred candidate won.

Figure 32: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 33: Estimated Candidate Support by Race/Ethnicity




### 6.19 Election 19: Circuit Judge (Group 55) 2020

The Circuit Judge (Group 55) contest was between Olanike Adebayo and Joe Perkins. Adebayo won Miami precincts with $51.4 \%$ of the vote. The Black and Anglo-preferred candidate was Adebayo. While both groups have higher than $60 \%$ cohesion in voting, the cohesion rate among Blacks were on the lower end of the spectrum ( $60.04 \%$ ). The Latino-preferred candidate was Joe Perkins.

I find evidence of racially polarized voting in this contest. The Black and Anglo-preferred candidate won the Miami precincts.

Figure 34: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 35: Estimated Candidate Support by Race/Ethnicity




### 6.20 Election 20: Governor 2018

The 2018 gubernatorial race was primarily between Ron Desantis (R) and Andrew Gillum (D). If the contest was held in only Miami precincts, Gillum would have won with $65 \%$ of the vote. In Figure 36, I plot the share of the electorate by ethnicity, and vote shares of the top two vote receiving candidates. There's sufficient evidence that Blacks and Anglos preferred Andrew Gillum to Ron DeSantis. However, Latinos support was split between DeSantis at $52.6 \%$ and Gillum at $45.4 \%$. Thus, Latino support was not cohesive.

I find no evidence of racially polarized voting in this contest.

Figure 36: Scatterplot: Race/Ethnic Composition by Candidate Vote Share







Figure 37: Estimated Candidate Support by Race/Ethnicity


## 7 Threshold Analysis

The analysis thus far provides evidence of racially polarized voting. With a sample of twenty elections in the City of Miami between 2017 and 2021, I found ten contests showing discernible patterns of racially polarized voting. In this section, I estimate the proportion of Black, Anglo, and Latino registered voters required for their preferred candidate to prevail.

To estimate this threshold proportion, I need turnout by ethnicity, the proportion of registered voters by ethnicity, the estimated support of the group-preferred candidate, and the total number of registered voters in the area. These numbers come from two sources: (1) the turnout rates and the registered voter rate are taken from the voter file, and (2) the estimated support for the group's preferred candidate is derived from ecological inference. Using these quantities, I estimate the proportion of registered voters needed to elect the group-preferred candidate. In other words, this analysis will show how the Black-preferred candidate would have done if the share of Black registered voters varied. I do this analysis for all ethnic groups that have a preferred candidate.

It is important to note that I use registration numbers rather than citizen voting age population. Using registration rates by ethnicity provides a more accurate depiction of racially polarized voting at this level. Generally, the citizen voting age population is less precise at the precinct level, where much of our analysis primarily takes place. For example, a few precincts have more registered voters of a particular race than the estimated citizen voting age population.

In Figure 38, I plot the relationship between the number of registered voters in the precinct and the CVAP. They are correlated between .97 and .98 . Furthermore, in Figure 39, I plot the same relationship using the group's share of registered voters and the group's share of CVAP. I again find a high correlation between the variables. Thus, I use the registered voters for my analysis. For reference, if you want to calculate the estimated share of Black CVAP from the Black share of registered voters, you will subtract 0.2 percentage points from the Black share of registered voters. For Anglos, you would subtract two percentage points from the Anglo share of registered voters to estimate the Anglo CVAP. Lastly, to estimate Latino

CVAP, you would add seven percentage points to the Latino CVAP. ${ }^{5}$

Figure 38: Registration and 2019 CVAP: Miami Precincts


[^2]Figure 39: Share of Registered Voters and Share of 2019 CVAP: Miami Precincts


I run and interpret results for the ten contests exhibiting racially polarized voting patterns. For ease and reliability of computation, I estimate the vote share as if only three ethnic groups were voting: Blacks, Anglos, and Latinos.

Interpreting the Threshold Plots. If the contest had a group-preferred candidate, I estimate the proportion of registered voters needed for that candidate to be elected with a majority vote. The x -axis is the group's share of the registered voters. The y-axis is the preferred candidate's estimated vote share. The black line is how the share of registered voters translates to a candidate's vote share. I draw a dashed line across the $50 \%$ vote share to indicate when the candidate reaches a majority. I draw a vertical red line at the point where the candidate is elected.

The blue line will show the composition of the voting electorate. For example, the point at which the grey and blue lines intersect should be interpreted as the electorate's composition when their preferred candidate wins. Furthermore, when the blue line is above the black line, the ethnic group's preferred candidate is receiving above-average support from other groups. We expect this to be the case when two groups share the same preferred candidate.

### 7.1 City Commissioner District 32021

The contest for City Commissioner District 3 in 2021 showed patterns of racially polarized voting. The Anglo-preferred candidate was Quinn Smith, while the Latino-preferred candidate was Joe Carollo. Joe Carollo won the contest. Latinos made up $84 \%$ of the registered voters in this district. As shown in Figure 40, Latinos would need to be $61 \%$ of the registered voters for their preferred candidate (Carollo) to win.

For the Anglo-preferred candidate to prevail, they would need to $48 \%$ of the registered voting population (See Figure 41). Anglos are currently $12 \%$ in this district. While there is slight evidence that Black's preferred Smith to Carollo, they did not make up a sufficient amount in any precinct to provide reliable results.

Figure 40: Latino-Preferred Candidate Carollo


Figure 41: Anglo-Preferred Candidate Smith


### 7.2 City Commissioner District 32017

The contest for City Commissioner District 3 in 2017 showed patterns of racially polarized voting. The Latino-preferred candidate was Joe Carollo, while the Anglo- and Black-preferred candidate was Alfonso Leon. The Latino-preferred candidate prevailed. Latino's make up $79 \%$ of the district. As shown in Figure 42 , Latinos need to make up about $77 \%$ of the registered voters for their candidate to receive $50 \%$ of the vote. When the Latino-preferred candidate wins, the Latino share of the electorate is about $83 \%$.

For the Anglo-preferred candidate to prevail, Anglos need to make up $72 \%$ of the registered voters (See Figure 43). When the Anglo-preferred candidate wins, the Anglo share of the electorate is $19 \%$. For the Black-preferred candidate to prevail, Blacks need to make up $26 \%$ of the registered voters (See Figure 44). When the Black-preferred candidate wins, the Black composition of the electorate is about $10 \%$. This suggests that the Black-preferred candidate has larger than average support from other racial groups. In this case, the Anglo- and Black-preferred candidates are the same.

Figure 42: Latino-Preferred Candidate Carollo


Figure 43: Anglo-Preferred Candidate Leon


Figure 44: Black-Preferred Candidate Leon


### 7.3 County Commissioner District 3

The contest for County Commissioner District 3 in 2020 showed patterns of racially polarized voting. The Black-preferred and Latino-preferred candidate was Keon Hardemon. The Anglo-preferred candidate was Gepsie Metellus. Across all levels of Black share and Latino share of registered voters, the Black preferred candidate prevails (See Figures 45 and 46). The Anglo-preferred candidate needs Anglo voters to make up $60 \%$ of the registered voter population to win a majority. When the Anglo-preferred candidate wins, they will make up $63 \%$ of the voting electorate.

Figure 45: Black-Preferred Candidate


Figure 46: Latino-Preferred Candidate


Figure 47: Anglo-Preferred Candidate


### 7.4 County Mayor 2020

The contest for County Mayor in 2020 showed signs of racially polarized voting. The Black and Anglopreferred candidate was Levine Cava while the Latino-preferred candidate was Bovo. For the Black-preferred candidate to prevail, Blacks must make up $8 \%$ of the registered voter population. Similarly, the Anglopreferred candidate must make up $2 \%$ of the registered voting population to prevail. For the Latino-preferred candidate to prevail, they must make up $74 \%$ of the registered voter population.

Figure 48: Black-Preferred Candidate


Figure 49: Anglo-Preferred Candidate


Figure 50: Latino-Preferred Candidate


### 7.5 Presidential 2020

The Presidential race in 2020 showed signs of racially polarized voting. The Black- and Anglo-preferred candidate was Biden. The Latino-preferred candidate was Trump. For the Black-preferred candidate to win, the Black share of the registered voter population must reach $5 \%$. Similarly, the Anglo share of the registered voter population must reach $4 \%$ for the Anglo-preferred candidate to win. For the Latino-preferred candidate to win, Latinos must make up $77 \%$ of the registered voter population.

Figure 51: Black-Preferred Candidate


Figure 52: Anglo-Preferred Candidate


Figure 53: Latino-Preferred Candidate


### 7.6 County Judge (Group 9) 2020

The County Judge (Group 9) election showed signs of racially polarized voting. The Black and Anglopreferred candidate was Mansfield. The Latino-preferred candidate was Mirabal. For the Black-preferred candidate to win, the Black share of the registered voter population must reach $30 \%$. Similarly, the Anglo share of the registered voter population must reach $33 \%$ for the Anglo-preferred candidate to win. For the Latino-preferred candidate to win, Latinos must make up $77 \%$ of the registered voter population.

Figure 54: Black-Preferred Candidate


Figure 55: Anglo-Preferred Candidate


Figure 56: Latino-Preferred Candidate


### 7.7 Circuit Judge 75

The Circuit Judge (Group 75) contest showed signs of racially polarized voting. The Anglo-preferred candidate was Dava Tunis, and the Latino-preferred candidate was Aponte. While there is suggestive evidence that Black's preferred Aponte to Tunis, the results did not meet the $60 \%$ threshold. As such, I analyze the Anglo and Latino composition of the registered population. For the Anglo-preferred candidate to win, the Anglo share of the registered voter population must reach $32 \%$. For the Latino-preferred candidate to win, Latinos must make up $44 \%$ of the registered voter population.

Figure 57: Anglo-Preferred Candidate


Figure 58: Latino-Preferred Candidate


### 7.8 Circuit Judge (Group 67) 2020

The Circuit Judge (Group 67) contest showed signs of racially polarized voting. The Black-preferred candidate Marcia Giordano Hansen, while the Latino-preferred candidate was Mavel Ruiz. There's suggestive evidence that Anglo's preferred Ruiz to Hansen, but Anglo cohesion did not reach 60\%. For the Black-preferred candidate to prevail, Blacks must make up $43 \%$ of the registered population. For the Latino-preferred candidate to win, they must make up $29 \%$ of the registered population.

Figure 59: Black-Preferred Candidate


Figure 60: Latino-Preferred Candidate


### 7.9 Circuit Judge 57

The Circuit Judge (Group 57) contest showed signs of racially polarized voting. The Anglo- and Blackpreferred candidate was Vereen, while the Latino-preferred candidate was Cabarga. For the Black-preferred candidate to prevail, Blacks must make up $49 \%$ of the registered voter population. For the Anglo-preferred candidate to prevail, Anglos must achieve $38 \%$ of the population. For the Latino-preferred candidate to prevail, they must be $44 \%$ of the registered voter population.

Figure 61: Black-Preferred Candidate


Figure 62: Anglo-Preferred Candidate


Figure 63: Latino-Preferred Candidate


### 7.10 Circuit Judge (Group 55)

The Circuit Judge (Group 55) contest showed signs of racially polarized voting. The Black- and Anglopreferred candidate was Olanike Adebayo, while the Latino-preferred candidate was Joe Perkins.

The Black-preferred candidate prevails when their registration share is $12 \%$. For the Anglo-preferred candidate to win, they must reach $18 \%$ of the registered voter population. For the Latino-preferred candidate to prevail, the Latino share of the registered voting population must reach $65 \%$.

Figure 64: Black-Preferred Candidate


Figure 65: Anglo-Preferred Candidate


Figure 66: Latino-Preferred Candidate


## 8 Summary

This report aims to determine whether and to what extent racially polarized voting exists in Miami, Florida. Using data from Miami-Dade County's Elections Department, I examine twenty races between 2017 and 2021. Six of the twenty races were endogenous (municipal elections), and fourteen were exogenous.

I evaluate racially polarized voting using two methods. First, I create bivariate scatterplots between the demographic composition of the turnout and candidate vote share. A group cohesively supports a candidate if their support - in homogenous precincts - reaches $60 \%$ or greater. Second, I use ecological inference from the eiPack package to estimate the level of support each candidate received from each racial group. Where the method provides interpretable $95 \%$ confidence bands, I display the results. My results are robust across both methods.

I find evidence of racially polarized voting in half of the contests analyzed. One-third $(2 / 6)$ of the endogenous races can be characterized as racially polarized, while $57 \%(8 / 14)$ of exogenous races were polarized. Of the ten races that exhibited RPV, Latinos prevailed in $70 \%(7 / 10)$ of them. Indeed, Latinos prevailed at a higher rate than Blacks (4/8) and Anglos (3/9).

It is important to note the coalition formation at the local level. Blacks and Anglos preferred the same candidate in six RPV contests. In contrast, only one of the RPV contests saw Blacks and Latinos prefer the same candidate.


Bryant J. Moy, Ph.D.
Date: February 10, 2023

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## Bryant J. Moy

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|  | Transparency, and Discriminatory Ordinances |  |

- Cum Laude

Substantive: American Politics, Local/Urban Politics, Race \& Ethnic Politics Methodological: Causal Inference, Experimental Design, Computational Methods
3. Moy, Bryant J. 2021. "Can Social Pressure Induce Responsiveness? An Open Records Field Experiment with Mayoral Offices." Journal of Experimental Political Science, 8(2), 117-127. doi: 10.1017/XPS.2020.22
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2. O'Brochta, William and Bryant J. Moy. 2021. "Department-Level Graduate Student Peer Teaching Workshops." The Political Science Educator. 25(1) 6-8.

Working Papers

Invited Talks

Conference
Presentation
3. Moy, Bryant J. "Responsiveness in the Patchwork of Local Government"

- Won Best Poster Award (Applications). PolMeth XXXVIII. July 2021.

2. Moy, Bryant J. "Racial Threat and Policy Adoption in Local Government: The Emergence of Criminal Activity Nuisance Ordinances in Ohio Municipalities"
3. Dasanaike, Noah, Jacob Montgomery, Bryant J. Moy, and Santiago Olivella. "Small-area estimation using Gaussian Process grouped IRT regression and poststratification"
4. "Racial Threat and the Emergence of Discriminatory Ordinances." NYU Wagner Research Seminar, Oct 20, 2022
5. "Responsiveness in the Patchwork of Local Government." Junior Americanist Workshop Series (JAWS), December 2021
6. "Responsiveness in the Patchwork of Local Government." The George Rabinowitz Seminar Series, American Politics Research Group. University of North Carolina - Chapel Hill. Oct. 29, 2021.
7. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" Local Political Economy Pre-Conference (LPEC), September 2022
8. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" American Political Science Association, September 2022
9. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" PolMeth XXXIX, July 2022 (Poster)
10. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" Midwest Political Science Association, April 2022
11. Moy, Bryant J. "Responsiveness in the Patchwork of Local Government" Southern Political Science Association, January 14, 2022.
12. Moy, Bryant J. "The Dynamic City: Responsiveness in Local Government?" American Political Science Association, Oct 1, 2021. (iPoster)
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14. Dasanaike, Noah, Jacob Montgomery, Bryant J. Moy, and Santiago Olivella. "Small-area estimation using Gaussian Process grouped IRT regression and poststratification" St. Louis Area Methods Meeting (SLAMM) May 7, 2021.
15. Moy, Bryant J. "The Limited City: Does Dynamic Responsiveness Exist in Local Government?" Midwest Political Science Association, April 17, 2021.
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Award - American Political Science Association (Urban and Local Politics Section)

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Fellowship - Washington University in St. Louis

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Fellowship - Mercatus Center

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- Don Lavoie Fellowship $\$ 1,250$

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# Racially Polarized Voting in Miami, Florida 

Bryant J. Moy, PhD
June 12, 2023

## Introduction and Scope of Work

My name is Bryant J. Moy, Ph.D., and I am a faculty fellow in the Center for Data Science and a Visiting Assistant Professor in the Wilf Family Department of Politics at New York University. My qualifications were further described in my initial report dated February 10, 2023.

I have been asked to analyze two proposed maps and provide my expert opinion on whether Black voters could elect their preferred candidates in the newly constituted District 5. I was provided a geolocated voter file and two shape files containing the geographic boundaries of newly constituted District 5 .

In this report, I analyze the performance of the Black-preferred candidate in six recent contests from 2022. Next, I re-analyze five contests from 2020 where I previously showed evidence of racial polarization. I discuss how the newly proposed maps make it easier for Black voters to translate their preferences to higher vote totals for their preferred candidate.

## Summary of Findings

- Black voters in Miami District 5 cohesively support a single candidate in the six recent elections: Senate, Governor, County Judge Group 5, Chief Financial Officer, Commissioner of Agriculture, and Attorney General. Moreover, non-Hispanic white voters' support for the Black-preferred candidate is under $50 \%$ in all but one of the analyzed contests.
- In the six recent elections, the Black-preferred candidate received the vast majority of the top twocandidate vote share across both newly proposed districts.
- In the re-analysis of five previously polarized contests in 2020, I find that the Black-preferred candidate would prevail in either of the proposed districts. Moreover, it would be easier for Black voters to translate their preferences into a higher vote share for their preferred candidate in the two proposed districts than in the currently constituted one.


## 1 Black-Preferred Candidates in Recent Elections

In this section, I estimate the extent to which Black voters cohesively support a single candidate and whether non-Hispanic whites support the Black-preferred candidate. Furthermore, using precinct-level election results, I provide evidence of how the Black-preferred candidate would have performed under the various District 5 maps. In Table 1, I provide a list of six recently held contests in 2022. I indicate the ethnicity of the candidate in parentheses: "B" represents Black, "W" represents non-Hispanic white, and "H" represents Hispanic of any race.

Table 1: List of Elections Analyzed

| Race | Black-Preferred Candidate | Non-Black-Preferred Candidate |
| :--- | :--- | :--- |
| US Senate | Demings (B) | Rubio (H) |
| Governor | Crist (W) | DeSantis (W) |
| Attorney General | Ayala (B) | Moody (W) |
| Chief Financial Officer | Hattersley (W) | Patronis (W) |
| Commissioner of Agriculture | Blemur (B) | Simpson (W) |
| County Judge 5 | Seraphin (B) | Diaz de la Portilla (H) |

### 1.1 Estimating Support for the Black-Preferred Candidate By Race

I analyze the extent to which Blacks and whites support different candidates. As shown in Figure 1, Black voters cohesively support a single candidate. Indeed, Black voters support their preferred candidate in rates higher than $80 \%$ in all elections analyzed. Non-Hispanic white support for the Black-preferred candidate is below $50 \%$ in all contests but County Judge Group 5 .

Figure 1: Estimated Proportion of Support by Race


### 1.2 Performance of Black-Preferred Candidate in Recent Elections

Using precinct-level results of six elections held in 2022, I aggregate results to determine how many votes the Black-preferred candidate would have received within the boundaries of the two newly constituted districts (See Table 2). The two-candidate vote shares were similar across proposed districts. ${ }^{1}$ Yet, the Black-preferred candidate would have prevailed in all contests analyzed at the district-level.

Table 2: Black-Preferred Candidate Performance in Recent Election

| Race |  |  |  |  |  | Map |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Vote Total $^{2}$ | Black-Pref. \# | Black-Pref. $\%$ | Non-Black-Pref. \# | Non-Black-Pref. $\%$ |  |  |
| County Judge Grp 5 | Current | 6473 | 5046 | $77.95 \%$ | 1427 | $22 \%$ |
| County Judge Grp 5 | 1 | 6567 | 5124 | $78 \%$ | 1443 | 1478 |
| County Judge Grp 5 | 2 | 6698 | 5220 | $78 \%$ | $22 \%$ |  |
| US Senate | Current | 14370 | 11741 | $81.7 \%$ | $22 \%$ |  |
| US Senate | 1 | 14483 | 11784 | $81.36 \%$ | 2699 | $18.3 \%$ |
| US Senate | 2 | 14859 | 12047 | $81 \%$ | $189.6 \%$ |  |
| Governor | Current | 14392 | 11523 | $80 \%$ | 2869 | $18.9 \%$ |
| Governor | 1 | 14500 | 11555 | $80 \%$ | 2945 | $20 \%$ |
| Governor | 2 | 14875 | 11812 | $79.4 \%$ | 3063 | $20 \%$ |
| Attorney General | Current | 14300 | 11424 | $80 \%$ | 2876 | $20.5 \%$ |
| Attorney General | 1 | 14418 | 11462 | $79.5 \%$ | 2956 | $20 \%$ |
| Attorney General | 2 | 14793 | 11730 | $79.3 \%$ | 3063 | $20.5 \%$ |
| CFO | Current | 14200 | 11470 | $80.8 \%$ | 2730 | $20.7 \%$ |
| CFO | 1 | 14324 | 11505 | $80.3 \%$ | 2819 | $19.2 \%$ |
| CFO | 14696 | 11764 | $80 \%$ | 2932 | $19.7 \%$ |  |
| Comm. of Agriculture | Current | 14273 | 11689 | $81.9 \%$ | 2584 | $20 \%$ |
| Comm. of Agriculture | 1 | 14396 | 11724 | $81.4 \%$ | 2672 | $22.1 \%$ |
| Comm. of Agriculture | 2 | 14766 | 11986 | $81.2 \%$ | 2780 | $18.6 \%$ |

## 2 Black-Preferred Candidate Performance in Previously Racially Polarized Elections

Table 3: Black-Preferred Candidate Performance in Previous RPV Elections

| Race | Map | Vote \# | Black-Pref. \# | Black-Pref. $\%$ | Non-Black-Pref. \# | Non-Black-Pref. $\%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| President | Current | 30418 | 25648 | $84.3 \%$ | 4770 | $15.7 \%$ |
| President | 1 | 34422 | 28462 | $82.7 \%$ | 5960 | $17.3 \%$ |
| President | 2 | 35032 | 28935 | $82.6 \%$ | 6097 | $17.4 \%$ |
| County Mayor | Current | 26889 | 22159 | $82.4 \%$ | 4730 | $17.6 \%$ |
| County Mayor | 1 | 30509 | 24845 | $81.4 \%$ | 5664 | $18.6 \%$ |
| County Mayor | 2 | 31059 | 25262 | $81.3 \%$ | 5797 | $18.6 \%$ |
| County Judge Grp 9 | Current | 10335 | 6933 | $67 \%$ | 3402 | $32.9 \%$ |
| County Judge Grp 9 | 1 | 11686 | 7631 | $65.3 \%$ | 4055 | $34.7 \%$ |
| County Judge Grp 9 | 2 | 11867 | 7744 | $65.2 \%$ | 4123 | $34.7 \%$ |
| Circuit Judge Group 57 | Current | 10654 | 7380 | $69 \%$ | 3274 | $30.7 \%$ |
| Circuit Judge Group 57 | 1 | 12016 | 8103 | $67.4 \%$ | 3913 | $32.6 \%$ |
| Circuit Judge Group 57 | 2 | 12200 | 8227 | $67.4 \%$ | 3973 | $32.6 \%$ |
| Circuit Judge Group 67 | Current | 10407 | 6079 | $58.4 \%$ | 4328 | $41.6 \%$ |
| Circuit Judge Group 67 | 1 | 11779 | 6646 | $56.4 \%$ | 5133 | $43.6 \%$ |
| Circuit Judge Group 67 | 2 | 11958 | 6751 | $56.4 \%$ | 5207 | $43.5 \%$ |

In this section, I re-analyze five 2020 contests that showed signs of racial polarization in my previous report: President, County Mayor, County Judge Group 9, Circuit Judge Group 57, and Circuit Judge Group

[^3]67. In Table 3, I aggregate the official election results for each district and show how many votes the Blackpreferred candidate would have received under each map. Across all contests, the Black-preferred candidate would have received the majority of the votes in District 5 .

Figures 2-6 depicts the relationship between the Black share of the electorate and the share that the Black-preferred candidate received. Each dot represents a precinct and corresponds to the share of Black registered voters and the two-candidate vote share in that precinct. I report the correlation coefficient in the top left of each figure. These correlation coefficients are bounded from -1 to +1 . Numbers closer to 1 indicate that Black voters are able to translate their preferences into their preferred candidate's vote share.

As we see in the figures, Black voters can better translate their preferences into higher vote shares in the two proposed districts than in the current District 5. For all contests, the correlation coefficient is larger and closer to one in the two proposed districts.

Figure 2: Presidential Election


Figure 3: County Mayor


Figure 4: County Judge Group 9


Figure 5: Circuit Judge Group 57


Figure 6: Circuit Judge 67


## Summary

In this report, I analyzed two newly proposed maps for District 5. I analyzed six recent elections and found that Black support in this district is cohesive. Moreover, in those elections, the Black-preferred candidate will receive the majority of the votes in the newly proposed districts. Lastly, I re-analyze five contests that previously showed evidence of racial polarization. The Black-preferred candidate would prevail in either of the two proposed districts. More importantly, Black voters can better translate their numbers into higher vote shares for their preferred candidate in the two proposed districts.


Bryant J. Moy, Ph.D.
Date: June 12, 2023

# Supplementary Report: Racially Polarized Voting in Miami, Florida 

Bryant J. Moy, PhD

July 1, 2023

## Introduction and Scope of Work

My name is Bryant J. Moy, Ph.D., and I am a faculty fellow in the Center for Data Science and a Visiting Assistant Professor in the Wilf Family Department of Politics at New York University. My qualifications were further described in my initial report dated February 10, 2023.

