

Race & Ethnicity in Dave's Redistricting (DRA)

November 21, 2023 | Redistricting Data Hub

Agenda

1. Race/Ethnicity in Redistricting
2. Race/Ethnicity in DRA
3. Drawing Maps with Race/Ethnicity
4. Analyzing Maps with Race/Ethnicity
5. Visualizing Race/Ethnicity in DRA
6. Questions



Redistricting Data Hub

The mission of the nonpartisan Redistricting Data Hub (RDH) is to make all the data, tools, and knowledge necessary for identifying gerrymandering and drawing legally compliant maps publicly available.

www.redistrictingdatahub.org

Dave's Redistricting App

The mission of Dave's Redistricting (DRA) is to empower civic organizations and citizen activists to advocate for fair congressional and legislative districts and increased transparency in the redistricting process.

www.davesredistricting.org

Race/Ethnicity in Redistricting

- ◆ Consideration of race and ethnicity in redistricting is guided by two federal principles:
 - a. The Fourteenth Amendment's equal protection clause, which has been interpreted to prohibit using race or ethnicity as the "predominant" factor in drawing
 - b. The Voting Rights Act of 1965, and Section 2's prohibition on discrimination in voting based on race, color, or creed
 - This applies to discriminatory intent as well as effect
- ◆ Together, these principles imply that race and ethnicity should be taken into account, but should be the primary consideration in drawing maps.

Race/Ethnicity in Redistricting

- ◆ States differ in:
 - a. How they define race/ethnicity
 - RDH researched whether redistricting bodies in 14 states publicly defined these categories: see Process Related Data in our [Data Accessibility Reports](#)
 - b. How they use race/ethnicity data for drawing maps
 - c. State laws concerning [minority voting rights in redistricting](#)
 - State Voting Rights Acts
 - State prohibitions on racial gerrymandering

Race/Ethnicity in Redistricting

- ◆ The Census Bureau follows standards for collecting and reporting race and ethnicity put out by the Office of Management and Budget (OMB)
- ◆ [These standards](#) require collecting Hispanic ethnicity and race in two separate questions
- ◆ Each race question also asks for ethnic origin, to be added by the respondent

- [illegible]

Race/Ethnicity in Redistricting

- ◆ In the 2020 census data for redistricting (PL 94-171 data), [race is reported alone or in combination](#) for:
 - a. White
 - b. Black or African-American
 - c. American Indian or Alaska Native
 - d. Asian
 - e. Native Hawaiian or Other Pacific Islander
 - f. Some other race
- ◆ Counts by race are reported separately as Hispanic or non-Hispanic

Race/Ethnicity in Redistricting

- ◆ The Census Bureau made a number of changes in how they collect and code race/ethnicity from 2010 to 2020
 - a. Read more [here](#)

- ◆ Advocates are already looking to make changes and improvements in 2030
 - a. For example, changing the definition of White to no longer include people of Middle Eastern and Northern African (MENA) descent

Race/Ethnicity in DRA

- ◆ Population data by race and ethnicity in DRA comes from two sources:
 - a. 2020 decennial census data (PL 94-171)
 - b. American Community Survey (ACS) 5-year estimates
- ◆ Key differences in these datasets:
 - a. Enumeration (census) versus sample (ACS)
 - b. Reference date (2020 for census; 2019 for 2020 ACS 5-year estimates)
 - c. Level of geography available (census blocks for census; block groups for ACS)

Race/Ethnicity in DRA

- ◆ DRA currently has:
 - a. 2010 and 2020 census data
 - Broken down by total population and voting age population (VAP)
 - b. 2019 and 2020 ACS data
 - Broken down by total population and citizen voting age population (CVAP)
- ◆ More details on this data can be found [here](#)

Race/Ethnicity in DRA

- ◆ In DRA, CVAP and VAP by race/ethnicity are reported as:
 - a. White (alone, not Hispanic)
 - b. Hispanic (alone or in combination with other races)
 - c. Black (Black alone or in combination with other races, including Hispanic)
 - d. Asian (Asian alone or in combination with other races, including Hispanic)
 - e. Native (AIAN alone or in combination with other races, including Hispanic)
 - f. Pacific (NHPI alone or in combination with other races, including Hispanic)
- ◆ The sum of these categories is greater than the total population
- ◆ VAP by race alone (excluding Hispanic) is also available

Race/Ethnicity in DRA

- ◆ Thirteen states addressed prison gerrymandering in their congressional and/or state legislative districts by adjusting their population data
- ◆ DRA enables you to select adjusted or unadjusted data in the 12 states that publicly released a dataset
- ◆ Some states use adjusted data for legislative only or legislative and congressional - it is the user's responsibility to ensure you are using the correct population data!
- ◆ Stay tuned for an upcoming mapping snack training on prison gerrymandering analysis in DRA...