I have been asked to analyze two proposed maps and provide my expert opinion on whether Black voters could elect their preferred candidates in the newly constituted District 5. The first is Plaintiff's 4 ("P4") and the second is the City of Miami's proposed map ("City"). I was provided a geolocated voter file and two shape files containing the geographic boundaries of newly constituted District 5 .

In this report, I first provide racial demographic data of registered voters under the current map, the P4 plan, and the city's proposal. Second, I analyze the performance of the Black-preferred candidate in six recent contests from 2022. Lastly, I re-analyze five contests from 2020 where I previously showed evidence of racial polarization. I discuss how the newly proposed maps make it easier for Black voters to translate their preferences to higher vote totals for their preferred candidate.

## Summary of Findings

- Black voters in the City of Miami cohesively support a single candidate in the six recent elections: Senate, Governor, County Judge Group 5, Chief Financial Officer, Commissioner of Agriculture, and Attorney General. Moreover, non-Black voters' support for the Black-preferred candidate is under $50 \%$ in all contests. I find patterns of racially polarized voting in these contests.
- In the six recent elections, the Black-preferred candidate received the vast majority of the top twocandidate vote across both newly proposed districts. Moreover, the Black-preferred candidate would have received more votes under the P4 plan than both the enjoined map and the city's proposed plan.
- In the re-analysis of five previously polarized contests in 2020, I find that the Black-preferred candidate would prevail under either of the proposed districts. More importantly, the Black-preferred candidates under P4 have a marginally higher likelihood of prevailing given the larger makeup of the district regardless of the Black share of the precinct.


## 1 Racial Demographics of Registered Voters in District 5

There are 220,103 registered voters in Miami. ${ }^{1}$ In Table 1 I show the racial composition of registered voters under each map's District 5. The City of Miami has a majority-Hispanic electorate with Anglos (non-Hispanic whites) constituting $21 \%$ of the electorate and Blacks constituting $17 \%$ of the electorate.

Table 1: District 5 Racial Composition: Registered Voters

| Race | Enjoined | Enjoined $\%$ | P4 | P4 \% | City | City $\%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Anglo | 6,813 | $14.0 \%$ | 7,550 | $15.0 \%$ | 6,782 | $14.0 \%$ |
| Black | 28,054 | $57.6 \%$ | 28,156 | $55.5 \%$ | 27,793 | $57.0 \%$ |
| Hispanic | 13,166 | $27.0 \%$ | 14,324 | $28.0 \%$ | 13,338 | $27.0 \%$ |
| AAPI/American Indian | 661 | $1.3 \%$ | 703 | $1.4 \%$ | 713 | $1.5 \%$ |
| Total | 48,694 | - | 50,733 | - | 48,626 | - |

## 2 Black-Preferred Candidates in Recent Elections

In this section, I analyze six recently help contests in 2022 to assess the extent to which they show patterns of racially polarized voting: U.S. Senate, Governor, Attorney General, Chief Financial Officer, Commissioner of Agriculture, and County Judge Group 5. I estimate the extent to which Black voters cohesively support a single candidate using bivariate scatterplots. The x-axis corresponds with the Black Share of the Total Citizen Voting Age Population for 2020, while the y-axis corresponds with the Black preferred candidate's vote share within Miami precincts. ${ }^{2}$ I draw a linear line of best fit through the cluster of precincts. The positive association means that as the Black share of the Citizen Voting Age Population increases, the Black-preferred candidate receives a higher share of the vote.

For all contest, when the precinct is homogeneously Black, the identified Black-preferred candidate receives overwhelming support. Similarly, when precincts are homogeneously non-Black, the Black-preferred candidate fails to receive the majority of the votes on average. All of the six contests analyzed show signs of racially polarized voting. ${ }^{3}$

In Table 2, I indicate which individuals are the Black-preferred candidates and include their ethnicity in parentheses: "B" represents Black, "W" represents non-Hispanic white, and "H" represents Hispanic of any race.

Table 2: List of Elections Analyzed

| Race | Black-Preferred Candidate | Non-Black-Preferred Candidate |
| :--- | :--- | :--- |
| US Senate | Demings (B) | Rubio (H) |
| Governor | Crist (W) | DeSantis (W) |
| Attorney General | Ayala (B) | Moody (W) |
| Chief Financial Officer | Hattersley (W) | Patronis (W) |
| Commissioner of Agriculture | Blemur (B) | Simpson (W) |
| County Judge Group 5 | Seraphin (B) | Diaz de la Portilla (H) |

[^4]Figure 1: Black Preferred Candidates in Recent Contests


### 2.1 Performance of Black-Preferred Candidate in Recent Elections

Using precinct-level results of six elections held in 2022, I aggregate results to determine how many votes the Black-preferred candidate would have received within the boundaries of the two newly constituted districts (See Table 3). The two-candidate vote shares were similar across proposed districts. ${ }^{4}$ The Black-preferred candidate would have prevailed in all contests analyzed at the district-level. According to Table 3, the Black-preferred candidate would receive more votes under the P4 map than both the enjoined and the city's plan.

[^5]Table 3: Black-Preferred Candidate Performance in Recent Election

| Race | Map | Vote Total | Black-Pref. \# | Black-Pref. $\%$ | Non-Black-Pref. \# | Non-Black-Pref. $\%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| County Judge Grp 5 | Enjoined | 7157 | 5234 | $73.1 \%$ | 1923 | $26.9 \%$ |
| County Judge Grp 5 | P4 | 7046 | 5433 | $77.1 \%$ | 1613 | $22.9 \%$ |
| County Judge Grp 5 | City | 7548 | 5735 | $76.0 \%$ | 1813 | $24.0 \%$ |
| US Senate | Enjoined | 16807 | 12230 | $72.8 \%$ | 4577 | $27.2 \%$ |
| US Senate | P4 | 15942 | 12718 | $79.8 \%$ | 3224 | $20.2 \%$ |
| US Senate | City | 17753 | 13815 | $77.8 \%$ | 3938 | $22.2 \%$ |
| Governor | Enjoined | 16849 | 11989 | $71.2 \%$ | 4860 | $28.8 \%$ |
| Governor | P4 | 15966 | 12462 | $78.1 \%$ | $21.9 \%$ |  |
| Governor | City | 17782 | 13530 | $76.1 \%$ | 4252 | $23.9 \%$ |
| Attorney General | Enjoined | 16660 | 11979 | $71.9 \%$ | 4681 | $28.1 \%$ |
| Attorney General | P4 | 15876 | 12403 | $78.1 \%$ | 3473 | $21.9 \%$ |
| Attorney General | City | 17678 | 13507 | $76.4 \%$ | 4171 | $23.6 \%$ |
| CFO | Enjoined | 16554 | 11908 | $71.9 \%$ | 4646 | $28.1 \%$ |
| CFO | P4 | 15762 | 12418 | $78.8 \%$ | 3344 | $21.2 \%$ |
| CFO | City | 17552 | 13477 | $76.8 \%$ | 4075 | $23.2 \%$ |
| Comm. of Agriculture | Enjoined | 16607 | 12182 | $73.4 \%$ | 4425 | $26.2 \%$ |
| Comm. of Agriculture | P4 | 15830 | 12645 | $79.9 \%$ | 3185 | $20.1 \%$ |
| Comm. of Agriculture | City | 17608 | 13743 | $78.0 \%$ | 3865 | $22.0 \%$ |

## 3 Black-Preferred Candidate Performance in Previously Racially Polarized Elections

Table 4: Black-Preferred Candidate Performance in Previous RPV Elections

| Race | Map | Vote \# | Black-Pref. \# | Black-Pref. $\%$ | Non-Black-Pref. \# | Non-Black-Pref. \% |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| President | Enjoined | 36848 | 28308 | $76.8 \%$ | 8540 | $23.2 \%$ |
| President | P4 | 38379 | 31312 | $81.6 \%$ | 7067 | $18.4 \%$ |
| President | City | 41234 | 33233 | $80.6 \%$ | 8001 | $19.4 \%$ |
| County Mayor | Enjoined | 32852 | 24968 | $76.0 \%$ | $24.0 \%$ |  |
| County Mayor | P4 | 34145 | 27473 | $80.5 \%$ | 6672 | 7494 |
| County Mayor | City | 36703 | 29209 | $79.6 \%$ | 4762 | $20.4 \%$ |
| County Judge Grp 9 | Enjoined | 12043 | 7281 | $60.5 \%$ | $39.5 \%$ |  |
| County Judge Grp 9 | P4 | 12798 | 8198 | $64.1 \%$ | 4600 | 3582 |
| County Judge Grp 9 | City | 13325 | 8443 | $63.4 \%$ | 4785 | $36.6 \%$ |
| Circuit Judge Group 57 | Enjoined | 12348 | 7563 | $61.2 \%$ | $38.8 \%$ |  |
| Circuit Judge Group 57 | P4 | 13140 | 8741 | $66.5 \%$ | 4399 | $33.5 \%$ |
| Circuit Judge Group 57 | City | 13685 | 8976 | $65.6 \%$ | 4709 | $34.4 \%$ |
| Circuit Judge Group 67 | Enjoined | 12189 | 6362 | $52.2 \%$ | 5827 | $47.8 \%$ |
| Circuit Judge Group 67 | P4 | 12891 | 7219 | $56.0 \%$ | 5672 | $44.0 \%$ |
| Circuit Judge Group 67 | City | 13428 | 7504 | $55.9 \%$ | 5924 | $44.1 \%$ |

In this section, I re-analyze five 2020 contests that exhibited signs of racial polarization in my previous report: President, County Mayor, County Judge Group 9, Circuit Judge Group 57, and Circuit Judge Group 67. In Table 4, I aggregate the official election results for each district and show how many votes the Blackpreferred candidate would have received under each map. Across all contests, the Black-preferred candidate would have received the majority of the votes in District 5 .

Figures 2-6 depicts the relationship between the Black share of the Citizen Voting Age Population and the share that the Black-preferred candidate received. I report the linear line of best fit and the $\mathrm{R}^{2}$ in each graph. As we see in the figures, Black voters are able to translate their preferences into high vote shares for their preferred candidate. Furthermore, the P4 plan increases the likelihood that the Black-preferred candidate will prevail over the enjoined map and the plan proposed by the city. Specifically, as shown in the
equation, the intercept is shifted upward which meaning that the Black-preferred candidate is in a better position to prevail given the larger makeup of the district regardless of the Black share of the precinct. Take the County Mayor contest for example. The y-intercept shifts from .648 in enjoined map to .716 to the plaintiff's plan. This shift is even larger compared with the city's plan (. 638 to .716 ).

Figure 2: Presidential Election


Figure 3: County Mayor


Figure 4: County Judge Group 9


Figure 5: Circuit Judge Group 57


Figure 6: Circuit Judge 67


## Summary

In this report, I analyzed two newly proposed maps for District 5: plaintiff's 4 ("P4") and the city's plan ("City"). I analyzed six recent elections and found that Black support is cohesive for a single candidate and non-Black support for the Black-preferred candidate is under $50 \%$. Moreover, in those elections, the Black-preferred candidate will receive the majority of the votes in the newly proposed districts. Next, I reanalyzed five contests that previously showed evidence of racial polarization. The Black-preferred candidate would prevail in either of the two proposed districts. More importantly, Black voters would have seen their preferred candidate receive a higher vote share under P4 than both the city's plan and the enjoined plan.


Bryant J. Moy, Ph.D.
Date: July 1, 2023

## Addendum 9/21/2023

I am being compensated for my work on this report at an hourly rate of $\$ 250 /$ hour. No part of my compensation depends on the outcome of this case or on the nature of the opinions that I provide. I have testified as an expert at trial or by deposition in no other cases in the previous four years.

Bryant J. Moy, Ph.D.
3

Bryant J. Moy

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|  | Ph.D., Political Science, 2022 |
|  | - Chair: Jacob Montgomery |
|  | - Three Essays on Local Government: Responsiveness, Transparency, and Discriminatory Ordinances |
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- Cum Laude

Substantive: American Politics, Local/Urban Politics, Race \& Ethnic Politics Methodological: Causal Inference, Experimental Design, Computational Methods

Publications

Other
Publications
3. Moy, Bryant J. 2021. "Can Social Pressure Induce Responsiveness? An Open Records Field Experiment with Mayoral Offices." Journal of Experimental Political Science, 8(2), 117-127. doi: 10.1017/XPS.2020.22
2. Gimpel, Jim, Nathan Lovin, Bryant Moy, and Andrew Reeves. 2020. "The Urban-Rural Gulf in American Political Behavior" Political Behavior, 42, 13431368. doi: 10.1007/s11109-020-09601-w

1. Reeves, Andrew, David Miller, and Bryant J. Moy. 2018. "U.S. Presidential Campaigns and Their Impact." Oxford Bibliographies in Political Science, ed. by L. S. Maisel. Oxford University Press. doi: 10.1093/OBO/9780199756223-0156
2. O'Brochta, William and Bryant J. Moy. 2021. "Department-Level Graduate Student Peer Teaching Workshops." The Political Science Educator. 25(1) 6-8.

Working Papers 3. Moy, Bryant J. "Responsiveness in the Patchwork of Local Government"

- Won Best Poster Award (Applications). PolMeth XXXVIII. July 2021.

2. Moy, Bryant J. "Racial Threat and Policy Adoption in Local Government: The Emergence of Criminal Activity Nuisance Ordinances in Ohio Municipalities"
3. Ornstein Joseph T., Amanda J. Heideman, Bryant J. Moy, Kaylyn Jackson Schiff. "What Do Voters Want in Their Mayor? Evidence from a Survey Experiment"
4. Dasanaike, Noah, Jacob Montgomery, Bryant J. Moy, and Santiago Olivella. "Small-area estimation using Gaussian Process grouped IRT regression and poststratification"
5. Bryant J. Moy and Jiaxu Ren. "Improving Confidence in RDDs: Discontinuity Detection through Bayesian Change Point Analysis"
6. "Racial Threat and the Emergence of Discriminatory Ordinances." NYU Wagner Research Seminar, Oct 20, 2022
7. "Responsiveness in the Patchwork of Local Government." Junior Americanist Workshop Series (JAWS), December 2021
8. "Responsiveness in the Patchwork of Local Government." The George Rabinowitz Seminar Series, American Politics Research Group. University of North Carolina - Chapel Hill. Oct. 29, 2021.
9. Ornstein Joseph T., Amanda J. Heideman, Bryant J. Moy, Kaylyn Jackson Schiff. "What Do Voters Want in Their Mayor? Evidence from a Survey Experiment" Midwest Political Science Association, April 2023
10. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" Southern Political Science Association (SPSA), January 2023
11. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" Local Political Economy Pre-Conference (LPEC), September 2022
12. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" American Political Science Association, September 2022
13. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" PolMeth XXXIX, July 2022 (Poster)
14. Moy, Bryant J. "Racial Threat and the Emergence of Criminal Activity Nuisance Ordinances" Midwest Political Science Association, April 2022
15. Moy, Bryant J. "Responsiveness in the Patchwork of Local Government" Southern Political Science Association, January 14, 2022.
16. Moy, Bryant J. "The Dynamic City: Responsiveness in Local Government?" American Political Science Association, Oct 1, 2021. (iPoster)
17. Moy, Bryant J.. "Responsiveness in a Fragmented Local Politics" PolMeth XXXVIII. July 13-16, 2021. (Poster)
18. Dasanaike, Noah, Jacob Montgomery, Bryant J. Moy, and Santiago Olivella. "Small-area estimation using Gaussian Process grouped IRT regression and poststratification" St. Louis Area Methods Meeting (SLAMM) May 7, 2021.
19. Moy, Bryant J. "The Limited City: Does Dynamic Responsiveness Exist in Local Government?" Midwest Political Science Association, April 17, 2021.
20. Moy, Bryant J. "Can Social Pressure Induce Responsiveness? An Open Records Field Experiment with Mayoral Offices." (Cancelled - COVID) Midwest Political Science Association, 2020.
21. Rickert, Patrick, Nicholas Waterbury, and Bryant J. Moy. "Changing Principals: Committee Chair Effectiveness in a Partisan Congress" American Political Science Association. Washington, DC. August 29 - September 1, 2019 (Poster)
22. Gimpel, Jim, Nathan Lovin, Bryant J. Moy, and Andrew Reeves. "The UrbanRural Gulf in American Political Behavior" Midwest Political Science Association, Chicago, IL. April 5-8, 2018
23. Hacker, Hans J., Lisa Bohn, and Bryant J. Moy. "A Grave Responsibility: Teaching Social Justice through an Interdisciplinary, Curricular/Extra-Curricular, Collaborative Experience." Southwestern Social Science Association. April 2015.

Grants Internal

- Institute for Human Development and Social Change (IHDSC), New York University. Proposal Title: Criminal Activity Nuisance Ordinances: A National Assessment. Summary: A seed grant to build a national database of Criminal Activity Nuisance Ordinances. 2023-2024

AWARDS AND
Award - American Political Science Association (Urban and Local Politics Section)

- Susan Clarke Young Scholars Award

Award - Society for Political Methodology

- Best Poster Award (Applications)

July 2021
Fellowship - Washington University in St. Louis

- Graduate Fellowship

Fall 2016-2022

- The Otto E. Gansow Memorial Scholarship

Fall 2017
Fellowship - Institute for Humane Studies

- Junior Fellowship $\$ 6,000$

Summer 2023

- Summer Graduate Research Fellow $\$ 6,000$

Summer 2022

- Summer Graduate Research Fellow $\$ 5,000$

Summer 2021
Fellowship - Mercatus Center

- Bastiat Fellowship $\$ 5,000$

2021-2022

- Don Lavoie Fellowship \$1,250

Spring 2021
Travel Awards - Washington University in St. Louis

- Travel Grant, Department of Political Science $\$ 200$

Spring 2017
Awards/Grants - Arkansas State University

- Travel Grant, Department of Political Science $\$ 500$
- Travel Assistance Award, Graduate School, \$400
- Outstanding M.A. Student Award

Spring 2015
Spring 2015
May 2016

Teaching Data Science Faculty Fellow
Fall 2022, Fall 2023
Experience DS-UA 201: Causal Inference New York University

Data Science Faculty Fellow
Summer 2023
DS-GA 1009 Practical Training for Data Science
New York University
 Quarterly, Politics \& Policy

- Dean's Student Advisory (Infrastructure) Committee, Fall 2015 College of Humanities and Social Science, Arkansas State University
- Assistant Coach to the Arkansas State Moot Court Team Fall 2014 - Spring 2016
- Organizer Political Science Department Film Series.

Spring 2014
"Trading Places: In a socioeconomic and race perspective"

Technical Skills R, SQL, Stata, ATRX, Qualtrics, Python $^{\text {P }}$
Updated: August 25, 2023

# IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF FLORIDA MIAMI DIVISION 

## Case No. 1:22-cv-24066-KMM

GRACE, INC., et al., Plaintiffs, v.

CITY OF MIAMI,
Defendant.

# EXPERT REPORT OF DR. CAROLYN ABOTT 

## January 31, 2023

## Introduction and Summary

The Enacted Miami City Commission Districting Plan is the byproduct of many decades of racialized Commission maps. Changes made from the 2013 enacted plan were also racially motivated, though these changes are minimal compared to the inherited racialization from previous plans.

I was asked by Plaintiff's counsel in this case to use data on voting-age population (VAP), citizen voting-age population (CVAP), and voting patterns within individual city precincts in order to determine whether and to what extent race can explain the overall shapes of the 2022 Enacted Plan districts as well as the changes between the 2013 Plan and the 2022 Plan. In particular, I will examine the Black, White, and Hispanic voting-age populations in the precincts that border all five Commission Districts and draw conclusions about the way race was used to determine the district boundaries. I will also consider alternative explanations for the boundary
changes, and show that these alternatives cannot explain the patterns I observe. Finally, Plaintiff's counsel asked me to draw a majority White-CVAP district but was unable to do so due to the geographic distribution of racial groups.

Based on my examination, I reach the conclusion that areas moved from one district to another were done so on the basis of race and that other areas could have been moved without further segregating the districts by race but were rejected by the Commission or not considered at all. I also have observed the Commission's practice of splitting precincts along racial lines. Finally, I note that there are several alternative precincts that could have been moved out of District 2 for population equality reasons that would not have enhanced the racial divisions of districts to the same extent as the Enacted Plan. Most changes to Districts 1, 3, 4 and 5 that did not involve District 2 were unnecessary and can only be understood on the basis of race.

## Qualifications

I am an Assistant Professor of Political Science at Baruch College, City University of New York, where I teach courses in American Government, State and Local Politics, Political Economy, Public Policy, and Public Administration. Prior to joining the faculty at Baruch, I taught at St. John's University in Queens, New York and completed a postdoctoral fellowship at The Ohio State University. I received a Ph.D. in political science and social policy from Princeton University in 2016. Both my research and teaching focuses on various aspects of American politics and public policy, particularly at the state and local level. This work includes research on American elections, including publications in top peer-reviewed journals on local elections, minority representation, voting rights, and voting behavior. Further details about my
professional qualifications and experience are listed in the copy of my curriculum vitae attached. I am being compensated for my work on this report at an hourly rate of $\$ 450 /$ hour. No part of my compensation depends on the outcome of this case or on the nature of the opinions that I provide.

## Sources and Methodology

In preparing this report, I have relied on my personal knowledge gathered through my years of researching, studying, and publishing. I also utilize the standard methodology that political scientists use when investigating precinct and census data. The 2020 Census provided data on voting-age populations (VAP) by race at the block level that could then be aggregated up to the precinct and split-precinct level. Data on 2019 citizen voting-age population (CVAP) by race provided in the Appendix comes from the 2019 American Community Survey 5-Year Estimates (ACS).

City Commission district maps and incumbent addresses were provided to me by Counsel. Precinct shapefiles and statewide election results were downloaded from the Voting and Election Science Team on Harvard's Dataverse (https://dataverse.harvard.edu/dataverse/electionscience). Dr. Moy provided me with election results for the 2020 County Mayor race.

## Overview of District Maps Prior to 2022 Enacted Plan

When embarking upon the current round of redistricting, the City of Miami had inherited district maps from 2013 and beyond that exhibited clear patterns of racial segregation. Table 1
depicts the VAP by race in all five districts under the 2013 Plan. Majorities tend to be exaggerated in districts (Districts 1, 3, and 4 for Hispanic voters; District 5 for Black voters) while voters of those races tend to be spread out across districts in which they do not hold a majority. This is particularly true of Black voters. The Black VAP is $14.8 \%$ in the City of Miami. Only one district (District 5) had equal or greater Black VAP under the 2013 Plan. Under the previous map, District 1 contained 10\% Black VAP, District 2 contained 7.7\% Black VAP, District 3 contained 5.6\% Black VAP, and District 4 contained 2.9\% Black VAP. District 5, however, had $53 \%$ Black VAP, and is the only district in which Black voters could conceivably have any "voice" in a Commission election.

Table 1: District Racial Compositions Under the 2013 Plan

| District | Black VAP | White VAP | Hispanic VAP |
| :--- | :--- | :--- | :--- |
| 1 | $10.1 \%$ | $3.0 \%$ | $91.0 \%$ |
| 2 | $7.7 \%$ | $34.5 \%$ | $51.9 \%$ |
| 3 | $5.6 \%$ | $7.4 \%$ | $88.5 \%$ |
| 4 | $2.9 \%$ | $6.0 \%$ | $91.6 \%$ |
| 5 | $52.9 \%$ | $7.8 \%$ | $41.6 \%$ |

Districts 2 and 5 are the most racially diverse districts in the sense that there is no clear racial supermajority of voters. Unlike District 5, however, District 2 needed to be redrawn substantially in order to satisfy population equality concerns (District 5 needed to grow only somewhat). Table 2 shows the size of the VAP in districts before and after the most recent round of redistricting. Under the 2013 Plan, District 2 contained 34,540 more residents than the
next largest district. This is equivalent to being more than 40\% larger than any of the other districts. As a result, District 2 shrunk considerably under the 2022 Enacted Plan while the other four districts all grew. As we will see, however, District 2 was not the only donor of precincts; all districts except District 3 (the smallest under the 2013 plan) donated precincts or portions of precincts, often receiving different precincts from the very districts they were donating to.

Table 2: Population Before and After Redistricting

| District | 2013 Plan | 2022 Enacted Plan |
| :--- | :--- | :--- |
| 1 | 81,449 | 88,108 |
| 2 | 117,281 | 93,300 |
| 3 | 80,169 | 87,658 |
| 4 | 80,601 | 86,597 |
| 5 | 82,741 | 86,578 |

Table 3 depicts the racial VAP composition after redistricting. Overall, Black VAP in District 2 decreased slightly as a percentage of total VAP (from 7.7\% to 7.2\%), as did Hispanic VAP (from $52 \%$ to $49 \%$ ) after redistricting. This was due to the fact that White VAP increased from $34 \%$ to $37 \%$ after redistricting. White VAP also increased in District 5 while both Black and Hispanic VAP decreased. On the whole, however, there was no statistical difference between VAP by race before and after redistricting at the district level. There were, however, significant patterns of change at a more granular level, which I will discuss in the next section.

Table 3: District Racial Compositions Under the 2022 Enacted Plan

| District | Black VAP | White VAP | Hispanic VAP |
| :--- | :--- | :--- | :--- |


| 1 | $11.0 \%$ | $3.5 \%$ | $89.5 \%$ |
| :--- | :--- | :--- | :--- |
| 2 | $7.2 \%$ | $37.4 \%$ | $48.6 \%$ |
| 3 | $5.4 \%$ | $7.7 \%$ | $88.3 \%$ |
| 4 | $3.1 \%$ | $7.6 \%$ | $89.5 \%$ |
| 5 | $50.3 \%$ | $10.5 \%$ | $40.6 \%$ |

## Changes Made Between 2013 and 2022 Plan

## District 1

District 1 is a super-majority Hispanic district with a small Black and even smaller White population. The district was third largest by population under the 2013 Plan so, in theory, needed to gain only a few residents. The changes under the 2022 Enacted Plan resulted in District 1 growing both in absolute and relative terms (it is now second largest, after District 2).

Changes made to District 1 occurred in tandem with changes only to District 5. Areas 6 and 8 were moved from District 5 into District 1 while Area 7 was moved out of District 1 and into District 5 (please see Figure 1). These swaps appear to be entirely motivated by race. Areas 6 and 8 are less Black than the nearby areas surrounding it that remained in District 5 , while the reverse is true of Area 7.

At the precinct level, the portions of precincts that were split during the redistricting and remained in their original district looked significantly different from the portions that were moved. In Area 6, the portion of Precinct 531 that was moved from District 5 to District 1 had lower Black VAP and greater Hispanic VAP compared to the portion that remained in District 5.

In Area 8, Precinct 522 also had a split with lower Black VAP and greater Hispanic VAP that was moved into District 1 in addition to a portion of Precinct 512 that had comparatively lower White VAP. And in Area 7, the portion of Precinct 523 that was moved from District 1 to 5 had greater Black VAP and lower Hispanic VAP compared to the portion that remained in District 1. Table 4 lists these disparities in greater detail.

Table 4: Black, White, and Hispanic Voting-age Population in Precinct Splits that Were Located in Different Districts Under the 2022 Enacted Plan, Areas 6, 7, and 8

| Precinct | District 1 Split | District 5 Split |
| :---: | :---: | :---: |
| Area 6 |  |  |
| 531 | 27.2\%, 44.9\%, 71.1\% | 62.5\%, 2.7\%, 38.7\% |
| Area 7 |  |  |
| 523 | 27.4\%, 1.8\%, 82.0\% | 40.5\%, 0.5\%, 65.7\% |
| 529 | 18.7\%, 2.7\%, 86.6\% | 13.3\%, 13.3\%, 73.3\% |
| Area 8 |  |  |
| 512 | 50.0\%, 37.5\%, 37.5\% | 61.2\%, 1.3\%, 41.6\% |
| 522 | 32.8\%, 1.1\%, 77.0\% | 60.1\%, 2.5\%, 41.1\% |

Because District 5 took on additional precincts from District 2 as was necessary for population equalization purposes, District 5 needed to give precincts to either District 1 or District 3. In this regard, it is understandable why District 5 would have been a net donor to District 1. But the areas that were chosen were deliberately done so on the basis of race. That District 5 also received precincts from District 1 (which were also racially distinct from the
surrounding areas) when this should not have been necessary for equalizing, further bolsters the argument that changes made to District 1 were done so on a racialized basis.


Figure 1: Areas moved between 2013 Plan and 2022 Enacted Plan

## District 2

As previously discussed, District 2 is one of the two ethnically and racially diverse Commission districts in the City (District 5 being the other). It was also the largest in terms of population going into the redistricting process and needed to shrink in order to be in compliance with the law. This was accomplished by donating precincts and portions of precincts to Districts 3, 4, and 5. Three areas that were moved from District 2 stand out. The first is Area

10/11 that was given to District 5 . This section of donated precincts had a lower White VAP and a greater Hispanic and Black VAP compared to areas that were not moved. This is particularly pronounced among some precincts that were split across District 2 and 5 during the redistricting. Precinct 534A, for instance, was split in such a way that the portion donated to District 5 had nearly 10 percentage points greater Black VAP than the portion that remained in District 2. Precinct 536A saw a split given to District 5 that contained Black VAP that was 45 percentage points higher than the split that stayed in District 2 . Table 5 lists the VAP by race for each of these split precincts.

Area 17, a former section of the southwest part of District 2 directly below US 1, did not substantially differ from the other portions of District 2 surrounding it. It did, however, differ markedly from the racial composition of the receiving District 4, which undercuts the argument that Commissioners were seeking to maintain the core of the Districts' racial compositions. Looking at the split precincts in this area also raises concerns about race-based motivations. Table 6 lists the areas' two precinct splits and the VAP by race in each district. These precincts were split into sections with very different racial compositions: Precinct 583 gave District 4 a section with a greater percentage of Black and Hispanic voters, while Precinct 584 gave District 4 a much lower percentage of Black voters.

It should be noted, however, that the District 4 split of Precinct 584 contains about 10\% of the VAP that the District 2 split contains (235 individuals versus 2,108 ). This pattern is generally true across all districts and precincts: on average, portions of splits precincts that were moved were one-third the size of the portions that remained in their original 2013 districts.

Table 5: Black, White, and Hispanic Voting-age Population in Precinct Splits that Were Located in Different Districts Under the 2022 Enacted Plan, Areas 10/11

| Precinct | District 2 Split | District 5 Split |
| :--- | :--- | :--- |
| Area 10/11 |  |  |
| 538 | $8.3 \%, 31.1 \%, 54.8 \%$ | $8.3 \%, 31.1 \%, 56.7 \%$ |
| 534 | $6.6 \%, 24.7 \%, 60.0 \%$ | $9.8 \%, 20.4 \%, 65.8 \%$ |
| 534 A | $8.3 \%, 47.3 \%, 34.2 \%$ | $17.5 \%, 28.2 \%, 42.5 \%$ |
| 536 A | $13.0 \%, 16.6 \%, 67.0 \%$ | $54.8 \%, 0.0 \%, 74.2 \%$ |
| 984 A | $7.8 \%, 23.6 \%, 61.3 \%$ | $20.0 \%, 20.0 \%, 65.0 \%$ |
| 984 | $7.3 \%, 35.6 \%, 48.8 \%$ | $16.7 \%, 22.8 \%, 57.4 \%$ |

Table 6: Black, White, and Hispanic Voting-age Population in Precinct Splits that Were Located in Different Districts Under the 2022 Enacted Plan, Area 17

| Precinct | District 2 Split | District 4 Split |
| :--- | :--- | :--- |
| Area 17 |  |  |
| 583 | $5.3 \%, 50.3 \%, 41.6 \%$ | $8.3 \%, 35.6 \%, 53.9 \%$ |
| 584 | $34.2 \%, 21.8 \%, 42.1 \%$ | $1.3 \%, 14.0 \%, 83.4 \%$ |

Area 13 is also notable for a number of reasons. The first is the odd and unintuitive shape that this carve-out of District 2 creates. For compactness reasons, it would have made more sense to give District 3 portions of District 2 that were further north and closer to District 5. These portions further north along US 1 could have even been donated to District 3 in addition to Area 13. Instead, however, District 3 took on portions of District 4 (discussed below) that did not make sense strictly for purposes of population equalization. Secondly, while Area

13 does not differ markedly from the surrounding areas in terms of Black VAP, it has considerably lower Hispanic VAP than both the surrounding areas of District 2 and - by quite a bit - of the receiving District 3. Though the split precincts in Area 13 do not markedly differ from one another across districts in terms of VAP by race, the movement of Area 13 had ripple effects in the drawing of other districts that was largely adjudicated by racial concerns. Table 7 lists these split precincts and how the portions between Districts 2 and 3 differ by racial VAP.

Table 7: Black, White, and Hispanic Voting-age Population in Precinct Splits that Were Located in Different Districts Under the 2022 Enacted Plan, Area 13

| Precinct | District 2 Split | District 3 Split |
| :--- | :--- | :--- |
| Area 13 |  |  |
| 546 | $3.1 \%, 51.3 \%, 40.5 \%$ | $2.8 \%, 52.4 \%, 37.6 \%$ |
| 582 | $1.6 \%, 49.9 \%, 43.5 \%$ | $2.5 \%, 51.7 \%, 37.7 \%$ |

## District 3

District 3 is the second smallest district by population. As discussed in the previous section, District 3 needed to add portions of other districts in order to address population equalization issues, and did so by taking on areas from District 2 - the largest district in the City - and from

## District 4.

As discussed above, Area 13 was moved from District 2 to 3 for reasons that appear to be unmotivated by race as the precinct splits are not substantively distinct across district lines. Area 13 , however, contains only 1,396 people. This is a relatively small (18.6) percent of the total 7,493 people that were moved into District 3. These 1,396 residents in Area 13 make up
only $1.6 \%$ of District 3's overall population of 87,658 under the 2022 Enacted Plan. The bulk of the population that was moved came instead from Area 14/15 that originated in District 4.

Area $14 / 15$ did not strongly differ from the areas immediately surrounding it, either in District 3 or District 4. The two split precincts in this area also did not look different from the split portions that remained in District 4. Area 14/15, however, has a very high Hispanic VAP of $96.2 \%$. This very high proportion of potential Hispanic voters helped to offset the lower proportion of Hispanic voters that were gained by District 3 in Area 13 (37.6\% Hispanic VAP). Adding additional portions of District 2 - rather than unnecessarily adopting Area 14/15 from District 4 - would have lowered the overall percentage of Hispanic VAP. It is likely that Area 14/15 was adopted by District 3 in order to balance the addition of Area 13.

## Changes to Districts 4 and 5 were discussed in the sections on Districts 1-3.

## Alternative explanations

## Partisan gerrymander

Partisan gerrymanders are loosely defined as an attempt by a single party in charge of redistricting to maximize the number of seats held by the party. Partisan gerrymanders often occur when the majority party is tasked with drawing the maps and has full control over the district lines. This allows the majority party to draw districts in such a way as to narrowly guarantee the most number of majority-held seats in the legislative body, i.e., create competitive districts that give the majority party a narrow victory while splitting the minority party's voters into as few districts as possible that could grant them a victory.

This is not a viable explanation for what happened during the most recent round of redistricting of the Miami City Commission for a number of reasons. First, City Commission elections are nonpartisan. While it is quite easy to figure out the partisan affiliation of a candidate, there are no partisan primaries nor general elections that are guaranteed to pit candidates of different parties against one another. Second, the redistricting process was under the purview of the entire Commission, not just the "majority party" (in quotations as the Commission is nonpartisan and as such cannot have explicit partisan control), which meant that all Commissioners had at least nominal input on the map. Finally, the 2022 Enacted Plan was approved by a margin of 3-2 with one Democratic Commissioner joining two Republican Commissioners in the majority. Approval of traditional partisan gerrymanders cannot cross party lines as no minority party member would agree to the final product.

## Maintaining the partisanship of the district cores

A similar but unrelated alternative explanation to partisan gerrymandering is the idea that the 2022 Enacted Plan was designed to maintain the current partisan makeup of the cores of the districts, i.e., in order to guarantee that a Democrat would always represent District 5 and that a Republican would always represent District 3.

This alternative explanation does not hold water. For moved precincts that were not split and still had geographically contiguous neighboring precincts that remained and could be used for comparison, either partisan voting patterns in both the 2018 gubernatorial election and the 2020 county mayor election looked remarkably similar or the comparison precinct was too small (i.e., only one person voting) to make reasonable inferences.

Additionally, moved precincts - generally speaking - did not look like the cores of the receiving districts. There were other precincts that could have been moved, even if they were not directly nearby to the precincts that were moved (but were geographically contiguous to the receiving district), that would have been preferable for maintaining partisan voting patterns of the adopting or donating district. For example, part of Precinct 548 was moved into District 3 from District 4. Precinct 548 looked nothing like the core of District $3.59 .4 \%$ of voters voted for DeSantis (the Republican candidate) in Precinct 548 that was moved, while 41.2\% of District 3 voted for DeSantis using the 2013 map. Conversely, 53.4\% of District 4 - the giving District went for DeSantis. A more reasonable precinct to have been moved, had the plan been truly concerned about maintaining core partisanship patterns, would have been Precinct 572, 49.2\% of which voted for DeSantis.

As another example, part of Precinct 583 was moved from District 2 to $4.22 \%$ of this precinct voted for DeSantis compared to the overall $53.4 \%$ of District 4 and the $29.4 \%$ of District 2. A better portion of District 2 to move (which, again, was necessary for population equalization reasons) would have been 546 which went $29.9 \%$ for DeSantis. This precinct was split in the 2022 map, with one portion remaining in District 2 and one portion moved to District 3. If the map had truly aimed to preserve core partisanship, it would have made more sense to keep 546 in District 2 (or cede it to District 4) rather than give it to District 3 and instead move 582, 993, and/or 569 to District 3 where partisan voting patterns were far more similar. District 2 could have also donated its north end, which is heavily Democratic (i.e., Precincts 516, 544, 534B or the remaining portions of 999, 538, 534, 534A, 536A, 984A, 984
which each went $25.6 \%, 24.2 \%, 24.1 \% 26.5 \%, 18.1 \%, 23.2 \%, 24 \%, 14 \%, 23 \%$, and $23 \%$ for DeSantis), and given them to District 5 which is also heavily Democratic.

## Keeping incumbents in their districts

I have reviewed the locations of the five incumbents' addresses as given to me by Counsel and as reported on their voting registration, and I have come to the conclusion that no incumbent lives near one another, nor do they live near district boundaries that needed to change for population-equalization reasons, and that this consideration could not have affected the drawing of the district lines.

## Maintaining the cores of existing districts

Cores of existing districts were not changed; only boundary areas were affected. That said, there were a number of other boundary precincts and areas that could have made equal or greater sense to have been moved. These have been discussed in previous sections of the report.

## Compactness

Visual inspection reveals that the 2022 Enacted Plan is less compact than the 2013 Plan and as such compactness concerns cannot be used as an explanation for redistricting decisions.

Notable features of the 2022 Enacted Plan that stand out as being strangely drawn include splits of Precincts 536A and 534A (District 2) that act as a finger that juts into District 5. Similarly, splits of Precincts 546 and 582 belonging to District 3 extend past US-1 into District 2
when the rest of District 2's border is contiguous with US-1. The exception to this are splits of Precincts 583 and 584 belonging to District 4, and also appear to be drawn without regard to natural geographic boundaries.

## Alternative Map Proposals

A number of alternative maps were proposed but not enacted. All maps tended to shore up existing racial compositions within individual Commission districts, particularly those of Districts 1,2 and 5 . The alternative maps did differ from one another in a number of ways, however, as described below.

## A February 7, 2022 draft map

This alternative map (please refer to Figure 2) proposed to move Area B from District 2 to 5 and has 32.1\% Black VAP, 22\% White VAP, and 46.4\% Hispanic VAP. This area was proposed to be moved to District 5 in exchange for keeping a small carve out of Area A in District 2. Area A has 14.2\% Black VAP, 20.9\% White VAP, and 61\% Hispanic VAP.

The February 7 draft map also proposed to keep Area D in its 2013 district (District 5) but was instead moved to District 1 under the 2022 Enacted Plan. Area D has 29.9\% Black VAP, 3.5\% White VAP, and 72.1\% Hispanic VAP. In exchange, Area C stayed in District 5. This area is very small with only 647 residents ( 580 of whom are of voting age) and has 7.6\% Black VAP, 27.9\% White VAP, and 58.8\% Hispanic VAP.

## Commissioner Russell's rejected proposal

This map (please see Figure 3) would have moved a less Hispanic area into District 3, lowering the District's overall Hispanic share. Areas 13 and 17 from Figure 1 were not planned to be moved out of District 2 in this proposal, though they eventually were in the 2022 Enacted Plan. These areas are 5.1\% Black VAP, 40.8\% White VAP, and 49.5\% Hispanic VAP. Under this proposal, there was also an area that would be moved from District 2 to District 3 that did not come to pass. This area has 5.6\% Black VAP, $40.8 \%$ White VAP, and $42.9 \%$ Hispanic VAP.

## Commissioner Russell's rejected revised proposal

This proposal (Figure 4) differed from the original Russell proposal in that the area proposed to be moved from District 2 to District 3 was cut in half. The area that was proposed to remain in District 2 has 4.9\% Black VAP, 46.8\% White VAP, and 37.6\% Hispanic VAP. In comparison, the area that was proposed to continue to move to District 3 has $5.8 \%$ Black VAP, 38.9\% White VAP, and 44.6\% Hispanic VAP.

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Figure 2: Areas of difference between February 7, 2022 draft map and 2022 Enacted Plan

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Figure 3: Commissioner Russell's initial proposal


Figure 4: Commissioner Russell's revised proposal

## Commissioner Reyes's rejected proposal

This map (Figure 5) proposed to move an area that would have been less Hispanic than the one that was eventually moved._This proposal is similar to the Russell proposals except that it adds in a portion of District 2 to be moved to District 3 that encompasses both Area 13 in Figure 1 and the area that connects Area 13 to the Russell area. This strip has 0.9\% Black VAP, 31.4\% White VAP, and 61.6\% Hispanic VAP. These numbers do not include Area 13.


Figure 5: Commissioner Reyes's proposal

## Map with a majority White CVAP district

Counsel asked me to attempt to draw a district that contained $50 \%$ or more White CVAP but I found it impossible to do so due to the distribution of racial groups across the city.

## Conclusion

The 2022 Enacted Plan for the Miami City Commission has been designed around racial and ethnic considerations. While the Commission inherited a 2013 Plan that was already highly segregated by race, many of the changes made during the most recent round of redistricting were also motivated by race. Apart from a small portion of District 2 that was moved into

District 3 that objective demographic data does not demonstrate to be race-based, I found no evidence that any factors other than race and ethnicity affected the drawing of district lines in pursuit of equalizing population across districts.

Comtyn Alenst

Dr. Carolyn Abott, Ph.D.

January 31, 2023, in New York City, NY

## Demographics of the 2013 Plan

| Demographics of the 2013 Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Population and Deviations |  |  | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| 1 | 81,449 | -6,999 | -7.9\% | 91.0\% | 10.1\% | 3.0\% | 86.6\% | 8.0\% | 4.8\% |
| 2 | 117,281 | +28,833 | +32.6\% | 51.9\% | 7.7\% | 34.5\% | 49.4\% | 9.5\% | 38.1\% |
| 3 | 80,169 | -8,279 | -9.4\% | 88.5\% | 5.6\% | 7.4\% | 86.8\% | 3.5\% | 8.8\% |
| 4 | 80,601 | -7,847 | -8.9\% | 91.6\% | 2.9\% | 6.0\% | 90.1\% | 1.1\% | 7.5\% |
| 5 | 82,741 | -5,707 | -6.5\% | 41.6\% | 52.9\% | 7.8\% | 30.9\% | 59.4\% | 8.2\% |
| City | 442,241 | - | - | 71.1\% | 14.8\% | 13.9\% | 66.4\% | 17.6\% | 14.5\% |


| Demographics of the February 7 Draft |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Population and Deviations |  |  | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | Hisp. VAP | $\begin{aligned} & \text { Black } \\ & \text { VAP } \end{aligned}$ | White VAP | Hisp. CVAP | Black <br> CVAP | White CVAP |
| 1 | 88,775 | +327 | +0.4\% | 88.7\% | 10.5\% | 4.3\% | 84.8\% | 8.7\% | 5.9\% |
| 2 | 88,363 | -85 | -0.1\% | 47.8\% | 7.8\% | 37.6\% | 44.7\% | 10.4\% | 41.5\% |
| 3 | 87,600 | -848 | -1.0\% | 88.4\% | 5.5\% | 7.6\% | 86.6\% | 3.2\% | 9.3\% |
| 4 | 90,437 | +1,989 | +2.3\% | 88.1\% | 3.4\% | 8.7\% | 86.7\% | 1.7\% | 10.2\% |
| 5 | 87,066 | -1,382 | -1.6\% | 41.6\% | 49.8\% | 10.1\% | 30.9\% | 58.7\% | 8.9\% |
| City | 442,241 | - | - | 71.1\% | 14.8\% | 13.9\% | 66.4\% | 17.6\% | 14.5\% |


| Demographics of the Feb. 22 Draft/Base Plan/Enacted Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Population and Deviations |  |  | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| 1 | 88,108 | -340 | -0.4\% | 89.5\% | 11.0\% | 3.5\% | 86.1\% | 8.2\% | 5.0\% |
| 2 | 93,300 | +4,852 | +5.5\% | 48.6\% | 7.3\% | 37.4\% | 44.4\% | 8.7\% | 40.5\% |
| 3 | 87,658 | -790 | -0.9\% | 88.3\% | 5.4\% | 7.7\% | 85.6\% | 3.9\% | 9.9\% |
| 4 | 86,597 | -1,851 | -2.1\% | 89.5\% | 3.1\% | 7.6\% | 89.6\% | 1.3\% | 8.2\% |
| 5 | 86,578 | -1,870 | -2.1\% | 40.6\% | 50.3\% | 10.5\% | 30.8\% | 58.2\% | 9.5\% |
| City | 442,241 | - | - | 71.1\% | 14.8\% | 13.9\% | 66.4\% | 17.6\% | 14.5\% |


| Demographics of the Initial Russell Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Population and Deviations |  |  | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| 1 | 88,108 | -340 | -0.4\% | 89.5\% | 11.0\% | 3.5\% | 84.8\% | 9.3\% | 5.4\% |
| 2 | 89,309 | +861 | +1.0\% | 49.1\% | 7.3\% | 37.1\% | 46.0\% | 9.4\% | 41.1\% |
| 3 | 93,246 | +4,798 | +5.4\% | 85.2\% | 5.4\% | 9.9\% | 84.8\% | 3.2\% | 11.1\% |
| 4 | 85,000 | -3,448 | -3.9\% | 90.1\% | 3.0\% | 7.2\% | 89.1\% | 1.4\% | 8.2\% |
| 5 | 86,578 | -1,870 | -2.1\% | 40.6\% | 50.3\% | 10.5\% | 30.1\% | 59.0\% | 9.2\% |
| City | 442,241 | - | - | 71.1\% | 14.8\% | 13.9\% | 66.4\% | 17.6\% | 14.5\% |


| Demographics of the Revised Russell Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Population and Deviations |  |  | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Dist. | Total Pop. | Pop. Dev. | $\begin{gathered} \% \\ \text { Dev. } \end{gathered}$ | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| 1 | 88,108 | -340 | -0.4\% | 89.5\% | 11.0\% | 3.5\% | 84.8\% | 9.3\% | 5.4\% |
| 2 | 91,619 | +3,171 | +3.6\% | 48.8\% | 7.3\% | 37.4\% | 46.0\% | 9.4\% | 41.1\% |
| 3 | 90,936 | +2,488 | +2.8\% | 86.6\% | 5.4\% | 8.9\% | 84.8\% | 3.2\% | 11.1\% |
| 4 | 85,000 | -3,448 | -3.9\% | 90.1\% | 3.0\% | 7.2\% | 89.1\% | 1.4\% | 8.2\% |
| 5 | 86,578 | -1,870 | -2.1\% | 40.6\% | 50.3\% | 10.5\% | 30.1\% | 59.0\% | 9.2\% |
| City | 442,241 | - | - | 71.1\% | 14.8\% | 13.9\% | 66.4\% | 17.6\% | 14.5\% |


| Demographics of the Reyes Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Population and Deviations |  |  | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Dist. | Total Pop. | Pop. Dev. | $\begin{gathered} \% \\ \text { Dev. } \end{gathered}$ | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| 1 | 88,108 | -340 | -0.4\% | 89.5\% | 11.0\% | 3.5\% | 84.8\% | 9.3\% | 5.4\% |
| 2 | 92,617 | +4,169 | +4.7\% | 48.7\% | 7.3\% | 37.2\% | 45.5\% | 9.2\% | 41.7\% |
| 3 | 89,938 | +1,490 | +1.7\% | 87.3\% | 5.3\% | 8.6\% | 86.0\% | 3.3\% | 9.9\% |
| 4 | 85,000 | -3,448 | -3.9\% | 90.1\% | 3.0\% | 7.2\% | 89.1\% | 1.4\% | 8.2\% |
| 5 | 86,578 | -1,870 | -2.1\% | 40.6\% | 50.3\% | 10.5\% | 30.1\% | 59.0\% | 9.2\% |
| City | 442,241 | - | - | 71.1\% | 14.8\% | 13.9\% | 66.4\% | 17.6\% | 14.5\% |