Drawing Maps

- ◆ Draw at the block, precinct, city, or county level
 - a. Race/ethnicity data for individual blocks, precincts, cities and counties can be seen on the right, as you move your mouse across the map
 - b. Race/ethnicity data for districts can be seen on the left, by selecting a district and examining District Details
- ◆ To change the data displayed, go to:
 - a. Settings → Data Selector → Display or Hide Datasets

Race/Ethnicity in DRA

The screenshot displays the DRA2020 web application interface for Georgia's 2023 congressional districts. The main map shows the state of Georgia with district boundaries. A red arrow points to the settings gear icon in the top right corner of the map area.

GA cong 2023

Map Settings

Data Selector

Primary Datasets

Select primary datasets, one from each group, which will be used by District Statistics, Demographics Colors and Partisan Lean Colors.

Shapes 2020 Precincts

Census Total Population 2020

Voting Age Voting Age Pop 2020

Election Composite 2016-2020

Display or Hide Datasets

Show or hide datasets in the Details panels. These choices are for viewing only and are not used by District Statistics, Demographics Colors or Partisan Lean Colors.

APPLY **CANCEL**

District Selector

District	Population	Deviation
Un	9,741,455	-736
1	0	-765,136
2	206,053	-559,083

District Details

Colors

Districts

☐ Only Current

☒ Map Colors ☐ Partisan Lean

☐ Demographics

Precincts

☐ Partisan Lean ☐ Swing

☐ Demographics

Opacity

Change Palettes

Overlays

☒ Map ☐ Racial Dot

☐ District Lines ☐ Labels

☒ Precinct Lines ☐ Labels

☒ County Lines ☐ Labels

☐ City Lines ☐ Labels

☒ Landmarks

Custom Overlays

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Race/Ethnicity in DRA

The screenshot displays the DRA2020 Georgia map interface. The main map shows the state of Georgia with district boundaries. A red box highlights the 'Data Selector' panel on the right side of the interface. The panel includes a 'Primary Datasets' section with a table of datasets and a 'Display or Hide Datasets' section with checkboxes for various datasets.

Map Settings

Data Selector

Primary Datasets

Group	Dataset
Shapes	2020 Precincts
Census	Total Population 2020
Voting Age	Voting Age Pop 2020
Election	Composite 2016-2020

Display or Hide Datasets

Show or hide datasets in the Details panels. These choices are for **viewing only** and are not used by District Statistics, Demographics Colors or Partisan Lean Colors.

APPLY **CANCEL**

Georgia 0 -765,136

District Selector

District	Population	Deviation
Un	9,741,455	-736
1	0	-765,136
2	206,053	-559,083

District Details

Colors

Districts ☐ Only Current ☒ Map Colors ☐ Partisan Lean ☐ Demographics

Precincts ☐ Partisan Lean ☐ Swing ☐ Demographics

Opacity **Change Palettes**

Overlays

Map	Racial Dot
<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Racial Dot
<input type="checkbox"/> District Lines	<input type="checkbox"/> Labels
<input checked="" type="checkbox"/> Precinct Lines	<input type="checkbox"/> Labels
<input checked="" type="checkbox"/> County Lines	<input type="checkbox"/> Labels
<input type="checkbox"/> City Lines	<input type="checkbox"/> Labels
<input checked="" type="checkbox"/> Landmarks	

Custom Overlays

© 2023 Dave's Redistricting, LLC. Mapbox

Race/Ethnicity in DRA

The screenshot shows the DRA2020 Georgia 2023 interface. The main map displays the state of Georgia with district boundaries. The sidebar on the left contains various settings, including District Selector, District Details, Colors, Precincts, and Overlays. A red box highlights the 'Display or Hide Datasets' section in the sidebar, which includes a 'Choose Datasets' dropdown and a 'Hide Election Data and Partisan Analytics' checkbox. A red arrow points to the 'Choose Datasets' dropdown.