Comparison of 2013 Plan and Feb. 7 Draft

|  |  |  | Total Population Total Pop. | 2020 Census VotingAge Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | $\begin{array}{\|l\|} \hline \text { Black } \\ \text { VAP } \end{array}$ | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Coconut Grove area moved from D2 to D4 | US 1, SW 27th Ave, Day Ave, city limits | Parts of 532, 583, 584, 585, 587 | 5,071 | 49.1\% | 10.1\% | 37.4\% | 43.5\% | 6.5\% | 46.3\% |
| Golden Pines area moved from D2 to D4 | SW 25th St, SW 27th Ave, US 1, city limits | 577, 578 | 10,496 | 81.8\% | 3.6\% | 13.6\% | 83.9\% | 3.8\% | 11.8\% |
| Area moved from D2 to D3 | SW 17th Ave, S Miami Ave, SW 15th Rd, SW 1st Ave, I-95, US 1 | 993, part of 582 | 1,313 | 56.2\% | 2.3\% | 36.9\% | 60.3\% | 0.8\% | 34.8\% |
| Little Havana area moved from D4 to D3 | SW 27th Ave, SW 9th St, SW 17th Ave, SW 12th St | Parts of 572,574 | 3,221 | 91.1\% | 4.1\% | 5.6\% | 85.4\% | 0.9\% | 13.0\% |
| Little Havana area moved from D4 to D1 | NW 37th Ave, NW 7th St, NW 27th Ave, NW 4th St | Parts of 510, 548 | 2,510 | 96.1\% | 2.2\% | 2.5\% | 99.1\% | 0.0\% | 0.1\% |
| Little Havana area moved from D1 to D3 | Dolphin Expy, NW 22nd Ave, NW 7th St, NW 27th Ave | Part of 545 | 2,897 | 96.1\% | 4.2\% | 1.8\% | 98.2\% | 0.6\% | 0.8\% |
| Riverside area moved from D5 to D1 | Miami River, Dolphin Expy, NW 7th Ave, NW 6th Ave, I-95, SW 2nd St, Metrorail | 530, 540, 656, 656A, 985, 990, parts of 531, 655 | 5,230 | 70.4\% | 20.0\% | 10.6\% | 62.5\% | 21.2\% | 15.3\% |
| Riverside area moved from D2 to D1 | Miami River, Metrorail, SW 2nd St, S Miami Ave | Part of 984 | 2,483 | 56.7\% | 6.0\% | 30.2\% | 60.0\% | 7.5\% | 29.0\% |
| Downtown/Omni/Wynwood/Edge water area moved from D2 to D5 |  | 536, 536A, 599, parts of 534, 538, 658A, 984, 984A, 999 | 9,555 | 56.9\% | 10.8\% | 27.9\% | 60.5\% | 11.9\% | 26.4\% |
| Portion of D1 remaining in D1 |  |  | 78,552 | 90.8\% | 10.3\% | 3.1\% | 86.3\% | 8.3\% | 4.9\% |
| Portion of D2 remaining in D2 |  |  | 88,363 | 47.8\% | 7.8\% | 37.6\% | 44.7\% | 10.4\% | 41.5\% |
| Portion of D3 remaining in D3 |  |  | 80,169 | 88.5\% | 5.6\% | 7.4\% | 86.8\% | 3.5\% | 8.8\% |
| Portion of D4 remaining in D4 |  |  | 74,870 | 91.5\% | 2.9\% | 6.1\% | 89.9\% | 1.2\% | 7.5\% |
| Portion of D5 remaining in D5 |  |  | 77,511 | 39.4\% | 55.4\% | 7.6\% | 29.1\% | 61.6\% | 7.8\% |


| Comparison of Feb. 7 Draft and Base/Enacted Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population Total Pop. | 2020 Census VotingAge Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Allapattah area moved from D5 to D1 | SR 112, NW 12th Ave, NW 36th St, NW 19th Ave | Parts of 512, 522 | 995 | 76.6\% | 33.0\% | 1.5\% | 62.8\% | 34.9\% | 2.3\% |
| $\begin{aligned} & \text { Allapattah area moved from D1 } \\ & \text { to D5 } \end{aligned}$ | I-95, NW 32nd St, NW 8th Ave, NW 36th St | Parts of 523, 529 | 329 | 66.7\% | 37.1\% | 2.1\% | 50.0\% | 50.0\% | 1.4\% |
| Downtown area moved from D5 to D1 | I-95, NW 6th St, NW 7th Ave, NW 8th St | Part of 531 | 794 | 72.1\% | 29.9\% | 3.5\% | 64.8\% | 32.6\% | 0.7\% |
| Riverside area moved from D1 back to D5 (including the Wharf) | Miami River, SW 1st St, I-95, SW 2nd St, S Miami Ave, SW 3rd St, Metrorail | Parts of 655, 656, 984 | 81 | 52.6\% | 40.4\% | 7.0\% | 61.5\% | 15.4\% | 15.4\% |
| Downtown areas moved from D2 to D5 | N/S Miami Ave, SW 2nd St, SE/NE 2nd Ave, NE 8th St; and N Miami Ave, NE 10th St, NE 2nd Ave, Dolphin Expy | 982A, parts of 534A, 658A, 984, 984A | 2,521 | 46.4\% | 32.1\% | 22.0\% | 46.1\% | 33.0\% | 19.1\% |
| Downtown area moved from D5 back to D2 | N Miami Ave, NW 8th St, Metrorail, NE 10th St | Part of 536A | 1,638 | 67.0\% | 13.0\% | 16.6\% | 72.6\% | 10.7\% | 15.6\% |
| Riverside area moved from D1 back to D2 | Miami River, Metrorail, SW 3rd St, S Miami Ave | Part of 984 | 2,433 | 56.7\% | 5.5\% | 30.5\% | 60.0\% | 5.5\% | 30.3\% |
| Area moved from D3 back to D2 | Alatka St, S Miami Ave, SW 15th Rd, SW 1st Ave, I-95, US 1 | 993, part of 582 | 918 | 62.9\% | 1.6\% | 31.3\% | 57.7\% | 0.9\% | 37.1\% |
| Coconut Grove area moved from D2 to D3 | US 1, SW 17th Ave, S Bayshore Dr, SW 22nd Ave | Parts of 546, 582 | 997 | 36.7\% | 2.2\% | 52.8\% | 36.2\% | 0.0\% | 61.7\% |
| Coconut Grove area moved from D4 back to D2 | US 1, Bird Ave, SW 27th Ave, Day Ave | $\begin{array}{r} \text { Parts of } 532,583,584, \\ 585,587 \end{array}$ | 3,474 | 44.5\% | 11.5\% | 40.0\% | 43.6\% | 8.0\% | 44.7\% |
| Little Havana area moved from D3 back to D4 | SW 27th Ave, SW 9th St, SW 17th Ave, SW 12th St | Parts of 572, 574 | 3,221 | 91.1\% | 4.1\% | 5.6\% | 85.4\% | 0.9\% | 13.0\% |
| Little Havana area moved from D4 to D3 | SW 8th St, SW/NW 32nd Ave, NW 4th St, NW/SW 27th Ave | Parts of 548, 670 | 5,026 | 96.2\% | 3.0\% | 2.5\% | 96.8\% | 0.4\% | 2.3\% |
| Little Havana area moved from D1 to D3 | NW 4th St, NW 32nd Ave, NW 7th St, NW 27th Ave | Part of 548 | 1,071 | 96.1\% | 3.7\% | 2.5\% | 98.2\% | 0.0\% | 1.8\% |
| Little Havana area moved from D1 back to D4 | NW 4th St, NW 37th Ave, NW 7th St, NW 32nd Ave | Parts of 510, 548 | 1,439 | 96.1\% | 1.1\% | 2.5\% | 99.7\% | 0.0\% | 0.1\% |
| Little Havana area moved from D3 back to D1 | Dolphin Expy, NW 22nd Ave, NW 7th St, NW 27th Ave | Part of 545 | 2,897 | 96.1\% | 4.2\% | 1.8\% | 98.2\% | 0.6\% | 0.8\% |
| West Grove Triangle moved from D2 to D4 in Feb. 7 Draft and remaining in D4 | US 1, SW 27th Ave, Bird Ave | Parts of 583, 584 | 1,597 | 59.2\% | 7.1\% | 31.7\% | 43.1\% | 3.5\% | 49.6\% |


| Comparison of 2013 Plan and Base/Enacted Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population <br> Total Pop. | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black <br> CVAP | White CVAP |
| Allapattah area moved from D5 to D1 | SR 112, NW 12th Ave, NW 36th St, NW 19th Ave | Parts of 512, 522 | 995 | 76.6\% | 33.0\% | 1.5\% | 62.8\% | 34.9\% | 2.3\$\% |
| Allapattah area moved from D1 to D5 | I-95, NW 32nd St, NW 8th Ave, NW 36th St | Parts of 523, 529 | 329 | 66.7\% | 37.1\% | 2.1\% | 50.0\% | 50.0\% | 1.4\% |
| Downtown area moved from D5 to D1 | Miami River, Dolphin Expy, NW 7th Ave, NW 8th St, l-95, SW 1st St | 530, 540, 656A, 985, 990, and parts of 531, 656 | 5,993 | 70.8\% | 21.1\% | 9.7\% | 62.7\% | 22.2\% | 14.1\% |
| Downtown/Omni/Wynwood/Edg ewater area moved from D2 to D5 | Metrorail, NW/NE 8th St, NE 2nd Ave, SW/SE 2nd St, S Miami Ave, SW 3rd St; and FEC Railway, NW 14th St, NW 1st Ave, NW 22nd St, N Miami Ave, SR 112, Biscayne Blvd, NE 36th St, NE 2nd Ave, NE 10th St | $\begin{array}{r} 536,599,658 \mathrm{~A}, 982 \mathrm{~A}, \\ \text { and parts of } 534,534 \mathrm{~A}, \\ 536 \mathrm{~A}, 538,984,984 \mathrm{~A}, \\ 999 \end{array}$ | 10,496 | 52.8\% | 15.9\% | 28.0\% | 51.5\% | 21.4\% | 25.6\% |
| Coconut Grove area moved from D2 to D3 | US 1, Alatka St, S Bayshore Dr, Kirk St, SW 22nd Ave | Parts of 546, 582 | 1,392 | 37.6\% | 2.6\% | 52.1\% | 47.1\% | 0.3\% | 49.9\% |
| Entire Golden Pines/Coconut Grove area moved from D2 to D4 | SW 25th, SW 27th Ave, Bird Ave, US 1, city limits | 577, 578, and parts of 583, 584 | 12,093 | 78.9\% | 4.0\% | 15.9\% | 76.7\% | 3.8\% | 18.5\% |
| Little Havana area moved from D4 to D3 | SW 8th St, SW/NW 32nd Ave, NW 7th Ave, NW 27th Ave | Parts of 548, 670 | 6,097 | 96.2\% | 3.1\% | 2.5\% | 97.1\% | 0.3\% | 2.1\% |
| Portion of D1 remaining in D1 |  |  | 81,120 | 91.1\% | 10.0\% | 3.0\% | 86.7\% | 7.9\% | 4.8\% |
| Portion of D2 remaining in D2 |  |  | 93,300 | 48.6\% | 7.3\% | 37.4\% | 45.6\% | 9.3\% | 41.5\% |
| Portion of D3 remaining in D3 |  |  | 80,169 | 88.5\% | 5.6\% | 7.4\% | 86.8\% | 3.5\% | 8.8\% |
| Portion of D4 remaining in D4 |  |  | 74,504 | 91.3\% | 2.9\% | 6.3\% | 89.6\% | 1.2\% | 7.8\% |
| Portion of D5 remaining in D5 |  |  | 75,753 | 38.5\% | 56.0\% | 7.7\% | 28.3\% | 62.2\% | 7.9\% |

2022 Enacted Plan's Division of the Southeast Overtown/Park West CRA

| 2022 Enacted Plan's Division of the Southeast Overtown/Park West CRA |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population <br> Total Pop. | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Portion in D1 |  |  | 1,760 | 74.4\% | 27.9\% | 2.4\% | 67.1\% | 30.4\% | 1.6\% |
| Portion in D2 (6-block appendage off NE 2nd Ave) |  |  | 1,972 | 61.0\% | 14.2\% | 21.0\% | 70.9\% | 11.8\% | 16.1\% |
| Portion in D5 |  |  | 8,072 | 38.2\% | 61.0\% | 4.7\% | 23.6\% | 71.2\% | 4.4\% |


| Miscellaneous Areas |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population <br> Total Pop. | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Portion of Allapattah in D1 | NW 27th Ave, Miami River, Dolphin Expy, NW 7th Ave, NW 22nd St, I-95, NW 32nd St, NW 8th Ave, NW 36th St, NW 12 Ave, SR 112 |  | 40,669 | 86.8\% | 17.0\% | 2.9\% | 78.6\% | 15.3\% | 5.3\% |
| Portion of Allapattah in D5 | SR 112, I-95, NW 23nd St, NW 8th Ave, NW 36th St, NW 12 Ave |  | 774 | 54.7\% | 47.4\% | 3.1\% | 49.2\% | 49.2\% | 1.6\% |
| Portion of D5 protruding west of I-95 | I-95, NW 8th St, NW 7th Ave, NW 22nd St |  | 1,634 | 39.6\% | 60.5\% | 5.1\% | 38.6\% | 58.5\% | 2.5\% |
| Portion of D2 west of SE 2nd Ave by Miami River | SE 2nd Ave, Miami River, Metrorail, SW 3rd St, S Miami Ave, SW 2nd St |  | 2,433 | 56.7\% | 5.5\% | 30.5\% | 60.0\% | 7.5\% | 29.0\% |
| Portion of the North Grove | US 1, SW 22nd Ave, Kirk St, S Bayshore Dr, SW 27th Ave |  | 2,832 | 36.7\% | 2.4\% | 55.0\% | 29.9\% | 1.4\% | 67.7\% |


| Comparison of Initial Russell Plan to Base Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population <br> Total Pop. | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Area moved from D2 to D3 | I-95, US 1, S Miami Ave, Miami River, Metrorail, SW 1st Ave | 568, 668, 993, 996, and part of 541 | 6,980 | 42.2\% | 5.5\% | 41.5\% | 37.4\% | 2.8\% | 56.2\% |


| Comparison of Revised Russell Plan to Base Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population <br> Total Pop. | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Area moved from D2 to D3 | I-95, US 1, S Miami Ave, SW 10th St, Metrorail, SW 1st Ave | 993 and parts of 668, 996 | 4,670 | 44.6\% | 5.8\% | 38.9\% | 37.4\% | 2.8\% | 56.2\% |


| Comparison of Reyes Plan to Base Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Population <br> Total Pop. | 2020 Census Voting-Age Population (VAP) |  |  | 2019 American Community Survey Citizen VAP (CVAP) |  |  |
| Area Description | Boundaries | Precincts |  | Hisp. VAP | Black VAP | White VAP | Hisp. CVAP | Black CVAP | White CVAP |
| Area moved from D2 to D3 | Alatka St, S Miami Ave, SW 13 St, Metrorail, SW 1st Ave, I-95, US 1 | 993 and parts of $582,668,996$ | 2,280 | 50.8\% | 3.0\% | 39.0\% | 48.0\% | 6.0\% | 43.6\% |

## IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF FLORIDA

GRACE, INC., et al.,
Plaintiffs,
v.

Case No. 1:22-cv-24066-KMM
CITY OF MIAMI,
Defendant.

## SECOND EXPERT REPORT OF DR. CAROLYN ABOTT

## July 5, 2023

## Introduction and Summary

The City's Proposed Remedy ("Res. 23-271") differs only marginally from the Enjoined Plan. The largest differences can be found in Districts 3 and 4, though Black voting-age populations do not change substantively at all between the two plans. Race is still the primary determinant of the shapes of the districts in Res. 23-271.

I was asked by Plaintiff's counsel in this case to use data on voting-age population (VAP), citizen voting-age population (CVAP), and voting patterns within individual city precincts in order to determine whether and to what extent race can explain the overall shapes of the districts in Res. 23-271 as well as the changes between the Enjoined Plan and Res. 23-271.

Based on my examination, I reach the conclusion that differences between Res. 23-271 and the Enjoined Plan are a result of racial concerns.

## Sources and Methodology

In preparing this report, I have relied on my personal knowledge gathered through my years of researching, studying, and publishing. I also utilize the standard methodology that political
scientists use when investigating precinct and census data. The 2020 Census provided data on voting-age populations (VAP) by race at the block level that could then be aggregated up to the precinct and split-precinct level. Data on 2020 citizen voting-age population (CVAP) by race provided in the Appendix is from the 2020 American Community Survey 5-Year Estimates (ACS).

City Commission district maps were provided to me by Counsel. Precinct shapefiles and statewide election results were downloaded from the Voting and Election Science Team on Harvard's Dataverse (https://dataverse.harvard.edu/dataverse/electionscience).

## Overview of Commission Districts in Res. 23-271

Overall, the commission districts in Res. 23-271 are nearly identical to those contained in the Enjoined Plan. Figure 1 displays the two maps next to one another. They are visually very similar. The biggest changes to the overall composition of the districts occurred in Districts 3 and 4. As shown in Table 1 and Table 2, White VAP increases in District 3 from 7.7\% under the Enjoined Plan to 10.5\% under Res. 23-271. Hispanic VAP, on the other hand, decreases in District 3 from $88.3 \%$ to $84.5 \%$. District 4 absorbs most of these changes such that White VAP decreases (from $7.6 \%$ to $7.2 \%$ ) and Hispanic VAP increases ( $89.5 \%$ to $90.0 \%$ ). District 2 also absorbs some of these racial changes, though to a lesser degree. Across all districts, Black VAP remains virtually unchanged. Population deviation improved under Res. 23-271, decreasing the population spread from 6,722 (with 86,578 in District 5 and 93,300 in District 2) under the Enjoined Plan to a spread of 3,149 (with 86,444 in District 5 and 89,593 in District 2).

While both maps are overwhelmingly similar, as discussed above, there is a degree of compactness that is lost in Res. 23-271 relative to the Enjoined Plan. This is particularly true with regards to District 5 and the areas moved between District 5 and 1 (especially Areas 13, 14, and

16 in Figure 2) and the areas moved between Districts 5 and 2 (particularly Area 19). The single block that makes up Area 12, moved from District 3 to 2, also creates an unnatural sliver of District 3 that extends into District 2, decreasing overall compactness.

Figure 1: The Enjoined Plan (Top Panel) and Res. 23-271 (Bottom Panel)


Table 1: District Racial Compositions Under the Enjoined Plan

| District | Black VAP | White VAP | Hispanic VAP |
| :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | $11.0 \%$ | $3.5 \%$ | $89.5 \%$ |
| $\mathbf{2}$ | $7.3 \%$ | $37.4 \%$ | $48.6 \%$ |
| $\mathbf{3}$ | $5.4 \%$ | $7.7 \%$ | $88.3 \%$ |
| $\mathbf{4}$ | $3.1 \%$ | $7.6 \%$ | $89.5 \%$ |
| $\mathbf{5}$ | $50.3 \%$ | $10.5 \%$ | $40.6 \%$ |

Table 2: District Racial Compositions Under Res. 23-271

| District | Black VAP | White VAP | Hispanic VAP |
| :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | $10.9 \%$ | $3.4 \%$ | $89.7 \%$ |
| $\mathbf{2}$ | $7.7 \%$ | $36.5 \%$ | $49.6 \%$ |
| $\mathbf{3}$ | $5.4 \%$ | $10.5 \%$ | $84.5 \%$ |
| $\mathbf{4}$ | $3.1 \%$ | $7.2 \%$ | $90.0 \%$ |
| $\mathbf{5}$ | $50.3 \%$ | $10.5 \%$ | $40.6 \%$ |

Figure 2: Areas Moved Between Enjoined Plan and Res. 23-271


## Individual Areas Moved Between Enjoined Plan and Res. 23-271

## District 1

District 1, under both plans, is a super-majority Hispanic district with a small Black and even smaller White VAP. Under Res. 23-271, District 1 lost four areas from the Enjoined Plan as depicted in Figure 2: Areas 7, 13, 16, and 17. These areas moved out of District 1 are highlighted in yellow in Table 3. District 1 also gained four areas: Areas 6, 8, 14, and 15. These areas are highlighted in teal. Below I discuss the racial compositions of each of these areas and how they impacted the overall change to District 1. I exclude Areas 15 and 16 in this discussion as they are given separate treatment in the discussion of Historic Overtown.

Area 7 is a small (population of 48), high Hispanic VAP, low Black VAP area that was moved from District 1 to District 3. Both districts are of similar racial composition and this movement made little difference to either of their overall racial VAP. Areas 13 and 17, however, have higher Black VAP than District 1 ( $29.2 \%$ and $66.7 \%$, respectively) and were moved into District 5, a majority Black district.

Table 3: Areas Moved Between Enjoined Plan and Res. 23-271 in District 1 (areas moved out highlighted in yellow; areas moved in highlighted in teal)

| Area \# | Movement | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 6 | 4 to 1 | 0.0 | 99.1 | 3.6 | 139 |
| 7 | 1 to 3 | 25.7 | 68.6 | 8.6 | 48 |
| 8 | 3 to 1 | 1.5 | 97.1 | 2.9 | 762 |
| 13 | 1 to 5 | 1.0 | 80.2 | 29.2 | 805 |
| 14 | 5 to 1 | 2.4 | 66.3 | 37.5 | 286 |
| 15 | 5 to 1 | 11.1 | 41.9 | 55.6 | 376 |
| 16 | 1 to 5 | 7.3 | 66.7 | 26.4 | 1,353 |
| 17 | 1 to 5 | 0.0 | 33.3 | 66.7 | 10 |

Areas 6 and 8, moved into District 1 from racially similar Districts 4 and 3 (respectively) are high Hispanic VAP, low Black VAP areas. Area 14, moved from District 5 to District 1, has a relatively high Hispanic VAP compared to the district it is being moved from, and a relatively low Black VAP.

Areas 15 and 16 are discussed separately in the discussion of Overtown.

## District 2

District 2 is the most ethnically and racially diverse Commission district in the City. Though the district is still Hispanic VAP-plurality under both plans, white VAP trails by only 11 percentage points under the Enjoined Plan, compared to about 13 percentage points under Res. 23-271. In other words, the white VAP of District 2 is just 0.9 points lower than the Enjoined Plan, and Hispanic VAP is just 1.0 point higher. Six areas moved between the Enjoined Plan and Res. 23271 affected District 2 directly. These are listed in Table 4, where areas moved out of District 2 are again highlighted in yellow and areas moved into District 2 are highlighted in teal.

Table 4: Areas Moved Between Enjoined Plan and Res. 23-271 in District 2 (areas moved out highlighted in yellow; areas moved in highlighted in teal)

| Area \# | Movement | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 10 | 4 to 2 | 31.7 | 59.2 | 7.1 | 1,597 |
| 11 | 2 to 3 | 41.0 | 43.6 | 5.2 | 8,304 |
| 12 | 3 to 2 | 45.9 | 42.1 | 4.7 | 1,360 |
| 18 | 5 to 2 | 30.6 | 50.6 | 8.6 | 342 |
| 19 | 5 to 2 | 20.8 | 64.0 | 11.9 | 3,731 |
| 20 | 2 to 5 | 30.5 | 56.7 | 5.5 | 2,433 |

Both Areas 11 and 20 are Hispanic VAP-plurality areas with low Black VAP. They are similar in racial composition to the donor District 2. Area 11 has lower Hispanic VAP than recipient District

3, although it is a Hispanic-plurality area. Area 20 has lower Black VAP than recipient District 5, and a lower white VAP than donor District 2.

All of the areas that were moved into District 2 look more similar, racially, to District 2 than their donor districts. Area 12, in particular, is a white VAP-plurality area that was moved out of a Hispanic VAP supermajority district. Similarly, Areas 18 and 19 have Black VAP that is considerably lower than their donor District 5 and considerably higher White VAP.

## District 3

District 3 is another Hispanic VAP supermajority district. Table 5 lists the moved areas that affected District 3.

Areas 8, 9, and 12 were moved out of the Enjoined Plan's District 3 under Res. 23-271. While Areas 8 and 12 were discussed in previous sections, Area 9 was also moved out of District 3. Area 9 is a supermajority Hispanic VAP area that was moved into another high Hispanic VAP district (District 4). While both Areas 8 and 9 are high Hispanic VAP areas that were exchanged amongst other high Hispanic VAP areas, it bears repeating that Area 12 is a plurality White VAP area that was moved out of District 3 and into the more diverse District 2, forming an irregular divot into District 3—as if to compensate for the more evenly divided plurality Hispanic VAP Area 11, which was added to District 3 immediately to the south.

Table 5: Areas Moved Between Enjoined Plan and Res. 23-271 in District 3 (areas moved out highlighted in yellow; areas moved in highlighted in teal)

| Area \# | Movement | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 1 to 3 | 25.7 | 68.6 | 8.6 | 48 |
| 8 | 3 to 1 | 1.5 | 97.1 | 2.9 | 762 |
| 9 | 3 to 4 | 7.2 | 89.3 | 5.1 | 4,694 |
| 11 | 2 to 3 | 41.0 | 43.6 | 5.2 | 8,304 |
| 12 | 3 to 2 | 45.9 | 42.1 | 4.7 | 1,360 |

Area 7 was discussed in a previous section.

Changes to Districts 4 and 5 were discussed in the sections on Districts 1-3.

Table 6 summarizes the areas moved into and out of District 4 and Table 7 summarizes the areas moved into and out of District 5. Note that eight distinct areas were moved in and out of District 5, the largest number in any district.