Georgia 0 -765,136

District Selector

District	Population	Deviation
Un	9,741,455	-736
1	0	-765,136
2	206,053	-559,083

District Details

Colors

Districts ☐ Only Current ☒ Map Colors ☐ Partisan Lean ☐ Demographics

Precincts ☐ Partisan Lean ☐ Swing ☐ Demographics

Opacity

Overlays

<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Racial Dot
<input type="checkbox"/> District Lines	<input type="checkbox"/> Labels
<input checked="" type="checkbox"/> Precinct Lines	<input type="checkbox"/> Labels
<input checked="" type="checkbox"/> County Lines	<input type="checkbox"/> Labels
<input type="checkbox"/> City Lines	<input type="checkbox"/> Labels
<input checked="" type="checkbox"/> Landmarks	

Custom Overlays

GA cong 2023

Map **Statistics** **Analyze** **Compare** **Advanced**

Select primary datasets, one from each group, which will be used by District Statistics, Demographics Colors and Partisan Lean Colors.

Shapes 2020 Precincts

Census Total Population 2020

Voting Age Voting Age Pop 2020

Election Composite 2016-2020

Display or Hide Datasets

Show or hide datasets in the Details panels. These choices are for **viewing only** and are not used by District Statistics, Demographics Colors or Partisan Lean Colors.