Table 6: Areas Moved Between Enjoined Plan and Res. 23-271 in District 4
(areas moved out highlighted in yellow; areas moved in highlighted in teal)

| Area \# | Movement | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 6 | 4 to 1 | 0.0 | 99.1 | 3.6 | 139 |
| 9 | 3 to 4 | 7.2 | 89.3 | 5.1 | 4,694 |
| 10 | 4 to 2 | 31.7 | 59.2 | 7.1 | 1,597 |

Table 7: Areas Moved Between Enjoined Plan and Res. 23-271 in District 5 (areas moved out highlighted in yellow; areas moved in highlighted in teal)

| Area \# | Movement | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 13 | 1 to 5 | 1.0 | 80.2 | 29.2 | 805 |
| 14 | 5 to 1 | 2.4 | 66.3 | 37.5 | 286 |
| 15 | 5 to 1 | 11.1 | 41.9 | 55.6 | 376 |
| 16 | 1 to 5 | 7.3 | 66.7 | 26.4 | 1,353 |
| 17 | 1 to 5 | 0.0 | 33.3 | 66.7 | 10 |
| 18 | 5 to 2 | 30.6 | 50.6 | 8.6 | 342 |
| 19 | 5 to 2 | 20.8 | 64.0 | 11.9 | 3,731 |
| 20 | 2 to 5 | 30.5 | 56.7 | 5.5 | 2,433 |

## Overall Movement between Majority-Hispanic and -Black Districts, and District 2

Looking at all of the areas moved into and out of the three majority-Hispanic Districts 1, 3, and 4; majority-Black District 5, and the racially mixed District 2, further shows that the changes made to the Enjoined Plan shored up, or did not change, the racial composition of each grouping of districts. Collectively, the areas moved out of Districts 1, 3, and 4 have much lower Hispanic VAP
(58.8\%) than the Enjoined districts (86.1, 85.6, and 89.6\%), making that three-district grouping more concentrated in its Hispanic VAP.

Likewise, the areas moved out of District 5 had a much lower Black VAP (16.6\%) than the district overall. District 5's Black VAP (50.3\%) is the same in the Enjoined Plan and Res. 23-271.

Areas moved out of District 2 were similar in demographics to the district overall.

Table 8: Overall Movement in and out of Districts 1-3-4, District 2, and District 5

| Area \# | Description | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :--- | ---: | ---: | ---: | ---: |
| $6,7,8,9$ | Areas moved among D1, D3, D4 | 6.4 | 90.4 | 4.8 | 5,643 |
| $10,12,13,16,17$ | Areas moved out of D1, D3, D4 <br> and into D2 or D5 | 25.6 | 58.8 | 14.3 | 5,125 |
| 11,20 | Areas moved out of D2 | 38.6 | 46.6 | 5.3 | 10,737 |
| $14,15,18,19$ | Areas moved out of D5 | 19.8 | 61.2 | 16.6 | 4,735 |

## Changes made to Overtown

Referring back to Figure 2, Area 15 (moved from District 5 to District 1) and Area 16 (moved from District 1 to District 5) are of special note. These areas are portions of a contested area of the City referred to as Overtown (by City Code § 2-1051, ${ }^{1}$ the Miami Police Department (MPD), ${ }^{2}$ and the City's now-dissolved Neighborhood Enhancement Team (NET) ${ }^{3}$ ) or as Historic Overtown (by the Greater Miami Convention \& Visitors Bureau (GMCVB) ${ }^{4}$ and consultant Miguel De Grandy).

While the definitions found in City Code and by the GMCVB/NET/MPD ${ }^{5}$ differ slightly, as

[^6]depicted in Figure 3, they are both more expansive than the definition used by De Grandy.

Figure 3: Different Definitions of Overtown/Historic Overtown


The top-left panel of Figure 3 compares the City's definition with that of De Grandy's; Area 35, in teal, is the area included in the City's definition but excluded by De Grandy. Similarly, Area 36 in the top-right panel - though slightly smaller than Area 35 - is the area included in the GMCVB/NET/MPD definition but excluded in De Grandy's. What both Area 35 and Area 36 have in common is that they have considerably lower Black VAP ( $24.6 \%$ and $26.2 \%$, respectively) than Area 34 (60.5\%), De Grandy's definition of Overtown. This is important to note because Area 34 corresponds almost exactly to the portions of Overtown that are contained in District 5 under Res. 23-271. While the northeast portions of Areas 35 and 36 (north of NW 20th St and east of

NW 1st Ave), which were also excluded from De Grandy's definition, are contained within District 5, these portions have much greater black VAP (64.1\%) than the southwest portions that are contained in District 1.

Overall, De Grandy's boundaries of Historic Overtown are considerably more restrictive than both City Code and the GMCVB/NET/MPD definition. The southwest portions of Historic Overtown that De Grandy excluded from his definition were kept in D1 (with high Hispanic VAP) and are notably racially different from the area that he defined as Historic Overtown. This definition shored up the existing racial composition of District 5 and shored up the Hispanic supermajority in District 1. While there is a small sliver of Historic Overtown excluded from De Grandy's version in the northeast that contains very few people (413 relative to the 3,301 that made up the entirety of the area excluded by the consultant), it is characterized by levels of Black VAP that are more similar to the areas that the consultant did not exclude ( $64.1 \%$ in this northern portion compared to the $60.5 \%$ in the portion of Historic Overtown identified by De Grandy). Regardless of definitions, this small, high Black VAP section of Areas 35 and 36 was included in District 5 along with De Grandy's defined area, providing further evidence that De Grandy defined Historic Overtown along racial lines, resulting in the area being split into District 1 and District 5 on the basis of race.

## Partisan motivations

Partisan motivations cannot explain the boundaries of the commission districts nor the movement of specific areas between the Enjoined Plan and Res. 23-271. In particular, a desire to maximize Republican advantage in Districts 1, 3, and/or 4 cannot explain any aspect of Res. 23-
271. As I discussed in my previous report, commission elections occur on a nonpartisan basis and commission district maps have no outcome on other elections (i.e., state or federal elections).

Additionally, the areas that were moved into Districts 1, 3, and 4 under Res. 23-271 were, in general, no less Republican than other surrounding precincts that could have potentially been moved. Most of Precinct 531, for instance, was kept in District 5 (which voted only 16\% for Donald Trump for president in 2020) and out of District 1 (which voted 49\% for Trump). But Precinct 531 is less Democratic ( $28 \%$ for Trump) than both Precinct 522 ( $13 \%$ for Trump) and Precinct 523 ( $26 \%$ Trump), parts of which were kept in District 1. It is notable that the less-Democratic Precinct 531 includes most of the Overtown area, as discussed above. The more-Democratic Precinct 522 is divided in the identical manner as in the Enjoined Plan, along racial lines, as discussed in my initial report at page 7.

Less-Republican areas like Precincts 996 (31\% for Trump) and part of Precinct 546 (29\% for DeSantis) were also added to or retained in District 3 (which voted $46 \%$ for Trump), while alternative adjacent precincts like 569 (43\% Trump), nearly all of 541 (41\% Trump), and part of 566 (39\% Trump) with higher Republican vote shares remained or were moved into District 2 (which voted 34\% for Trump).

Further, Precinct 989 (78\% Trump) was moved in its entirety from District 1 into District 3. In exchange, most of the less-Republican Precincts 997 (58\% Trump) and 971 (63\% Trump) were added to District 1 from Districts 3 and 4. These movements suggest that enhancing Republican advantage in District 1 was not a motivation behind the map.

Shoring up the Republican partisanship of any one of Districts 1, 3, or 4 would have allowed the mapmaker to move areas along the internal borders of those districts to achieve a
desired partisan advantage in the others, but the map does not reflect such a strategy. There is no evidence to suggest that any areas were moved or not moved to shore up partisan advantages in district cores.

## Conclusion

The City's Proposed Remedy ("Res. 23-271") for the Miami City Commission has not been substantially changed from the Enjoined Plan. The changes that have occurred appear to continue to be designed around racial and ethnic considerations. There is no basis on which to make the argument that these considerations were instead partisan in nature.

Dr. Carolyn Abott, Ph.D.
July 5, 2023, in New York City, NY

## Appendices

## Appendix 1. Plan District Demographics

| Enjoined Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 88,108 | -340 | -0.4 | 3.5 | 89.5 | 11.0 | 5.0 | 86.1 | 8.2 |
| 2 | 93,300 | +4,852 | +5.5 | 37.4 | 48.6 | 7.3 | 40.5 | 44.4 | 8.7 |
| 3 | 87,658 | -790 | -0.9 | 7.7 | 88.3 | 5.4 | 9.9 | 85.6 | 3.9 |
| 4 | 86,597 | -1,851 | -2.1 | 7.6 | 89.5 | 3.1 | 8.3 | 89.6 | 1.3 |
| 5 | 86,578 | -1,870 | -2.1 | 10.5 | 40.6 | 50.3 | 9.5 | 30.8 | 58.2 |
| Overall Range |  | 6,722 | 7.6 |  |  |  |  |  |  |


| Version 12 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,465 | -983 | -1.1 | 3.4 | 89.7 | 10.9 | 5.0 | 85.9 | 8.3 |
| 2 | 88,749 | +301 | +0.3 | 36.1 | 49.9 | 7.7 | 38.1 | 46.3 | 9.7 |
| 3 | 89,479 | +1,031 | +1.2 | 10.7 | 84.4 | 5.4 | 13.8 | 81.4 | 3.8 |
| 4 | 89,390 | +942 | +1.1 | 7.4 | 89.8 | 3.1 | 8.0 | 89.8 | 1.4 |
| 5 | 87,158 | -1,290 | -1.5 | 10.8 | 40.7 | 50.0 | 9.8 | 31.4 | 57.0 |
| Overall Range |  | 2,276 | 2.6 |  |  |  |  |  |  |


| Version 14 (D1 alt) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,465 | -983 | -1.1 | 3.4 | 89.7 | 10.9 | 5.0 | 85.9 | 8.3 |
| 2 | 89,424 | +976 | +1.1 | 35.9 | 51.2 | 5.9 | 38.9 | 49.5 | 5.7 |
| 3 | 89,530 | +1,082 | +1.2 | 7.1 | 89.5 | 5.1 | 9.9 | 86.0 | 3.6 |
| 4 | 88,247 | -201 | -0.2 | 10.2 | 84.6 | 5.1 | 10.4 | 83.6 | 4.8 |
| 5 | 87,575 | -873 | -1.0 | 11.0 | 40.5 | 49.9 | 10.2 | 31.4 | 56.6 |
| Overall Range |  | 2,065 | 2.3 |  |  |  |  |  |  |


| Version 12 D2 alt |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,465 | -983 | -1.1 | 3.4 | 89.7 | 10.9 | 5.0 | 85.9 | 8.3 |
| 2 | 90,146 | +1,698 | +1.9 | 36.7 | 49.4 | 7.6 | 38.4 | 45.9 | 9.6 |
| 3 | 88,806 | +358 | +0.4 | 10.1 | 85.0 | 5.5 | 12.7 | 82.6 | 3.8 |
| 4 | 89,390 | +942 | +1.1 | 7.4 | 89.8 | 3.1 | 8.0 | 89.8 | 1.4 |
| 5 | 86,434 | -2,014 | -2.3 | 10.5 | 40.6 | 50.3 | 9.6 | 31.4 | 57.4 |
| Overall Range |  | 3,712 | 4.2 |  |  |  |  |  |  |


| Version 12 D5 alt |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,465 | -983 | -1.1 | 3.4 | 89.7 | 10.9 | 5.0 | 85.9 | 8.3 |
| 2 | 89,473 | +1,025 | +1.2 | 36.2 | 49.8 | 7.7 | 38.0 | 46.1 | 9.8 |
| 3 | 89,479 | +1,031 | +1.2 | 10.7 | 84.4 | 5.4 | 13.8 | 81.4 | 3.8 |
| 4 | 89,390 | +942 | +1.1 | 7.4 | 89.8 | 3.1 | 8.0 | 89.8 | 1.4 |
| 5 | 86,434 | -2,014 | -2.3 | 10.5 | 40.6 | 50.3 | 9.6 | 31.4 | 57.4 |
| Overall Range |  | 3,045 | 3.4 |  |  |  |  |  |  |


| Version 12 D3 alt v1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |  |  |  |  |  |  |
| $\mathbf{1}$ | 87,465 | -983 | -1.1 | 3.4 | 89.7 | 10.9 | 5.0 | 85.9 | 8.3 |  |  |  |  |  |  |
| $\mathbf{2}$ | 89,593 | $+1,145$ | +1.3 | 36.5 | 49.6 | 7.7 | 38.6 | 45.8 | 9.6 |  |  |  |  |  |  |
| $\mathbf{3}$ | 89,194 | +746 | +0.8 | 10.5 | 84.5 | 5.4 | 12.6 | 82.7 | 3.8 |  |  |  |  |  |  |
| $\mathbf{4}$ | 89,555 | $+1,107$ | +1.3 | 7.2 | 90.0 | 3.1 | 7.9 | 90.0 | 1.4 |  |  |  |  |  |  |
| $\mathbf{5}$ | 86,434 | $-2,014$ | -2.3 | 10.5 | 40.6 | 50.3 | 9.6 | 31.4 | 57.4 |  |  |  |  |  |  |
| Overall Range |  |  |  |  |  |  |  |  |  |  | 3,159 | 3.6 |  |  |  |


| Version 12 D3 alt v2 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,201 | -1,247 | -1.4 | 3.4 | 89.8 | 10.8 | 5.0 | 85.9 | 8.3 |
| 2 | 89,593 | +1,145 | +1.3 | 36.5 | 49.6 | 7.7 | 38.6 | 45.8 | 9.6 |
| 3 | 89,194 | +746 | +0.8 | 10.5 | 84.5 | 5.4 | 12.6 | 82.7 | 3.8 |
| 4 | 89,555 | +1,107 | +1.3 | 7.2 | 90.0 | 3.1 | 7.9 | 90.0 | 1.4 |
| 5 | 86,698 | -1,750 | -2.0 | 10.5 | 40.7 | 50.3 | 9.6 | 31.6 | 57.3 |
| Overall Range |  | 2,895 | 3.3 |  |  |  |  |  |  |


| Resolution 23-271-Version 12 D3 alt v3-City's Proposed Remedial Plan |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,455 | -993 | -1.1 | 3.4 | 89.7 | 10.9 | 5.0 | 85.9 | 8.3 |
| 2 | 89,593 | +1,145 | +1.3 | 36.5 | 49.6 | 7.7 | 38.6 | 45.8 | 9.6 |
| 3 | 89,194 | +746 | +0.8 | 10.5 | 84.5 | 5.4 | 12.6 | 82.7 | 3.8 |
| 4 | 89,555 | +1,107 | +1.3 | 7.2 | 90.0 | 3.1 | 7.9 | 90.0 | 1.4 |
| 5 | 86,444 | -2,004 | -2.3 | 10.5 | 40.6 | 50.3 | 9.6 | 31.4 | 57.4 |
| Overall Range |  | 3,149 | 3.6 |  |  |  |  |  |  |


| P1 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 86,569 | -1,879 | -2.1 | 14.9 | 70.1 | 16.1 | 14.8 | 66.3 | 16.5 |
| 2 | 89,078 | +630 | +0.7 | 31.2 | 57.9 | 5.8 | 33.2 | 56.3 | 6.4 |
| 3 | 87,666 | -782 | -0.9 | 5.8 | 90.8 | 5.2 | 7.4 | 88.6 | 3.6 |
| 4 | 89,091 | +643 | +0.7 | 3.5 | 95.0 | 3.0 | 4.5 | 94.1 | 0.8 |
| 5 | 89,837 | +1,389 | +1.6 | 13.8 | 41.2 | 45.2 | 12.4 | 32.3 | 53.0 |
| Overall Range |  | 3,268 | 3.7 |  |  |  |  |  |  |


| P2 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 86,541 | -1,907 | -2.2 | 4.3 | 86.6 | 13.7 | 6.0 | 81.0 | 12.4 |
| 2 | 89,897 | +1,449 | +1.6 | 36.9 | 48.7 | 7.9 | 39.6 | 44.3 | 10.1 |
| 3 | 85,108 | -3,340 | -3.8 | 10.6 | 84.8 | 4.3 | 12.3 | 84.5 | 2.4 |
| 4 | 90,388 | +1,940 | +2.2 | 2.9 | 95.6 | 3.3 | 3.5 | 94.5 | 1.5 |
| 5 | 90,307 | +1,859 | +2.1 | 13.3 | 41.0 | 46.2 | 11.9 | 31.8 | 54.3 |
| Overall Range |  | 5,280 | 6.0 |  |  |  |  |  |  |


| P3 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,607 | -841 | -1.0 | 5.6 | 85.4 | 13.0 | 7.2 | 80.6 | 11.7 |
| 2 | 89,522 | +1,074 | +1.2 | 37.9 | 48.2 | 7.0 | 41.1 | 44.2 | 8.2 |
| 3 | 85,973 | -2,475 | -2.8 | 10.6 | 84.9 | 4.3 | 12.2 | 84.6 | 2.4 |
| 4 | 90,388 | +1,940 | +2.2 | 2.9 | 95.6 | 3.3 | 3.5 | 94.5 | 1.5 |
| 5 | 88,751 | +303 | +0.3 | 11.3 | 41.1 | 48.8 | 10.1 | 31.6 | 56.5 |
| Overall Range |  | 4,415 | 5.0 |  |  |  |  |  |  |


| P4 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dist. | Total Pop. | Pop. Dev. | \% Dev. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| 1 | 87,556 | -892 | -1.0 | 5.6 | 85.8 | 13.0 | 7.2 | 80.3 | 11.9 |
| 2 | 89,522 | +1,074 | +1.2 | 37.9 | 48.2 | 7.0 | 41.1 | 44.2 | 8.2 |
| 3 | 87,829 | -619 | -0.7 | 10.4 | 85.1 | 4.2 | 12.1 | 84.7 | 2.4 |
| 4 | 87,667 | -781 | -0.9 | 2.9 | 95.6 | 3.2 | 3.4 | 94.5 | 1.5 |
| 5 | 89,667 | +1,219 | +1.4 | 11.2 | 41.5 | 48.4 | 10.0 | 32.3 | 55.8 |
| Overall Range |  | 2,111 | 2.4 |  |  |  |  |  |  |

## Appendix 2a. Areas Moved between Enjoined Plan and Res. 23-271

| Area \# | Description | Movement | WVAP | HVAP | BVAP | Total Pop. | Bounded by |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | Flagami (single block) | 4 to 1 | 0.0 | 99.1 | 3.6 | 139 | NW 3rd St, 4th Ave, 4th St, 45th Ave |
| 7 | Sewell Park | 1 to 3 | 25.7 | 68.6 | 8.6 | 48 | Dolphin Expy, Lawrence Canal, Miami River |
| 8 | Sewell Park | 3 to 1 | 1.5 | 97.1 | 2.9 | 762 | Dolphin Expy, Lawrence Canal, NW 7th St, 22nd Ave |
| 9 | Little Havana/Shenandoah | 3 to 4 | 7.2 | 89.3 | 5.1 | 4,694 | SW 32nd Ave, 5th St, 31st Ave, 4th St, 23rd Ave, 8th St, 16th Ave, 22nd St, 17th Ave, 9th St, 27th Ave, 8th St |
| 10 | West Grove | 4 to 2 | 31.7 | 59.2 | 7.1 | 1,597 | US 1, SW 27th Ave, Bird Ave |
| 11 | Bay Heights to Brickell | 2 to 3 | 41.0 | 43.6 | 5.2 | 8,304 | SW/SE 7th St, Metromover, Brickell Plaza, S Miami Ave, Alatka St, US 1, I-95, Metrorail |
| 12 | West Brickell (single block) | 3 to 2 | 45.9 | 42.1 | 4.7 | 1,360 | Miami River, Metrorail, SW 7th St, 2nd Ave |
| 13 | Northeast Allapattah | 1 to 5 | 1.0 | 80.2 | 29.2 | 805 | NW 12th Ave, 36th St, 8th Ave, 34th St, 11th Ave, 33rd Ct, 33rd St |
| 14 | Northeast Allapattah | 5 to 1 | 2.4 | 66.3 | 37.5 | 286 | I-95, NW 32nd St, 8th Ave, 35th St |
| 15 | Overtown | 5 to 1 | 11.1 | 41.9 | 55.6 | 376 | I-95, Dolphin Expy, NW 7th Ave, 22nd St |
| 16 | Overtown/Culmer | 1 to 5 | 7.3 | 66.7 | 26.4 | 1,353 | Dolphin Expy, NW 7th Ave, 8th St Rd, Seybold Canal |
| 17 | People's BBQ block | 1 to 5 | 0.0 | 33.3 | 66.7 | 10 | I-95, NW 7th St, 4th Ave, 8th St |
| 18 | Baypoint/Morningside | 5 to 2 | 30.6 | 50.6 | 8.6 | 342 | Biscayne Blvd, Federal Hwy, NE 36th St |
| 19 | Omni | 5 to 2 | 20.8 | 64.0 | 11.9 | 3,731 | FEC Rwy, NE 19th St , NE 2nd Ave, NE/NW 10th St |
| 20 | Downtown | 2 to 5 | 30.5 | 56.7 | 5.5 | 2,433 | Miami River, Metrorail, SW 3rd St, S Miami Ave, SE 2nd St, SE 2nd Ave |
| Total Moved |  |  |  |  |  | 26,240 |  |

Appendix 2b. Overall Movement between Majority-Hispanic Districts, MajorityBlack District 5, and District 2 between Enjoined Plan and Res. 23-271

| Area \# | Description | WVAP | HVAP | BVAP | Total Pop. |
| :---: | :--- | ---: | ---: | ---: | ---: |
| $6,7,8,9$ | Areas moved among D1, D3, D4 | 6.4 | 90.4 | 4.8 | 5,643 |
| $10,12,13,16,17$ | Areas moved out of D1, D3, D4 <br> and into D2 or D5 | 25.6 | 58.8 | 14.3 | 5,125 |
| 11,20 | Areas moved out of D2 | 38.6 | 46.6 | 5.3 | 10,737 |
| $14,15,18,19$ | Areas moved out of D5 | 19.8 | 61.2 | 16.6 | 4,735 |

Appendix 3. Cores of Enjoined Districts Remaining Intact in Res. 23-271

| Dist. | WVAP | HVAP | BVAP | Total Pop. |
| :---: | ---: | ---: | ---: | ---: |
| $\mathbf{1}$ | 3.4 | 90.0 | 10.6 | 85,892 |
| $\mathbf{2}$ | 37.2 | 48.8 | 7.5 | 82,563 |
| $\mathbf{3}$ | 7.1 | 89.0 | 5.4 | 80,842 |
| $\mathbf{4}$ | 7.2 | 90.1 | 3.0 | 84,861 |
| $\mathbf{5}$ | 9.9 | 39.3 | 52.5 | 81,843 |

## Appendix 4. Areas Moved between Version 12 and Res. 23-271

| Area \# | Description and Movement Between <br> Enjoined, Version 12, and Res. 23-271 | WVAP | HVAP | BVAP | Total <br> Pop. | Bounded by |
| :---: | :--- | ---: | ---: | ---: | ---: | :--- |
| 17 | People's BBQ block moved from D1 to D3 in <br> Res. 23-271 | 0.0 | 33.3 | 66.7 | 10 | I-95, NW 7th St, 4th Ave, 8th St |
| 21 | North Grove area moved from D2 to D3 in <br> Version 12, then back to D2 in Res. 23-271 | 54.8 | 35.9 | 3.3 | 1,672 | US 1, SW 22nd Ave, Kirk St, S Bayshore Dr, <br> Aviation Ave, SW 27th Ave |
| 22 | Shenandoah area moved from D3 to D4 in <br> Version 12, then back to D3 in Res. 23-271 | 12.1 | 83.2 | 3.2 | 1,932 | SW 17th Ave, 22nd St, 16th Ave, 8th St, 14th <br> Ave, 3rd Ave, US 1 |
| 23 | Little Havana area moved from D3 to D4 in <br> Res. 23-271 | 3.0 | 94.8 | 4.3 | 2,097 | SW 8th St, 32nd Ave, 5th St, 31st Ave, 4th St, <br> 23rd Ave |
| 24 | Brickell/Simpson Park areas moved from D2 <br> to D3 in Res. 23-271 | 39.2 | 47.1 | 5.3 | 2,949 | SW 25th Rd, I-95, Metrorail, SW 12th St, S Miami <br> Ave; and S Miami Ave, SE 7th St, Brickell Place |
| 25 | Brickell area moved from D3 to D2 in Res. <br> 23-271 | 45.2 | 42.1 | 5.3 | 1,397 | SW 7th St, 2nd Ave, Miami River, S Miami Ave |
| 26 | Sorth end of Morningside moved from D2 to <br> D5 in Version 12, then back to D2 in Res. <br> 23-271 | 41.9 | 42.8 | 11.8 | 724 | Biscayne Bay, NE 55th Ter, Biscayne Blvd, NE <br> 61st St |

## Appendix 5. Other Areas of Comparison

\(\left.$$
\begin{array}{|c|l|r|r|r|r|l|}\hline \text { Area \# } & \text { Description } & \text { WVAP } & \text { HVAP } & \text { BVAP } & \begin{array}{r}\text { Total } \\
\text { Pop }\end{array} & \text { Bounded by } \\
\hline 27 & \begin{array}{l}\text { South end of Morningside/Baypoint, kept } \\
\text { in D2 in Version 12 }\end{array} & 39.5 & 44.7 & 10.1 & 1,980 & \begin{array}{l}\text { Biscayne Bay, Julia Tuttle, Federal Hwy, NE 55th } \\
\text { Ter }\end{array} \\
\hline 26+27 & \begin{array}{l}\text { Entire Morningside/Baypoint area - moved } \\
\text { into D5 in Version 14 and P1, P2, P3 }\end{array} & 40.1 & 44.2 & 10.6 & 2,704 & \begin{array}{l}\text { Biscayne Bay, Julia Tuttle, Federal Hwy, Biscayne } \\
\text { Blvd, NE 61st St }\end{array} \\
\hline 28 & \begin{array}{l}\text { D5's Downtown appendage south of } \\
\text { NW/NE 8th St retained from Enjoined Plan }\end{array} & 21.1 & 47.4 & 32.5 & 2,848 & \begin{array}{l}\text { Miami River, SW 1st St, I-95, NW/NE 8th St, } \\
\text { NE/SE 2nd Ave, SE 2nd St, S Miami Ave, SW 3rd } \\
\text { St, Metrorail }\end{array}
$$ <br>
\hline 29 \& \begin{array}{l}Entire Omni/Downtown area west of <br>
NE 2nd Ave included in D2 (including <br>

Condo Canyon)\end{array} \& 20.8 \& 62.9 \& 12.7 \& 5,703 \& FEC Rwy, NW 19th St, 2nd Ave, NE/NW 8th St\end{array}\right\}\)| 30 | Bay Heights area added to D3 | 31.4 | 61.6 |
| :---: | ---: | ---: | ---: |
| 31 | Entire Northeast Allapattah area included <br> in D5 | 2.0 | 67.8 |
| 32 | D1's entire riverside appendage | 10.4 | 71.9 |
| 19.6 | 4,630 | US 1, S Miami Ave, Alatka St |  |
| Miami River, Dolphin Expy, Seybold Canal, NW 8th <br> St Rd, 8th St, 4th Ave, 7th St, I-95, SW 1st St |  |  |  |

## Appendix 6. Divisions of Overtown

| Area \# | Description | WVAP | HVAP | BVAP | Total <br> Pop | Bounded by |
| :---: | :--- | :---: | :---: | :---: | :---: | :--- |
| 34 | "Historic Overtown" on De Grandy Slide | 3.6 | 39.5 | 60.5 | 8,536 | Dolphin Expy, I-95, NW 20th St, 1st Ave, FEC <br> Rwy, NW 8th St, 8th St Rd, Seybold Canal |
| 35 | Areas of Overtown (City Code § 2-1051) <br> excluded from De Grandy definition | 9.1 | 67.6 | 24.6 | 4,394 | Dolphin Expy, I-95, NW 21st Ter, 22nd St, 3rd <br> Ave, 20th St, FEC Rwy, NW 3rd St, Miami River |
| 36 | Areas of Overtown (Greater Miami <br> Convention \& Victors Bureau/NET/MPD <br> definition) excluded from De Grandy definition | 10.9 | 63.7 | 26.2 | 3,301 | Dolphin Expy, I-95, NW 21st Ter, 22nd St, 3rd <br> Ave, 20th St, FEC Rwy, NW 5th St, Miami River |
| 37 | 3 Overtown blocks moved into D5 in Version <br> 12 D3 alt v2, then moved back into D1 | 5.3 | 70.2 | 35.6 | 254 | NW 7th Ave, 8th St, 4th Ave, 7th St |

## Appendix 7. FDC-Miami Population and Placement in Different Plans

The Federal Detention Center (FDC) Miami is located at Block 1013 of Tract 37.06 in Miami-Dade County. The Census Bureau reports separately the incarcerated population. For this block, the incarcerated population is the same as the total population, meaning no non-incarcerated individuals were counted at this block. Below are the demographics of the FDC-Miami block, and which Commission district FDCMiami is located in under each of the redistricting plans.

| Total Pop. | WVAP | HVAP | BVAP | WCVAP | HCVAP | BCVAP |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1,407 | 20.7 | 40.5 | 43.7 | 12.3 | 40.3 | 47.4 |


| Plan | District |
| ---: | :---: |
| 2013 Plan | 2 |
| Enjoined Plan | 5 |
| Version 12 | 5 |
| Version 14 (D1 alt) | 5 |
| Version 12 D2 alt | 5 |


| Plan | District |
| ---: | :---: |
| Version 12 D5 alt | 5 |
| Version 12 D3 alt v1 | 5 |
| Version 12 D3 alt v2 | 5 |
| Version 12 D3 alt v3 <br> (Res. 23-271) | 5 |


| Plan | District |
| ---: | :---: |
| P1 | 1 |
| P2 | 2 |
| P3 | 1 |
| P4 | 1 |

## Carolyn B. Abott

Baruch College - CUNY
Department of Political Science
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Email: carolyn.abott@baruch.cuny.edu
Website: https://sites.google.com/view/carolynabott/

## Academic Positions

Assistant Professor, Department of Political Science, Baruch College - CUNY, 2021 -
Assistant Professor, Department of Government and Politics, St. John's University, 2018-21
Postdoctoral Research Fellow, John Glenn College of Public Affairs and Department of Political Science, The Ohio State University, 2016-18

## Education

Ph.D., Politics and Social Policy, Princeton University, 2016
Dissertation: The Politics of Public Sector Pensions
Committee: Nolan McCarty, Brandice Canes-Wrone, and Charles Cameron
M.A., Politics, Princeton University, 2013

Fields: American Politics, Formal and Quantitative Methods, Inequality and Public Policy
B.A. Economics and Political Science, with High Honors, Swarthmore College, 2008

## Research and teaching interests

American politics, representation and accountability, state and local politics, public budgeting and finance, interest groups and political parties, federalism, inequality, macro political economy.

## Publications

Abott, Carolyn and Akheil Singla. (2021). Helping or Hurting? The Financial Costs and Benefits of Municipal Bankruptcy, Public Administration Review, 81(3), pp. 428-445.
Abott, Carolyn and Akheil Singla. (2021). Service Solvency and Quality of Life After Municipal Bankruptcy, Journal of Political Institutions and Political Economy, 2(2), pp. 249-280.
Abott, Carolyn and Asya Magazinnik. (2020). At-Large Elections and Minority Representation in Local Government, American Journal of Political Science, 64(3), pp. 717-733.

Abott, Carolyn, Vladimir Kogan, Stéphane Lavertu, and Zachary Peskowitz. (2020). School district operational spending and student outcomes: Evidence from tax elections in seven states. Journal of Public Economics, 183, 104142.
Abott, Carolyn. (2018). Book review of Michael A. McCarthy, Dismantling Solidarity: Capitalist Politics and American Pensions since the New Deal (Ithaca: Cornell University Press, 2017). Political Science Quarterly, 133(2), pp. 371-372.

Abott, Carolyn. (2010). Federal Reserve System. Encyclopedia of United States Political History, Vol. 7: 1976-present. Ed. Rick Valelly. Washington, DC: CQ Press.

## Under Review

Book project: The Politics of Public Pensions: How Strong Parties and Cooperative Politics Can Save State Government Revisions submitted.

## Available working papers

"Voter Responsiveness to Measures of Local Fiscal Performance" (with Matthew Incantalupo and Akheil Singla)
"A Distaste for Deficits: Voter Opinion and Balanced Budget Laws in the U.S. States"

## Research in progress

"Local Electoral Institutions and Fiscal Outcomes in the United States" (with Pengju Zhang) "The Fiscal Federalism Dimension of the SALT Cap and Its Potential Repeal" (with Rahul Pathak)
"Special District Bankruptcies" (with Pengju Zhang)

## Invited talks, presentations, and workshops

"A Distaste for Deficits: Voter Opinion and Balanced Budget Laws in the U.S. States"
Research in Progress Faculty Seminar, Marxe School of Public and International Affairs, Baruch College - CUNY, 2021.

Roundtable on Capital Assets Reporting Standards
Governmental Accounting Standards Board (GASB), 2021.
"Service Solvency and Quality of Life After Municipal Bankruptcy"
Local Political Economy Symposium, Bedrosian Center at Sol Price School of Public Policy, University of Southern California, 2021.
"Municipal Bankruptcy as Policy: Local Fiscal Stress and the Decision to File" $\ddagger$

Public Financial Management Northeastern Workshop, School of Public Affairs and Administration, Rutgers, The State University of New Jersey-Newark, 2020.
"Municipal Bankruptcy as Policy: Local Fiscal Stress and the Decision to File"
Fiscal Policy Series, Federal Reserve Bank of New York, 2019.
"At-Large Elections and Minority Representation in Local Government"
Department of Government and Politics Fall Graduate Colloquium, St. John's University, 2018.
"The Differential Impact of Single-Member and At-Large Voting Districts on Local Democracy: New Tests and Evidence"

Yale Center for the Study of American Politics Annual Conference, Yale University, 2017.
${ }^{*}$ Canceled due to COVID-19 pandemic.

## Conference presentations

Annual Meeting of the American Political Science Association: 2016, 2017, 2022.
Annual Conference of the Association for Budgeting and Financial Management: 2016, 2018, ${ }^{\dagger}$ 2022. ${ }^{\dagger}$

Annual Public Finance Consortium: 2021.
Annual Meeting of the Southern Political Science Association: 2015, 2016, 2019, 2020, 2021.
Brookings Municipal Finance Conference: 2020.
Annual State Politics and Policy Conference: 2015, 2020. $\ddagger$
Urban Affairs Association Conference: 2019. ${ }^{\dagger}$
Annual Conference of the Association for Education Finance and Policy: 2019. ${ }^{\dagger}$
Annual Conference of the Association for Public Policy Analysis \& Management: 2018, 2019. ${ }^{\dagger}$

Annual Meeting of the Midwest Political Science Association: 2015, 2017.
Public Management Research Conference: 2017. ${ }^{\dagger}$
${ }^{\ddagger}$ Canceled due to COVID-19 pandemic;*'Canceled due to earthquake; ${ }^{\dagger}$ Paper presented by coauthor.

## Grants, awards, \& fellowships

Faculty Innovation Seed Grant (with Rahul Pathak), Provost's Office, Baruch College, 2022 $(\$ 12,000)$

Cycle 53 PSC-CUNY Traditional B Research Award, City University of New York, 2022 $(\$ 6,000)$
Travel Grant, APSA Annual Meeting, 2017

Prestage-Cook Travel Award, SPSA Annual Meeting, 2016
Grant, Graduate Student Travel, Center for the Study of Democratic Politics, Princeton, 2015
Grant, Dean's Fund for Scholarly Travel, Princeton, 2015
Grant (with Nolan McCarty), The Social and Economic Effects of the Great Recession, Russell Sage Foundation, $2012(\$ 114,921)$

Graduate School Centennial Fellowship in the Humanities and Social Sciences, Department of Politics, Princeton, 2010-2015

Honorable Mention, National Science Foundation Graduate Research Fellowships Program, 2010

## Teaching experience

## Graduate level

Research Methodology and Quantitative Analysis
State and Local Government and Administration
Public Budgeting and Finance

## Undergraduate level

Introduction to Publicy Policy
The Politics of Inequality in the U.S.
Introduction to Public Administration
Research Methods for Political Science and Public Administration
Introduction to American Government

## Professional service

Member, Committee to Design the Baruch Public Service Capstone Seminar - 2023-present Co-chair, Baruch Political Science Department Research Seminar - 2022-present
Member, Baruch Political Science Student Awards Committee - 2022
Member, Baruch Political Science Search Committee in Comparative Politics - 2021
Co-chair, SJU Government \& Politics Committee to Redesign the Public Administration Major - 2019-2021
Member, SJU Government \& Politics Graduate Education Policy Committee - 2018-2021
Member, SJU Government \& Politics Undergraduate Education Policy Committee - 20182021

Referee, American Journal of Political Science, American Political Science Review, Economics E Politics, Economics Letters, Journal of Public Administration Research and Theory, National Tax Journal, Political Analysis, Public Budgeting \& Finance, Public Finance \& Management

## Professional memberships

Association for Public Policy Analysis \& Management, American Political Science Association, Midwest Political Science Association, Southern Political Science Association, American Society for Public Administration, Association for Budgeting and Financial Management

## Computer skills

R, Stata, ETEX, Bloomberg API, SAS, Matlab, EViews

Last updated: January 31, 2023

## IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF FLORIDA

GRACE, INC., et al., Plaintiffs,
v.

Case No. 1:22-cv-24066-KMM

## CITY OF MIAMI,

## Defendant.

# EXPERT REPORT <br> Cory McCartan, Ph.D. <br> September 21, 2023 

## I. INTRODUCTION AND SCOPE OF WORK

1. My name is Cory McCartan, and I am a Data Science Assistant Professor / Faculty Fellow at the Center for Data Science at New York University. I specialize in the development and application of statistical methodology in the social sciences.
2. I have been retained by counsel representing the Plaintiffs to provide an analysis of population and compactness of Miami City Commission redistricting plans, including the Enjoined plan, the City's proposed remedial plan, the Plaintiffs' proposed remedial plan, and other alternative plans.

## II. QUALIFICATIONS AND EXPERIENCE

3. I have a B.A. in mathematics from Grinnell College (2019) and an M.A. (2021) and Ph.D. (2023) from Harvard University in statistics. My research focuses on developing and applying
statistical methodology to problems in the social sciences. Specifically, I have extensively studied redistricting in the United States, publishing six peer-reviewed journal articles and working papers on redistricting in the last two years.
4. As part of my redistricting research agenda, I have developed a simulation algorithm that generates redistricting plans (McCartan and Imai, 2023). Part of this algorithm involves computing demographic, population, and compactness statistics for tens of thousands of randomlydrawn districts. The algorithm can be used to measure and evaluate existing redistricting plans along a variety of dimensions.
5. At Harvard, I also helped to start the Algorithm-Assisted Redistricting Methodology (ALARM) Project, which applies computational tools to study and evaluate redistricting plans and processes in the U.S. and around the globe. ${ }^{1}$ One effort that I led as part of the ALARM Project involved collecting every congressional district drawn in the 2021-22 redistricting cycle, and generating over 200,000 algorithmic redistricting plans which complied with all relevant state laws and constitutions (McCartan et al., 2022). For each of the real-world and algorithmic plans, we calculated a battery of population, demographic, compactness, and partisan measures for each district, and released all of the plans and statistics to the public. These statistics included multiple different compactness metrics and the population overlap between each algorithmic district and the respective enacted district.
6. In 2021, I was hired to assist with algorithmic redistricting simulations for two court cases in the state of Ohio (Ohio Supreme Court Cases 2021-1193 and 2021-1449; both titled League of Women Voters of Ohio v. Ohio Redistricting Commission). As part of this work I computed measures of compactness, county splits, and demographics for various enacted, proposed, and

[^7]remedial redistricting plans, along with 5,000 algorithmically simulated plans. These calculations and the accompanying algorithmic simulations provided evidence that the enacted plans in each case were statistical outliers as regards both partisan outcomes and traditional redistricting criteria such as compactness.
7. I have also developed and continue to maintain a variety of open-source software packages for using census data and studying redistricting plans. These tools can be installed for free on any personal computer and operating system. The packages include redist (Kenny et al., 2020), which implements several cutting-edge redistricting simulation algorithms, and an accompanying package redistmetrics (Kenny et al., 2021), which lets users calculate dozens of compactness, partisan, and demographic measures for redistricting plans. They also include easycensus (McCartan, 2023), PL94171 (McCartan and Kenny, 2022), alarmdata (McCartan et al., 2023), and tinytiger (Kenny and McCartan, 2023), which provide access to Census data and geography shapefiles related to redistricting. Together, these software packages have been downloaded tens of thousands of times, and are widely used in academic research and by redistricting practitioners.
8. A copy of my curriculum vitae is attached as Exhibit A. I am being compensated for my work on this report at an hourly rate of $\$ 125$ per hour. No part of my compensation depends on the outcome of this case or on the nature of the opinions that I provide. I have testified as an expert at trial or by deposition in the previous four years in the following cases:

1. Nairne v. Ardoin, U.S. District Court, M.D. Louisiana, Case no. 3:22-cv-00178.

## III. DATA, SOFTWARE, AND METHODOLOGY

9. I calculated compactness and population statistics for 8 plans, which are hereinafter abbreviated as follows:

- 2013: the City's 2013 enacted plan;
- Enjoined: the City's 2022 enacted plan, enjoined by the Court;
- City: the City's final proposed remedial plan, adopted June 14, 2023 (counsel provided two files for this plan: "City Enacted" and "City Opposing Counsel," as discussed in Part IV below);
- P4: the Plaintiffs' proposed remedial plan; and
- P1-P3: prior plans proposed by Plaintiffs.

10. Counsel representing the Plaintiffs provided me the geographic boundaries for all 8 plans as Block Assignment Files (BAFs) in comma-delimited format (.csv). I verified that these files were properly formatted and translated to geographically contiguous city council districts.
11. I downloaded 2020 decennial census total population counts for every census block in the City of Miami from the U.S. Census Bureau's software interface. These total population counts are the same that are mandated by P.L. 94-171 and are used in congressional apportionment. I also downloaded geographic shapefile information for the blocks.
12. I calculated four compactness measures for each plan: the Polsby-Popper score (Polsby and Popper, 1991), the Reock score (Reock, 1961), the Convex Hull score (ratio of the area of each district to the area of the district's convex hull), and the Edge-Cut score (see Dube and Clark, 2016, and McCartan and Imai (2023)). This latter measure is graph-theory based and is much less sensitive than other measures to particularities of local geography such as irregular
coastlines and city boundaries. As such, it has recently gained traction among algorithmic and computational redistricting researchers. The calculations were carried out with the aforementioned redistmetrics software, which has been numerically validated and extensively tested.
13. I also calculated the degree to which each plan's districts overlap with the districts in the Enjoined and 2013 plans. To do so, I used population overlap routines implemented in my redist software, using the 2020 decennial census population data described above.

## IV. ACCURACY OF BLOCK ASSIGNMENT FILES

14. Counsel representing Plaintiffs also provided me a slideshow presentation containing maps of various plans considered by the Miami City Commisison and asked me to identify any differences between the "D3 alt map v3" map on slide 6 and the final plan provided by the opposing counsel ("City Opposing Counsel"). I generated my own district map of the BAF provided by opposing counsel and compared it to the "D3 alt map v3" map.
15. I identified a discrepancy between the BAF provided by the opposing counsel and the "D3 alt map v3" map on the slide on the boundary between District 3 and District 2. Specifically, the "D3 alt map v3" map assigns census blocks 120860067201002 and 120860066051000 to District 3, while the BAF provided by opposing counsel assigns those blocks to District 2. In contrast, the "City Enacted" plan assigns these blocks to District 3, matching the "D3 alt map v3" in the slideshow.
16. The two blocks are not populated, and thus the discrepancy does not impact the population overlap analysis in Part VI.

## V. COMPACTNESS OF REDISTRICTING PLANS

17. The Polsby-Popper scores are reported in Table 1 for each district of each plan. All values were multiplied by 100 , so they lie on a $0-100$ scale, for interpretability. Higher values indicate more compact districts.

Table 1: Polsby-Popper compactness scores.

| Plan | District 1 | District 2 | District 3 | District 4 | District 5 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| 2013 | 25 | 28 | 62 | 24 | 29 |
| Enjoined | 21 | 26 | 41 | 22 | 30 |
| City Enacted | 19 | 26 | 34 | 22 | 28 |
| City Opposing Counsel | 19 | 26 | 37 | 22 | 28 |
| P1 | 24 | 39 | 77 | 34 | 55 |
| P2 | 41 | 34 | 55 | 39 | 51 |
| P3 | 35 | 31 | 54 | 39 | 43 |
| P4 | 32 | 31 | 57 | 38 | 40 |

18. The Reock scores are reported in Table 2. All values were multiplied by 100 , so they lie on a $0-100$ scale. Higher values indicate more compact districts.

Table 2: Reock compactness scores.

| Plan | District 1 | District 2 | District 3 | District 4 | District 5 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| 2013 | 20 | 32 | 60 | 23 | 33 |
| Enjoined | 21 | 30 | 47 | 24 | 34 |
| City Enacted | 21 | 30 | 43 | 24 | 33 |
| City Opposing Counsel | 21 | 30 | 43 | 24 | 33 |
| P1 | 18 | 36 | 66 | 33 | 61 |
| P2 | 34 | 37 | 35 | 29 | 54 |
| P3 | 30 | 34 | 35 | 29 | 47 |
| P4 | 31 | 34 | 37 | 28 | 47 |

19. The convex hull scores are reported in Table 3. All values were multiplied by 100, so they lie on a $0-100$ scale. Higher values indicate more compact districts.

Table 3: Convex hull compactness scores.

| Plan | District 1 | District 2 | District 3 | District 4 | District 5 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| 2013 | 67 | 65 | 84 | 61 | 61 |
| Enjoined | 58 | 63 | 71 | 53 | 65 |
| City Enacted | 58 | 63 | 67 | 54 | 62 |
| City Opposing Counsel | 58 | 63 | 67 | 54 | 62 |
| P1 | 64 | 80 | 94 | 71 | 85 |
| P2 | 72 | 71 | 90 | 87 | 82 |
| P3 | 67 | 66 | 89 | 87 | 75 |
| P4 | 66 | 66 | 92 | 86 | 75 |

20. The Edge-Cut measure is reported in Table 4 for each plan. This measure is planwide and not district-specific. It counts the number of pairs of neighboring census blocks which are separated by a district line. In contrast with the above measures, lower values indicate more compact districts.

Table 4: Edge-Cut measure by plan. Lower values indicate more compact plans.

| Plan | Edges cut by district boundaries |
| :--- | ---: |
| 2013 | 342 |
| Enjoined | 420 |
| City Enacted | 400 |
| City Opposing Counsel | 398 |
| P1 | 168 |
| P2 | 184 |
| P3 | 248 |
| P4 | 237 |

## VI. POPULATION OVERLAP BETWEEN REDISTRICTING PLANS

21. I first calculated the overlap between districts in the Enjoined plan to corresponding districts in the City and P1-P4 plans. These calculations are summarized in Tables 5 (percentage overlap) and 6 (raw population counts). Because the two blocks that differ between both provided versions of the City plan ("City Enacted" and "City Opposing Council") are not populated, these
two versions have identical overlap calculations; they are reported together as "City" below.
Table 5: District population overlap between Enjoined and various other plans, expressed as a percentage of the population of each plan's corresponding district.

|  | Overlap with... |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Enjoined plan | Enjoined | City | P1 | P2 | P3 | P4 |  |
| District 1 | 100 | 98.2 | 61.1 | 56.7 | 54.8 | 53.3 |  |
| District 2 | 100 | 92.2 | 63.3 | 89.5 | 96.7 | 96.7 |  |
| District 3 | 100 | 90.6 | 83.5 | 45.4 | 46.0 | 47.1 |  |
| District 4 | 100 | 94.8 | 56.9 | 42.7 | 42.7 | 44.0 |  |
| District 5 | 100 | 94.7 | 84.1 | 85.8 | 94.0 | 92.5 |  |
| Districts 1, 3, and 4 | 100 | 97.8 | 77.0 | 48.7 | 48.8 | 49.3 |  |
| Overall | 100 | 94.1 | 69.8 | 64.3 | 66.9 | 67.0 |  |

Table 6: District population overlap between Enjoined and various other plans.

|  | Overlap with... |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Enjoined plan | Enjoined | City | P1 | P2 | P3 | P4 |  |
| District 1 | 88,108 | 85,892 | 52,916 | 49,042 | 48,043 | 46,690 |  |
| District 2 | 93,300 | 82,563 | 56,388 | 80,476 | 86,533 | 86,533 |  |
| District 3 | 87,658 | 80,842 | 73,237 | 38,662 | 39,527 | 41,383 |  |
| District 4 | 86,597 | 84,861 | 50,699 | 38,554 | 38,554 | 38,554 |  |
| District 5 | 86,578 | 81,843 | 75,561 | 77,483 | 83,418 | 82,981 |  |
| Districts 1, 3, and 4 | 262,363 | 251,595 | 176,852 | 126,258 | 126,124 | 126,627 |  |
| Overall | 442,241 | 416,001 | 308,801 | 284,217 | 296,075 | 296,141 |  |

22. I then calculated the overlap between districts in the 2013 plan to corresponding districts in the Enjoined, City, and P1-P4 plans. These calculations are summarized in Tables 7 (percentage overlap) and 8 (raw population counts). Because the two blocks that differ between both provided versions of the City plan are not populated, these two versions have identical overlap calculations; they are reported together as "City" below.

Table 7: District population overlap between 2013 and various other plans, expressed as a percentage of the population of each plan's corresponding district.

|  | Overlap with... |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| 2013 plan | Enjoined | City | P1 | P2 | P3 | P4 |
| District 1 | 92.1 | 92.1 | 53.4 | 49.0 | 48.4 | 48.4 |
| District 2 | 100.0 | 98.1 | 78.4 | 100.0 | 100.0 | 100.0 |
| District 3 | 91.5 | 83.8 | 83.5 | 45.4 | 46.0 | 45.5 |
| District 4 | 86.0 | 84.6 | 63.8 | 49.4 | 49.4 | 49.4 |
| District 5 | 87.5 | 88.4 | 79.5 | 81.3 | 85.9 | 86.0 |
| Districts 1, 3, and 4 | 97.5 | 96.3 | 79.0 | 51.9 | 52.3 | 51.9 |
| Overall | 91.5 | 89.4 | 71.8 | 65.4 | 66.1 | 66.1 |

Table 8: District population overlap between 2013 and various other plans.

|  | Overlap with... |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| 2013 plan | Enjoined | City | P1 | P2 | P3 | P4 |  |
| District 1 | 81,120 | 80,553 | 46,257 | 42,383 | 42,383 | 42,383 |  |
| District 2 | 93,300 | 87,891 | 69,873 | 89,897 | 89,522 | 89,522 |  |
| District 3 | 80,169 | 74,737 | 73,237 | 38,662 | 39,527 | 39,999 |  |
| District 4 | 74,504 | 75,749 | 56,796 | 44,651 | 44,651 | 43,267 |  |
| District 5 | 75,753 | 76,398 | 71,427 | 73,419 | 76,232 | 77,156 |  |
| Districts 1, 3, and 4 | 235,793 | 231,039 | 176,290 | 125,696 | 126,561 | 125,649 |  |
| Overall | 404,846 | 395,328 | 317,590 | 289,012 | 292,315 | 292,327 |  |

23. At the request of counsel for the Plaintiffs I also calculated the overlap for the grouped set of Districts 1, 3 and 4. These are reported as a separate summary line in Tables 5-8.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed this 21st day of September, 2023.


Cory McCartan, Ph.D.

## REFERENCES

Dube, M. P. and Clark, J. T. (2016). Beyond the circle: Measuring district compactness using graph theory. In Annual Meeting of the Northeastern Political Science Association.

Kenny, C. T. and McCartan, C. (2023). tinytiger: Lightweight Interface to TIGER/Line Shapefiles. https://cran.r-project.org/package=tinytiger.

Kenny, C. T., McCartan, C., Fifield, B., and Imai, K. (2020). redist: Computational Algorithms for Redistricting Simulation. https://CRAN.R-project.org/package=redist.

Kenny, C. T., McCartan, C., Fifield, B., and Imai, K. (2021). redistmetrics: Redistricting Metrics. https://CRAN.R-project.org/package=redistmetrics.

McCartan, C. (2023). easycensus: Quickly Find, Extract, and Marginalize U.S. Census Tables. https://cran.r-project.org/package=easycensus.

McCartan, C. and Imai, K. (2023). Sequential Monte Carlo for sampling balanced and compact redistricting plans. Annals of Applied Statistics, Accepted.

McCartan, C. and Kenny, C. T. (2022). PL94171: Tabulate P.L. 94-171 Redistricting Data Summary Files. https://cran.r-project.org/package=PL94171.

McCartan, C., Kenny, C. T., Simko, T., Garcia III, G., Wang, K., Wu, M., Kuriwaki, S., and Imai, K. (2022). Simulated redistricting plans for the analysis and evaluation of redistricting in the united states. Scientific Data, 9(1):689.

McCartan, C., Kenny, C. T., Simko, T., Zhao, M., and Imai, K. (2023). alarmdata: Download, Merge, and Process Redistricting Data. https://github.com/alarm-redist/alarmdata/.

Polsby, D. D. and Popper, R. D. (1991). The third criterion: Compactness as a procedural safeguard against partisan gerrymandering. Yale Law \& Policy Review, 9(2):301-353.

Reock, E. C. (1961). A note: Measuring compactness as a requirement of legislative apportionment. Midwest Journal of Political Science, 5(1):70-74.

## EXHIBIT A <br> Curriculum Vitae

# Cory McCartan 

## Curriculum Vitae

June 2023

InFORMATION

Employment

Education

Publications
(425) 770-9244
corymccartan@nyu.edu

The Pennsylvania State University
Assistant Professor of Statistics

## New York University

corymccartan.com

Center for Data Science
Data Science Assistant Professor / Faculty Fellow

Harvard University
2019-2023
Ph.D., Statistics, 2023. Advisor: Kosuke Imai.
A.M., Statistics, 2021.

## Grinnell College

2015-2019
B.A., Mathematics, with honors.
"Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans," with Kosuke Imai. Annals of Applied Statistics, Forthcoming.

Covered by the Washington Post, Quanta Magazine.
"Widespread Partisan Gerrymandering Mostly Cancels Nationally, but Reduces Electoral Competition," with Christopher Kenny, Tyler Simko, Shiro Kuriwaki, and Kosuke Imai. Proceedings of the National Academy of Sciences 120:25 (2023).
"Recalibration Of Predicted Probabilities Using the 'Logit Shift': Why does it work, and when can it be expected to work well?" with Evan T. R. Rosenman and Santiago Olivella. Political Analysis 1-11 (2023).
"Comment: The Essential Role of Policy Evaluation for the 2020 Census Disclosure Avoidance System" with Christopher T. Kenny, Shiro Kuriwaki, Tyler Simko, Evan T. R. Rosenman, and Kosuke Imai. Harvard Data Science Review, Special Issue 2 (2023).
"Simulated Redistricting Plans for the Analysis and Evaluation of Redistricting Plans in the United States," with Christopher Kenny, Tyler Simko, Shiro Kuriwaki, George Garcia III, Kevin Wang, Melissa Wu, and Kosuke Imai. Scientific Data 9:689 (2022).
"The Use of Differential Privacy for Census Data and its Impact on Redistricting: The Case of the 2020 U.S. Census," with Christopher T. Kenny, Shiro Kuriwaki, Tyler Simko, Evan T. R. Rosenman, and Kosuke Imai. Science Advances 7:41 (2021).

Covered by the Associated Press, the Washington Post, the San Francisco Chronicle, and others.
"Geodesic Interpolation on Sierpinski Gaskets," with Caitlin M. Davis, Laura A. LeGare, and Luke G. Rogers. Journal of Fractal Geometry 8:2 (2021).

Working Papers "Estimating Racial Disparities When Race is Not Observed," with Jacob Goldin, Daniel E. Ho, and Kosuke Imai.
"Individual and Differential Harm in Redistricting," with Christopher T. Kenny.
"Measuring and Modeling Neighborhoods," with Jacob R. Brown and Kosuke Imai. Under Review.
"Evaluating Bias and Noise Induced by the U.S. Census Bureau's Privacy Protection Methods," with Christopher T. Kenny, Shiro Kuriwaki, Tyler Simko, and Kosuke Imai.
"Making Differential Privacy Work for Census Data Users," with Tyler Simko and Kosuke Imai.
"Finding Pareto Efficient Redistricting Plans with Short Bursts."

Works in Progress

Other Writing

Software
"Studying Officeholders' Perceived Geographic Constituencies," with Jacob R. Brown and Hunter E. Rendleman.
"Regression of the Conditional Median," with Xiao-Li Meng.
"Algorithm-Assisted Redistricting Methodology" (book), with Kosuke Imai, Christopher Kenny, and Tyler Simko.
"Researchers need better access to US Census data," with Tyler Simko and Kosuke Imai. Science, 380:6648 (2023).
"Candy cane shortages and the importance of variation." International Statistical Institute: Statisticians React to the News (December 21, 2021).
"Where will the rocket land?" International Statistical Institute: Statisticians React to the News (May 12, 2021).
"Who's the most electable Democrat? It might be Warren or Buttigieg, not Biden." The Washington Post (October 23, 2019).
"I-405 Express Toll Lanes: Usage, benefits, and equity," with Shirley Leung, C.J. Robinson, Kiana Roshan Zamir, Vaughn Iverson, and Mark Hallenbeck. Technical report for the Washington State Department of Transportation (2019).
redist: Simulation Methods for Legislative Redistricting
redistmetrics: Redistricting Metrics
easycensus: Quickly Find, Extract, and Marginalize U.S. Census Tables
birdie: Bayesian Instrumental Regression for Disparity Estimation
causaltbl: Tidy Causal Data Frames and Tools
PL94171: Tabulate P.L. 94-171 Redistricting Data Summary Files
adjustr: Stan Model Adjustments and Sensitivity Analyses using Importance Sampling conformalbayes: Jackknife(+) Predictive Intervals for Bayesian Models alarmdata: Download, Merge, and Process Redistricting Data
blockpop: Estimate Census Block Populations for 2020
ggredist: Scales, Palettes, and Extensions of ggplot2 for Redistricting
tinytiger: Lightweight Interface to TIGER/Line Shapefiles
wacolors: Colorblind-friendly Palettes from Washington State

## Presentations

## Teaching

Honors and Awards

Joint Statistical Meetings, Invited Paper Panel: 2022, 2021.
Society for Political Methodology, Annual Meeting, Paper: 2022; Poster: 2022, 2021.
American Association for Public Opinion Research, Annual Meeting, Poster: 2022.
Institute for Quantitative Social Science, Harvard University, Applied Statistics Workshop, Paper: 2023, 2022, 2021, 2020.

Harvard University
STAT 117: Introduction to Biostatistics
Spring 2021
Awarded a Certificate of Distinction in Teaching
STAT 221: Monte Carlo Methods \& Other Computational Fall 2020
Tools for Statistical Learning
Thor

## Grinnell College

MAT 215: Linear Algebra Fall 2017 and Spring 2019
MAT 310: Statistical Modeling Fall 2018
Grinnell College Math Lab 2018-2019

Best Statistical Software Award, for developing statistical software that makes a significant research contribution, awarded to the redist software package by the Society for Political Methodology, 2022.

Service
Harvard Statistics Graduate Council
2020-2023 Organized Ph.D. student retreat and research "lightning talks," 2020 and 2021.

First-year Ph.D. Student Mentor
2020-2023

Harvard Graduate Students Union - UAW Local 5118
2019-2021
Elected member, Bargaining Committee, 2020-2021 and 2021-2024 contracts. Interim chair, Finance and Benefits Committee, 2020.

Reviewer: Election Law Journal, Sloan Foundation.

Membership American Statistical Association, Society for Political Methodology, American Political Science Association.
Other Experience Data for Progress
Consultant, Midterm election modeling
American Civil Liberties Union of Ohio ..... 2O21-2022
Consultant (with Prof. Kosuke Imai), League of Women Voters of Ohio v. Ohio Redistricting Commission (Ohio Supreme Court Cases 2021-1193 and 2021-1449).
University of Washington eScience Institute ..... Summer 2019
Data Science for Social Good Fellow
Union of Grinnell Student Dining Workers ..... 2016-2019
Founder, President (2016-17), and Advisor to the Executive Board (2018-19)
University of Connecticut ..... Summer 2018
REU Participant, Department of Mathematics
Fred Hutchinson Cancer Research Center ..... Summer 2017
Lead Intern, Department of Biostatistics
Grinnell College Department of Mathematics ..... 2017
Course Grader
Cray, Inc.

> UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF FLORIDA MIAMI DIVISION
> CASE NO. $22-\mathrm{cr}-24066-\mathrm{KMM}$

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GRACE, INC., et al.,
    Plaintiffs,
    vs.
    CITY OF MIAMI,
    Defendant.
Miami, Florida
March 29, 2023
9:31 a.m. to 3:19 p.m.
11th Floor - Atkins Building
(Pages 1 to 160)
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EVIDENTIARY AND MOTION PRELIMINARY INJUNCTION HEARING BEFORE THE HONORABLE LAUREN FLEISCHER LOUIS, UNITED STATES MAGISTRATE JUDGE

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> I N D E X

## WITNESSES

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you need to, but we can be back in five, okay? All right. Thank you.

THE COURTROOM DEPUTY: All rise.
(A recess was taken from 10:38 a.m. to 10:45 a.m.)
THE COURTROOM DEPUTY: All rise.
(Time 10:45 a.m.)
MIGUEL DE GRANDY,
a witness for Defendant, testified as follows:
THE WITNESS: I do.
THE COURTROOM DEPUTY: Thank you. Please be seated.
State your name. Can you spell your first and last name for the record?

THE WITNESS: My name is Miguel de Grandy.
M-I-G-U-E-L. Last name D-E, G-R-A-N-D-Y.
DIRECT EXAMINATION
BY MR. LEVESQUE:
Q. Mr. De Grandy, are you an attorney?
A. Yes, sir.
Q. Where are you admitted to practice?
A. I'm admitted in the State of Florida, I'm admitted in the Southern District Federal Court, I'm admitted in the United States Supreme Court.
Q. And can you describe for the Court your experience in redistricting?
A. I started as a member of the legislature. I was on the
redistricting committee. I ended up suing my own legislature for violation of Voting Rights Act; that was de Grandy vs. Wetherell, I believe. I was lead plaintiff and also cocounsel.

In 1998, I believe, I was appointed by Speaker Thrasher to be lead counsel on the case of Fouts v. Mortham, a redistricting case that had been filed against the legislature. I have done Palm Beach School Board. I have done the City of Miami three times now. I have consulted with various elected officials on redistricting issues. That's pretty much it. Q. And at some time during this most recent cycle, were you engaged by the City to provide advice and counsel for the current redistricting cycle?
A. Yes, sir, I have.
Q. After you were engaged by the City, what did you do?
A. Well, we first -- we were awaiting the census data, the PLA data, which was delayed. We tried to spend our time officially in doing preliminary work to determine applicability of the Voting Rights Act. My coconsultant, Steve Cody, conducted that analysis, advised me that he did see patterns of politically cohesive voting, he did see patterns of block voting and polarized voting and that, therefore, in his opinion, the -the Voting Rights Act provisions would apply.
Q. Okay. In which districts did the Voting Rights Act apply to for the City of Miami?
A. District 5, District 1, District 3 and District 4.
Q. And how many districts are there in the City of Miami districts?
A. There's five districts.
Q. And did you also prepare a report for the City commission?
A. I prepared an initial, what $I$ call a primer, which is meant to educate lay people on the basics of redistricting law and redistricting processes.
Q. Did that primer also inform the City of their need to redistrict?
A. Yes, sir. We had done the preliminary analysis and determined that the overall deviation of the then current map was above 42 percent. District 2 was highly overpopulated. District 3 was the lowest population. Put together, the percentage over and the percentage under is how you calculate overall deviation and, therefore, we were of the opinion that you could not use that plan for further elections.
Q. And how many districts were overpopulated in that manner?
A. I recall District 2 was the -- the huge one that was overpopulated.
Q. In fact, that was the only one that was overpopulated, correct?
A. That is correct.
Q. Now, at some point did you have a public meeting with the City commission?
A. We had several public meetings; I believe in November,

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December, February and March.
Q. And at the November 18th public meeting, did the City give you directions to guide your work?
A. Yes, sir.
Q. And were those directions given in open meetings?
A. Yes. And they were, I think, later on redacted in the form of a resolution.
Q. And what were those directions?
A. The prime directive was comply with the constitution of the Voting Rights Act. They wanted to maintain the core existing districts to minimize voter confusion. They wanted to maintain mathematical -- excuse me, substantial equality as opposed to mathematical equality. They wanted me to concentrate further on voter cohesion, and they also wanted me to preserve traditional neighborhoods, if feasible.
Q. If you could take a quick look at Defendant's Exhibit 1, and let me know if that is the resolution that you just referenced.
(Defendant's Exhibit No. 1 was identified.) THE WITNESS: Yes, sir.

BY MR. LEVESQUE:
Q. Now, I want to talk about some of these criteria that they provided to you.

First, did the ordering of the criteria matter to you?
A. Yes, it did.
Q. How did it matter to you?
A. Well, some of these things become mutually exclusive. If, for example, you are trying to preserve the court of existing districts, it may not be feasible to maintain communities of interest. And so because some of them can conflict with each other, I ask them to give me a hierarchy, if you will, of which ones they wanted to emphasize more and an order of preference.
Q. So they placed compliance with the United States

Constitution and the Voting Rights Act at the top, correct?
A. That was always the prime directive.
Q. And the least important directive was maintaining community -- communities of interest, correct?
A. Where feasible, yes.
Q. How did you interpret maintaining the core of the districts to avoid voter confusion?
A. I mean, that -- that is a principle that is very popular among elected officials. It is also incumbent protection, but it's -- you know, you invest in, as a commissioner, in getting funds for a local road, a park, etc., you make those people happy. You expect those people are going to vote for you, so you want to maintain that constituency within your district. Q. And in the course of the meetings and your map drawing activities, did the commissioners ever indicate that there were constituencies -- and I use that term loosely -- surrounding the geography, such as a park, that were important that they
wanted to keep in their district?
A. Yes, sir.
Q. Can you maybe provide an example or two to that end?
A. That would violate attorney/client privilege.
Q. Okay.

Now, one of the criteria also included factoring in voter cohesion?
A. That's correct.
Q. How did you interpret that criteria?
A. Well, voter cohesion, I mean, you've got to understand that -- let me give you an example. The Hispanic community. The Hispanic community is not monolithic. So, for example, you have people that would elect a Commissioner Reyes in District 4, will not elect that same commissioner in District 2.

You have, for example, a commissioner that just got elected in District 2 which is Hispanic, Sabina Covo, who is liberal, who is a democrat; that person -- there is cohesion among the communities in District 2 to elect that type of politician, whereas District 3, 4 and 1 are very much more conservative, old guard, you know, a lot of Cuban Americans that vote a certain way and like a certain type of politician.
Q. And you used District 2, and you referred to it as a Hispanic district. How did the commissioners refer to that district?
A. They refer to it as an Anglo district, and I told them at
one point, I actually said, Fun fact, there is no Anglo district. And that was just proven in this last election where Ms. Sabina Covo was elected in District 2. She is Colombian American. Actually, the first three vote getters in District 2, Sabina Covo, Reyes and Torres, all Hispanic sir names, totaled 66 percent of the vote that was cast. So I never believed it to be an Anglo district.
Q. And the criteria that the commission provided to you, was that the criteria that you utilized in drawing the lines?
A. To the best of my ability, yes.
Q. Now, after the commission gave you that criteria, what did you do?
A. We started -- I mean, the prime directive was obviously comply with the law and Voting Rights Act. Once you drill down into the principles that they asked us to employ, maintaining the core of existing districts, seriously hampers what else you could do with the plan. You have to basically play around the edges to comply with that requirement.

So we started looking at the areas adjacent to the different districts that could be moved. You know, we found between 2 and 5, there was a lot of movement, I think over 10,000 folks that we were able to move. And I had to also figure out around the edges of 3 and 4 what, if anything, I could move from District 2. But I also had to ripple up to the other districts then to equalize their population.
Q. And in terms of maintaining the core of the existing districts, that would require you to, as much as you could, to spread out that additional population that you needed to shed from district 2 ; would that be fair?
A. That's fair.
Q. At some point did you come up with at least a draft map for the City's consideration?
A. We did.
Q. Was there a commission meeting on February 7th that you presented that map?
A. There was.
Q. In drawing that map, did you concern yourself with precinct boundaries?
A. No; precinct boundaries were irrelevant because -- well, let me take a step back. One of the preliminary things that we did was interact with the Department of Elections to understand, you know, their timing, when they needed a plan, etc., etc.

Now, what the elections department told us is, you know, because the county was going to be redistributed, the school board was going to be redistricted, the City of Miami, maybe other communities within Miami-Dade county, they were going to re-precinct the entire county. So to me, precincts were irrelevant. I concentrated on street boundaries rather than precincts.
Q. So when you were actually drawing the lines, you didn't look at precinct lines, you looked at street boundaries; did I --
A. We never even had a precinct map because it was irrelevant. Q. Now, one of the things that has been brought up in this litigation is the percentage in District 5 of black voting age population.

Did you have a specific target that you were looking for in drawing?
A. No. I wanted to keep it above 50 percent, and I will tell you why. If you look at each redistricting cycle since 1997, the black community has reduced both in relative and absolute terms. I'm not drawing a plan for a snapshot in time. I'm not drawing a plan for the 2023 election. I'm drawing a plan for a decade. I have to focus, and I believe the case law says you have to focus on local conditions. That area is gentrified. And so you can see it statistically in each decade of redistricting how the black percentage has gone down significantly.

In my assessment, a 50.3 percent black district, which would have 52 and change percent voter -- black voters was a district that could perform the entire decade.
Q. And the 52 percent figure that you referenced, that's not actually citizen voting age population?
A. It's registered voters.

THE COURT: Wait, say that again. Sorry.
THE WITNESS: It's registered voters.
THE COURT: I know, but the first part of the question was, the distinction you just drew, I missed it, I'm sorry.

THE WITNESS: And your question?
MR. JOHNSON: Citizen voting age population.
MR. LEVESQUE: Yeah, the distinction between citizen voting age population and black registered voters. So black citizen voting age population and registered voters.

THE WITNESS: I believe citizen voting age population was 58 , somewhere in that percentage. Voting -- registered voter population was 52 and change.

BY MR. LEVESQUE:
Q. And why would there be a delta in those two numbers?
A. Well, you have Haitian community, you have individuals that simply don't register to vote. But you have -- you know, within that area, you have a black immigrant community that is a noncitizen community.
Q. Is there also a federal prison in that community where they would be citizens but would not be eligible to register to vote?
A. I believe so, yes.

THE COURT: What federal prison, FDAC?
MR. WARREN: Yes, Your Honor.
THE COURT: FDC is part of District 5?

MR. WARREN: Yes, Your Honor.
THE COURT: It's across the street.
MR. WARREN: Yes, Your Honor.
THE COURT: Thank you. Go ahead.
BY MR. LEVESQUE:
Q. And in that February 7th meeting, did the commission give you directions on your draft map?
A. I'm trying to recall if they refined the direction. There was discussion about whether to move south of U.S. 1. I don't know if it was that meeting, but there was that discussion. Q. Now, in that meeting, in your draft map, had you already moved south of U.S. 1?
A. I don't recall that map. Can I see that map?
Q. Absolutely. Probably that would be captured in your slide presentation that would be Joint Exhibit 4.
(Joint Exhibit No. 4 was marked for identification.)
THE WITNESS: Ah, yes, that would be the version where I had taken a sliver of District 2 into District 3, and I am looking at, just for the record -- it's Exhibit 4 and it says Page 25 of 40 . There was a sliver of District 2 that I brought up to District 3 that was, you know, I thought more esthetically acceptable.

There were objections at that meeting that that included the area of Bay Heights, and that those objections, ah, strenuously came from some of the public, as well as
vehemently by the commissioner of the district and Bay Heights should not be separated from District 2. So there was pushback on that movement.

BY MR. LEVESQUE:
Q. And was there direction for you to also look at moving the Miami River Center back into District 5?
A. The MRC, yes.
Q. And was there also directions to restore some areas from D-1 to D-4?
A. That's correct.
Q. Now, after the February 7th hearing, what did you do?
A. I tried to make changes to the maps in compliance with the instructions that I had been given, and being sensitive to the community presentations that I had seen.
Q. If I could ask you to turn to Joint Exhibit 10, specifically Page 4.
(Joint Exhibit No. 10 was marked for identification.)
THE COURT: Did you say Exhibit 10?
MR. LEVESQUE: Yes, Your Honor, Joint Exhibit 10. THE COURT: But not this? My Exhibit 10 is a one-page map.

MR. LEVESQUE: Do we have a copy of this? THE COURT: Oh, did you mean ECF 24-10? MR. LEVESQUE: Yes, ECF -- yes. THE COURT: Oh, sorry. Thank you.

MR. LEVESQUE: I apologize, Your Honor.
THE COURT: I thought you were referring to your own
exhibit. But I got it. Okay, slide 3, I have it.
MR. JOHNSON: I think that would be ECF 24-4, Your
Honor. February 7th presentation? It's No. 10 in the Joint Exhibits, and No. 10 in the Joint Exhibit -- oh, excuse me, it is 24-10, sorry.

THE COURT: All right. I got it up.
THE WITNESS: I'm at Page 4.
BY MR. LEVESQUE:
Q. And does that reflect the -- the map that ultimately was adopted by the commission?
A. I believe so, yes.
Q. And I know it is going to be hard to see and -- if I could just ask you to -- there are several areas on there where you indicate there are movement in changes.

In your words, can you just walk us through each of those changes, describing it for the record and then talking about why you moved that and how that complied with the directions from the commission?
A. Okay.

THE COURT: Can I make sure, please, I am on the right slide? I'm at ECF 24-10, Page 4 of 15 and the title is, The base plan showing areas of movement, correct?

MR. LEVESQUE: That's correct.

THE COURT: And this is your testimony that this is the final plan as you presented it?

THE WITNESS: I believe so, yes.
THE COURT: Okay.
THE WITNESS: Okay. You're ready?
BY MR. LEVESQUE:
Q. Yes, sir.
A. I will start from the south to the north. The -- if you look at the first highlighted in red, there were actually two pieces to that. The piece that is north to U.S. 1, to me, was a natural movement in terms of shedding population from District 2; it would set, you know, a more stable boundary, if you will. Ultimately, there was a triangle that was added to the south of U.S. 1; again, that was purely to equalize population.

I had actually done a bigger movement south of U.S. 1 that was objected to by the folks in the Groves, and so I actually narrowed that piece, I believe, from --

THE COURT: Mr. De Grandy, I am going to tell you that you are losing me. So if you are going to describe your reasons for moving pieces, I need you to stay on one at a time, because -- I know that they are all very familiar to you, but I was with you on one piece and then I think you are describing another and I am lost.

THE WITNESS: Let me see if $I$ can find slides, Your

Honor, that better express.
THE COURT: So I will tell you where you lost me. You said this western most piece from the District 2 was a natural piece to move.

THE WITNESS: Yes.
THE COURT: I didn't think I got an explanation as to why that was natural to you, but then I think you moved to another piece.

THE WITNESS: Right. And if you look, Your Honor, if I can draw Your Honor's attention to Page 10 of that exhibit, the second piece that $I$ was talking about is that little red triangle. Your Honor sees that?

THE COURT: Yes.
THE WITNESS: Okay. That little red triangle initially was a larger triangle. There was a lot of opposition regarding that, and what $I$ did was reduce that, in other words, move the line further north to reduce that triangle to address the objections of the folks in the Grove to the effect that I was dividing the traditional Grove. So that's why that movement was reduced.

The area 13 that everybody talks about, previously in my testimony I had talked about the movement that I made in bringing in a portion of District 2 into District 3 that was objected to. If Your Honor looks at that red box, people call it an appendage, immediately north of that was the movement $I$
originally made. That was the movement that was objected to in terms of not taking Bay Heights out of District 2. Bay Heights is a walled-in community. The commissioner of the district felt strongly it should remain in District 2 . And so actually, I deleted that movement and had it -- I went south, literally, and the north boundary of that red square is the wall of Bay Heights, and I went south instead of going north.

Again, that was to bring in more population to District 3 and shed it from District 2. BY MR. LEVESQUE:
Q. And Mr. De Grandy, you referenced north in terms of the area that was of concern, Bay Heights. If we were being more precise, would that be northeast?
A. Yes, northeast. To the right of.

Going now, ah, moving north on District 2, I felt that the two movements that we did to bring population from 2 to 5 were natural movements. It's just simply moving east to capture additional population. I think I moved north of 10,000 people in that movement.

The river of movement, my -- my opinion was that it was naturally more adept to District 1 than District 5 because District 1 already had a huge part of the Miami River. The Miami River has a very strong business constituency; they have a river commission, they are very politically active, they want to maintain the commercial uses of the river. So I thought it
would be good to have a commission that represented the vast majority of the river, and to me, that was a natural movement to move that into District 1.

THE COURT: And you are describing area 6?
THE WITNESS: Area -- I actually can't see it without my glasses, Judge.

MR. LEVESQUE: Yes, Your Honor, I believe he is.
THE WITNESS: Yeah. And then the other two were just swapped to equalize population between -- north between 1 and 5.

BY MR. LEVESQUE:
Q. And those would be areas 7 and 8 ?
A. I can't see the numbers in this map, but I will take your word for it. It is the two in the north between District 1 and District 5.
Q. And the movements -- let me back up a little bit there. The movement that --
A. Oh, I'm sorry. I forgot to describe one movement which was the one where I took population from District 4 into District 3. Commissioner Carollo has taken a very, you know, strong position regarding the 8 th Street corridor and wants to, you know, control as much of it as possible. To me, that was the natural movement to, again, rebalance the population. Once I moved folks from 2 to 4, I had to rebalance the population, and it made sense to move that block of voters into District 3.

THE COURT: That's areas 14 and 15?

THE WITNESS: That is correct.
BY MR. LEVESQUE:
Q. If we could just go down and go back through a couple of those.
A. Sure.
Q. Area 13, that's one of those southern movements from District 2 into District 3?
A. Area 13 is the one they call the appendage?
Q. Yes, sir.
A. Okay.
Q. Am I correct that Commissioner Carollo has a residence that is in the foot of that area 13, in the lower corner?
A. That is correct, sir. There was a lot of discussion about that actually in commission meetings.
Q. And going up to areas 10 and 11 where District 2 shed population to District 5, are there reasons why you picked those areas to move into District 2 -- I'm sorry, District 5 versus other areas to move into District 5?
A. Well, in the last redistricting -- if you look at the most northeast part of District 5, that used to be District 2. In the last redistricting, there was a lot of controversy about actually taking that district through the bay. A lot of the constituents in that area said, Look, we are concerned with coastal issues, we're concerned with sea rises, we're concerned
with a lot of issues that aren't necessarily issues of concern in more inner city areas. We want to remain part of District
2. I recall the commissioner of the district made me do a couple more hearings in that area to explain to them why I had to move them based on a need to equalize population, etc.

So, quite frankly, I didn't want to go through that drama again, so I thought that taking more of the extreme north of District 2 was infeasible. And again, there is more of a community of interest in the coastal area that I wanted to preserve, and so I moved from more the urban core from west to east.
Q. And specifically for areas 10,11 and 12 that we were just talking about there, are there any -- can you describe the populations and whether they would be more closely associated with the populations in District 5 or District 2?
A. I believe they will be more cohesive with District 5 . The -- as you move further east, you know, waterfront becomes more affluent area. Those folks, again, are concerned with what I call first world issues, climate change, sea rise, things of that nature, social justice equity.

People in the more inner core are concerned about potholes in the street, whether they can pay the rent, whether they are going to have a park in their neighborhood. So those issues from the municipal perspective, it seemed to me that made more sense to move those folks into District 5.
Q. And in the presentation of their case, the Plaintiffs drew some attention to the little gap that's in between area 10 and 11 and area 12. Can you describe what that gap is?
A. I call it the Condo Canyon. It's high density, residential, more, you know, professional class affluent folks. And I felt that they would be better served in District 2. Q. If you were to move that particular piece into District 5, what would that do to the ability of District 5 -- let me rephrase that. What would that do to District 5's ability to elect a representative of their choice?
A. I think they would still be able to do so.
Q. Would it dilute it?
A. It would dilute it, yes.
(Pause in proceedings.)
THE COURT: What condos are there on 8 th and 9 th Street, because there are condos also at 10th and 11th, aren't there? What building are you describing in what you are referring to there as the condo what?

THE WITNESS: Condo Canyon.
THE COURT: Condo Canyon, what are the -- what are the buildings that are there?

THE WITNESS: If you look an aerial, Judge, you'll see that basically that sliver has significance high-rise condominiums.

THE COURT: But don't they continue up into 10th

## Street?

THE WITNESS: They do. I mean, I don't have the aerial, so $I$ can't tell you for sure, but they very well may. BY MR. LEVESQUE:
Q. And, Mr. De Grandy, why were you moving population from District 2 into District 5 at all?
A. Because I had to shed thousands of people out of District 2.
Q. And was District 5 the most under-populated district on the map?
A. No, it was District 3.
Q. And after redistricting, where did it rank, if you recall?
A. I don't recall.
Q. Now, after this map was presented -- let me back up.

At the February 25th meeting, did you present a map that was substantially similar to this?
A. At the?
Q. February 25 th meeting.
A. Yes.
Q. And did the commission adopt that February 25 th map as the base plan in which they would work from?
A. That's correct. I -- you know, I encouraged them to do that because, you know, if you have five individuals giving you five thoughts, you don't have, you know, a base to work from; it is very hard to draw a map. So I asked them to, you know --
you know, coalesce on a base draft, if you will, and then I -my charge was to make changes from those base plans. And ultimately commissioners also created their own alternatives from the base plan.
Q. And at some point did the commission consider a variety of alternatives to that base plan?
A. They did.
Q. And were any of those alternatives ultimately adopted?
A. No. Well, there were slight, you know, tweaks, the MRC, the -- there was an area called the Wharf which was joining the river that the district commission in District 5 wanted to keep, it is an entertainment venue. So that was moved back into D-5, but there were no, you know, substantive changes made otherwise.
Q. So other than that one little move for District 5 related to the Wharf, there were no changes that would have been reflected in this map?
A. Not to my recollection, no.
Q. Now, was there a Reyes alternative plan that was considered?
A. There was.
Q. When you reviewed that plan, did you believe that plan was also constitutionally compliant?
A. Yes.
Q. There was a Russell alternative plan, was there not?
A. There were two. I think she had an initial one and then he refined it to bring down the overall deviation.
Q. And at looking at both of those plans -- either of those plans, were those plans constitutionally compliant in your --
A. I believe them to be.
Q. Were there any other plans that were presented?
A. There was the Reyes plan. There was.
Q. But at least in terms of all of those other alternatives, those all would have been constitutionally compliant, correct?
A. I believe them to be, yes.
Q. Did any of them get a majority support?
A. No.
Q. If they had, they would be in the map, correct?
A. That's correct.
Q. Now, as the lead consultant working on these maps, what were your goals?
A. My goal was to create a plan that was constitutional and in compliance with the Voting Rights Act.
Q. And your primary directives came from full commission, correct?
A. That's correct. And I had told them on several occasions, if you go through the transcripts, that -- and I believe in the initial primer that I wrote, that I can't take directions from any individual commissioner. I have to have, you know, a -the body directs me as to how I need to move the plan.

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MR. LEVESQUE: If I could have one moment, Your Honor? THE COURT: Okay.
(Pause in proceedings.)
MR. LEVESQUE: No further question, Your Honor. THE COURT: All right.
(Pause in proceedings.)

THE COURT: Do you mind repeating your last name for
me, please?

MS. MCNAMARA: Caroline McNamara on behalf of -THE COURT: McNamara.

MS . MCNAMARA: McNamara, yes.

THE COURT: Okay. I wanted to make sure the court reporter had it as well.

MS. MCNAMARA: And I'm on behalf of the Plaintiffs.

THE COURT: Okay.

## CROSS-EXAMINATION

BY MS . MCNAMARA:
Q. Now, Mr. de Grandy, you stated that you're the consultant and you're hired by the City, correct?
A. That's correct.
Q. And the City, the commissioners are the ones who made the policy decisions about what would go into the map?
A. They provided the policy directives, yes.
Q. And that's like those five numbered that we went through in Defendant's Exhibit 1?
A. That's correct.
Q. And did you have any input into how they chose those five?
A. I put them out there to them. I suggested others that they didn't include, but I put them all out there for them.
Q. You raised the possibility to them that they could, quote, start from scratch if they wanted to?
A. I did, yes.
Q. But they instead wanted to preserve the cores and that's why after the Voting Rights Act, that's the next priority on the list?
A. That's correct.
Q. And -- and you briefly testified here that that decision constrained the further decisions you would make?
A. That's correct.
Q. And you were required to follow those instructions?
A. Yes.
Q. And because, you know, we test -- you testified that because of the focus on maintaining the cores, that the final priority about the neighborhoods was not something you could substantially achieve?
A. No. And actually, that hadn't been achieved in the -- in the plan that $I$ was revising. And there were multiple neighborhoods already that were divided.
Q. The district plan as the Benchmark from 2013 as it came to you already had, say, Flagami, and some of the other districts
split up?
A. That's correct, yes.
Q. And over the process of this provision, the result was, you know, the Grove and maybe a couple other neighborhoods that got divided, in addition to the ones that had already been divided that weren't really changed?
A. Yes, the Grove was -- well, was impacted. I wouldn't say it was divided. The majority of the Grove is in tact.
Q. And there was some discussion about the goal of compactness, and you agree that compactness was not a goal that was assigned to you?
A. Compactness would be a very difficult goal when you look at the boarders of the city; it would be challenging to draw a compact plan.
Q. Are the boarders of the city the only reason it is difficult to draw compact districts?
A. Other than the borders of the district, making it challenging it, are you talking about once I got the instructions?
Q. Um-hmm.
A. Yeah, once I got the instructions and maintained the core of the existing districts, you can't draw compact districts. Q. Now, the -- there is the -- Exhibit 1 that we have that has the five listed ordered priorities. Once you presented the plan and then there were some tweaks in the late February into

March area, the commission added the point about increasing the black voter -- voting age population in District 5 over 50 percent?
A. That was never done by resolution.
Q. It wasn't done by --
A. There was discussion on that, yes.
Q. Did you feel -- you felt you were bound to do that for them because they asked for it?
A. I felt I needed to do it regardless of whether they asked me in order to maintain the ability of that community to elect candidates of choice throughout that entire decade.
Q. With the initial plan that you submitted on February 7th that had the black voting age population, I think 49.8 percent, that was just below the 50 percent line, and that was when Commissioners Reyes and King raised the concern that they wanted to get it over 50. So you -- you indicated affirmative in that?
A. Yes. To me, 49.8 , 50.3, I mean, we are quibbling about a couple dozen people.
Q. Yeah.

You don't think it makes -- you don't think it's a significant difference between 49.8 and 50.3?
A. No. I mean, from an electoral perspective, listen, I'll tell you, my first election I lost by one vote, so to me, every vote is important. But, you know, statistically it is not that
significant.
Q. But Commissioners Reyes and King wanted the number to be over 50 percent?
A. They felt that was important, yes.
Q. Okay. Did the change of the threshold from 49.8 to, say, 50.2 change the analysis of the Voting Rights Act compliance?
A. No.
Q. So overall would you say that the main -- you know, setting aside the population equality, that once -- you are required to do the population equality and balance the districts, and the main driver beyond that was maintaining the cores?
A. The main driver after what, I'm sorry?
Q. The driver of how you made the map was driven by maintaining the cores, that was the highest priority?
A. No. The highest priority was draft a constitutional plan in compliance with the Voting Rights Act, and the next priority was maintaining the core districts.
Q. Now, you testified you did a racially polarizing voting analysis of the city?
A. Steve did.
Q. Did you make a determination that the three Gingles preconditions were met for the black community in the City of Miami?
A. Mr. Cody did.
Q. Did he made a determination that the three Gingles
preconditions were met for the Hispanic population of the City of Miami?
A. He did.
Q. Did he determine that the three --

THE COURT REPORTER: I'm sorry, can you --
THE COURT: You need to slow down.
THE COURT REPORTER: I need you to please repeat the question slower.

MS. MCNAMARA: Do you want me to --
THE COURT: For me, yeah. I think the court reporter needs it too. I couldn't keep up. BY MS. MCNAMARA:
Q. Did you determine that the three Gingles preconditions were met for the black population within the City of Miami?

THE COURT: Pause there.
Stephanie, G-I-N-G-L-E-S.
Go ahead.
THE WITNESS: Mr. Cody did. C-O-D-Y.
BY MS. MCNAMARA:
Q. Did you determine that the three Gingles preconditions were made for the Hispanic population for the City of Miami?
A. Mr. Cody did.
Q. Did you determine that the three Gingles preconditions were met for the non-Hispanic white population for the City of Miami?
A. There are not Gingles preconditions for white populations. It's not considered a protected class in the VRA.
Q. During the February 25th hearing, Commissioner Reyes asked you if the probability of District 2 electing a white, non-white -- or a non-Hispanic white candidate was still high, and you said it was a high probability?
A. And it still is.
Q. It's a competitive district, but there is a good chance that a white candidate would win, even notwithstanding what has happened in the -- the special election last month.
A. There is a good chance that a non-Hispanic white can win, and there is a good chance that a Hispanic can win.
(Pause in proceedings.)
BY MS. MCNAMARA:
Q. Now, you testified about the concerns over gentrification and the impact over the course of the next decade on the population in District 5?
A. Yes.
Q. Did you perform any specific studies to assess the degree of gentrification that's expected over the next decade?
A. No. We -- again, you have to look at local conditions. I think one of the reasons that the City continued to retain me throughout the cycles is because I grew up in this community. I know this community very well. I can drive through and see the condo buildings going up. The permitting activity is not
ceasing.
You know, my law firm, what I do normally other than, you know, everyday redistricting is land use and governmental procurement. So I am very aware of what is being permitted in those areas, and I can see it -- you know, I can see those high rises coming up and they will continue to come up and that area will continue to gentrify.
Q. This is based on your experience in the past and what you predict will happen in the future?
A. And having seen the demographic trends in the last three decades, whereas the black population continues to decrease in that area.
Q. Did you create any models that would predict the extent to which it would decrease over the next ten years?
A. No.
Q. Did you present anything to the commission to quantify that, saying this is how much more we need to protect the black community in District 5 beyond what it already is?
A. No. I figured if those patterns continue, the 52.
something percent of registered black voters would be in the 40s by the end of the decade.
Q. Now, we --

THE COURT: Pause there for a second.
Did you communicate that to the commissioners, or is that just something you've estimated?

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THE WITNESS: I -- I communicated in terms of concerns to keep the population above the 50 percent threshold, because that would keep my voter population in the 50 to 52 percent range.

THE COURT: It's specifically your opinion that by the end of the decade, the black population, voting black population would be in the upper 40 s, you said?

THE WITNESS: Did I communicate that explicitly as I did now, no.

THE COURT: Okay.
BY MS. MCNAMARA:
Q. Okay. Now we talked a little bit about the federal detention center and this sliver where this courthouse is located that's --

THE WITNESS: I'm sorry, let me qualify that, Your Honor. I did not in public meetings.

THE COURT: Okay.
THE WITNESS: I did have multiple discussions with commissioners one-on-one.

THE COURT: Okay. Do you want to flesh that out for me?

THE WITNESS: Without getting into attorney/client privilege, but I gave them my thoughts.

THE COURT: I already know the sword and shield, so you choose.

THE WITNESS: I gave them my thoughts, Your Honor.
Can't go further than that.
BY MS. MCNAMARA:
Q. Coming back to the sliver that we are in currently that is bound between Northeast and 2nd Avenue in Miami, right here that this courthouse is in, that also includes the Federal Detention Center, that's one of the districts that you talked about on direct that moved from District 2 into District 5?
A. That's correct.
Q. When you were moving that block, did you assess the -- did you assess how much of that population is incarcerated in the Federal Detention Center?
A. Did I explicitly count them, no. No.
Q. You -- when you say -- are the people who reside within the Federal Detention Center within the population that was added to D-5 in your analysis?
A. In other words, were those counted as people? They were counted by the census. They were counted as people, yes. Q. Did you count them as to when you were measuring the performance of the district, whether those inmates would affect the performance of the voting in the district?
A. Did I do that insular analysis, no. I looked at citizen voting age population and then citizen registered voter population; there is a delta there. And I assume part of that delta is the Federal Detention Center. Part of that delta is,
you know, people of African descent, like Haitians, that are non-citizens.
Q. And this -- the move that you did, that was in response to the reclassify commission to make sure it was over a 50 percent eval?
A. Which move?
Q. The move -- this move of this sliver and -- plus the one a little bit north of here from District 2 to District 5, that happened after you had presented the 49.8 percent BVAP and then some of the commissioners said, We really want to get that over 50, and you were looking for additional black population to get in to District 5 in order to get the BVAP over 50 percent?
A. What specific movements are you talking about?
Q. I am talking about the -- the movement of the sliver that we're standing in now that includes this courthouse and the Federal Detention Center.

THE COURT: Area 12?
THE WITNESS: Area 12. Okay. What about area 12? BY MS. MCNAMARA:
Q. That -- you did that after the February 7th hearing, when you presented your original plan with the 49.8 percent BVAP for District 5, and then the commissioners asked you to increase it to 50?
A. I believe -- yeah, I believe that that was in the later phases, yes.
Q. Adding the sliver which included the prison population was in the service of increasing the black population within the district?
A. No. It was to equalize population and shed population from District 2.
Q. But it didn't -- you -- you didn't consider the impact on the black voting age population number when you made that?
A. I was always cognizant of what the percentages were.
Q. Okay.

THE COURT: Is that a yes?
THE WITNESS: Yes.
(Pause in proceedings.)
BY MS. MCNAMARA:
Q. Just one more question. Going back to the discussion of -or discussions that you had with individual commissioners, and the Court asked the question of, if you discussed the gentrification models with individual commissioners.

Did you, in those individual discussions, discuss the -you know, statistics about potential gentrification models with those individual commissioners in those meetings?
A. I can't go into those details without violating attorney/client. I can just tell you that I gave them my thoughts.

MS. MCNAMARA: No more -- further questions.
THE COURT: All right.

MR. LEVESQUE: Your Honor, we don't have any redirect. THE COURT: Okay. I have a question.

THE WITNESS: Okay.
THE COURT: You have heard that the -- the explanation and response by the Defendant, that the discussions by the commissioners that focused explicitly and exclusively on race were intended to be a proxy for political cohesiveness.

You were here in the courtroom for that discussion? THE WITNESS: Yes.

THE COURT: Okay. I would like to know what your understanding was and what it was based on when, for example -I don't remember who said it, but someone pointed out in District 2 there could still be a commissioner, like Ken Russell, right, among other examples. But I would like to hear what your understanding and what it's based on when the commissioners addressed race explicitly and exclusively.

THE WITNESS: To me, the direction of voter confusion, and I touched on it a little bit before, is, again, you start with the fact, at least my experience, Your Honor, the Hispanic community is not monolithic. You have --

THE COURT: That's a good point, and let me just ask you to pause there, there isn't any distinction that I have seen in the transcripts that I have reviewed, and I have reviewed them all, so if you can point me to anything or you can recall from your presence there if there was something
different. But the only discussions that I have been pointed to that address Hispanic voters do treat them as a monolithic voting group. So if even you could flesh that out, that would be helpful.

THE WITNESS: That's -- that's why I believe they were trying to emphasize voter cohesion, because, again, if you look at the type of voters in a District 4 or a District 3, they are older, more conservative voters, very anti-communist because of their life experience, etc. You have the people in District 2 that just elected a Hispanic commissioner, are different, are younger generation, more assimilated into the American experience, more liberal. Whereas District 3, District 4, more conservative.

So that's how I interpreted voter cohesion. It is not only just look at, hey, how many Hispanics can I dump into a place? What kind of voters are they? What -- what interests them? What are their issues?

THE COURT: Can you direct me to any part of any transcript that's consistent with that understanding that there was a description of political or partisanship cohesiveness? Do you remember any of the dates on which that discussion --

THE WITNESS: I can't -- I remember when one of the commissioners asked to focus on that, and I -- I think my response to them was pretty much the understanding that I have conveyed to Your Honor. But other than that, I -- I don't have
any specific transcript references that I can point to.
THE COURT: Can you remember which commissioner you think that that conversation occurred with?

THE WITNESS: If I had to guess, I would say Carollo. THE COURT: Okay. And the generalized voting patterns that you are describing, can -- is there anywhere in the record of proceedings that support your conclusions that you relied on or shared with commissioners?

THE WITNESS: To support my conclusions? Other than the fact that, you know, a liberal Hispanic was elected to District 2.

THE COURT: But who were the other candidates? THE WITNESS: There was Martin Zilber, who was the preferred candidate of the commissioners; they actually endorsed him. He came in fourth. Again, I can't point you to anything in the transcript. I could tell you what I understood and how I acted based on what I understood.

THE COURT: Okay. If anyone has follow-up questions to mine.

MR. WARREN: Not from us, Your Honor.
MR. LEVESQUE: Not from us, Your Honor.
THE COURT: Okay. Thank you for coming forward.
THE WITNESS: Thank you, ma'am.
THE COURT: Let me ask just a procedural and planning question. There is no further evidence coming forth from the

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(The proceedings adjourned at 3:19 p.m.)
C E R T I F I C ATE

I hereby certify that the foregoing is an accurate transcription of the proceedings in the above-entitled matter.

DATE
 Official United States Court Reporter 400 North Miami Avenue, Thirteenth Floor Miami, Florida 33128 (305) 523-5518


[^0]:    1. I have also accepted an appointment as a tenure-track Assistant Professor in the Wilf Family Department of Politics at New York University starting in 2024.
[^1]:    2. The data comes from the U.S. Census Bureau. The table is entitled, "Hispanic or Latino, and Not Hispanic or Latino by Race" in the Decennial Census.
    3. The eiCompare (Collingwood et al. 2020) $R$ package relies and builds upon two other packages for ecological inference: "ei" (King and Roberts 2016) and "eiPack" (Lau, Moore, and Kellermann 2020) I include this analysis only for elections where these quantities can be calculated reliably. In all cases, the substantive results from the scatterplots and ecological inference packages are the same.
    4. Miami-Dade County's Elections Department Data:https://www.miamidade.gov/elections/voter-statistics-current-archive. html
[^2]:    5. Note that for Latinos, the share of Latino registered voters underestimates the CVAP.
[^3]:    1. I use the top two candidate vote totals to examine the contest's Black-preferred and non-Black-preferred candidates.
[^4]:    1. Consistent with the first report, I include Black, Anglo, Hispanic, AAPI/American Indian and exclude voters whose race is recorded as "Other," "Multi-racial," or "Unknown" throughout the analysis. Registered voters recorded as both active and inactive status are included in this analysis.
    2. For this analysis, I use the top two candidates only.
    3. In 5 of the 6 contest, when the Black share of CVAP is 0 , the Black-preferred candidate receives a vote share in the low 40s. In the County Judge Group 5, however, when the Black share of CVAP is 0, the Black-preferred candidate receives $49 \%$ of the vote. While still under $50 \%$, there is suggestive evidence that the County Judge Group 5 may show less racial polarization than the other contests.
[^5]:    4. I use the top two candidate vote totals to examine the contest's Black-preferred and non-Black-preferred candidates.
[^6]:    ${ }^{1}$ The Code defines Overtown as follows: "As used herein, the "Overtown area" is that area approximately bounded on the north by Northwest 20th Street from Florida East Coast Railroad to Northwest 3rd Avenue to Northwest 5th Avenue; on the west by I-95 Expressway from Northwest 21st Terrace to 836 Expressway and State Road 836 (EastWest) Expressway from I-95 to the Miami River; on the south by Northwest 3rd Street from Florida East Coast Railroad to Northwest 7th Avenue and the Miami River from Northwest 7th Avenue to 836 Expressway; and on the east by Florida East Coast Railroad right-of-way. (Note: All boundaries are to be construed expansively, incorporating the breadth of described streets, avenues, expressways, and railroad property.)"
    ${ }^{2}$ https://www.miami-police.org/overtown.html
    ${ }^{3}$ http://www.miami21.org/PDFs/support/netmapnew.jpg
    ${ }^{4}$ https://www.miamiandbeaches.com/neighborhoods/historic-overtown
    ${ }^{5}$ The GMCVB's Overtown definition is identical to the NET and Police Neighborhood Service Area boundaries.

[^7]:    ${ }^{1}$ Project website: https://alarm-redist.org/