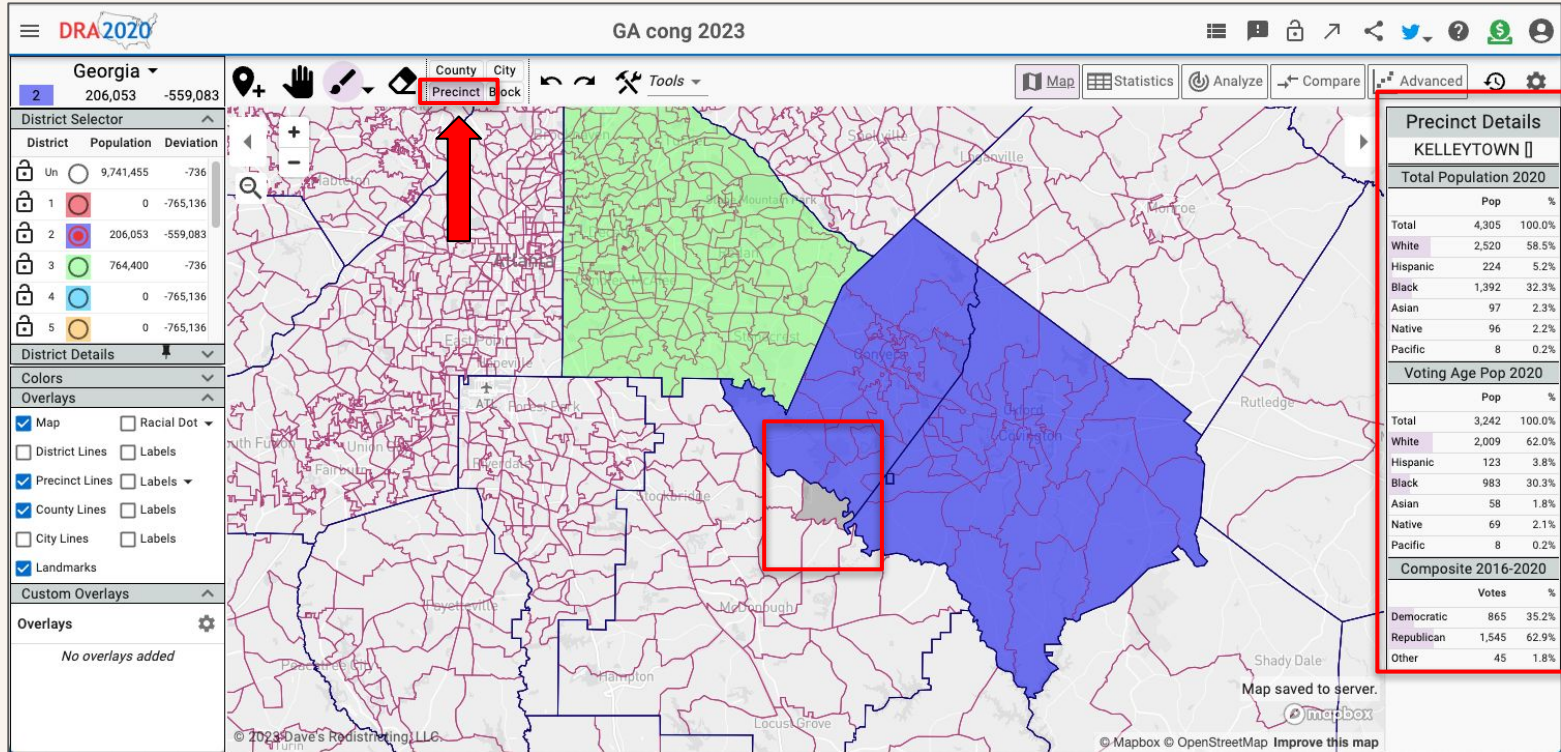
Choose Datasets

☐ Hide Election Data and Partisan Analytics

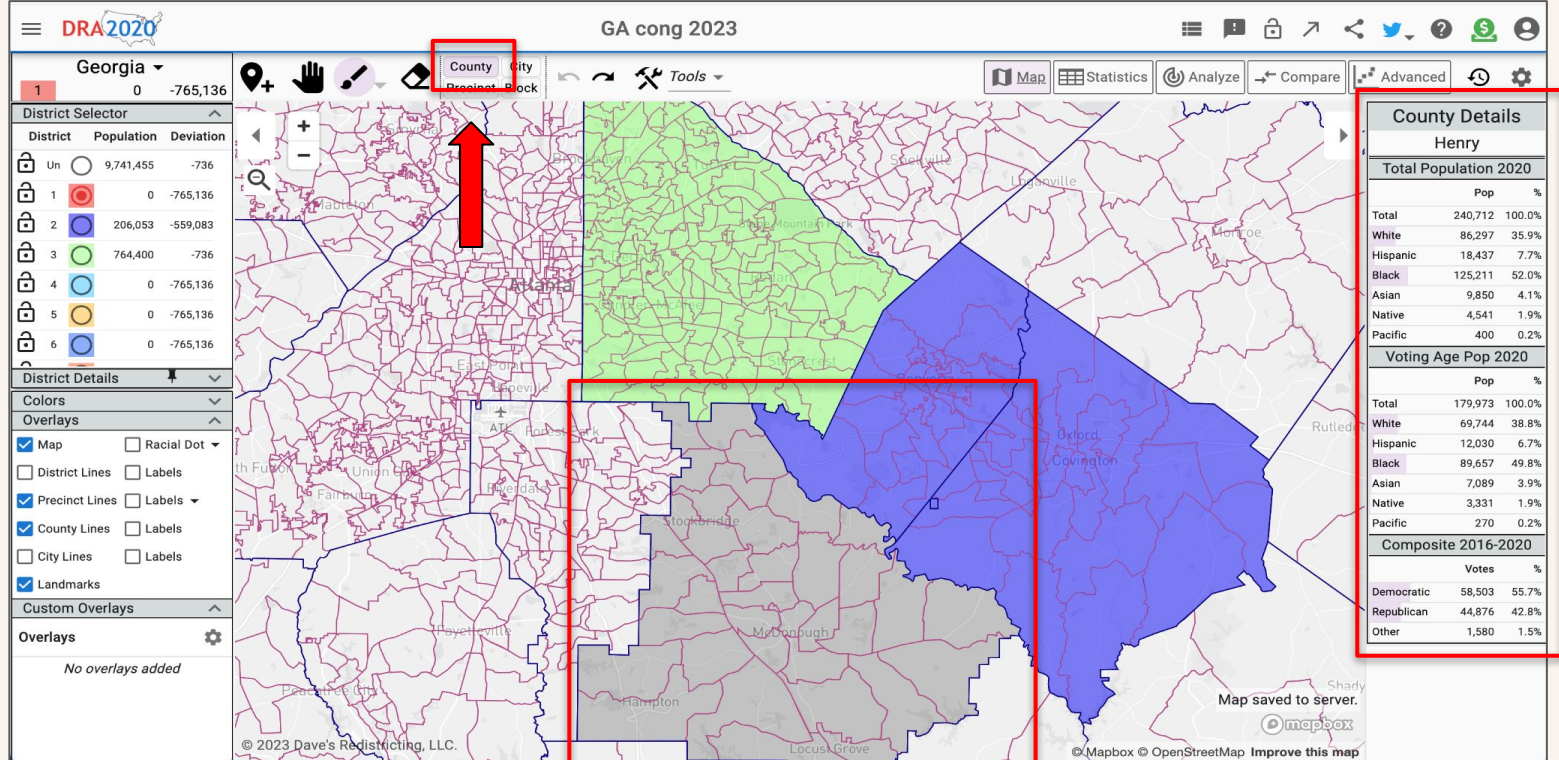
Color Map from File

APPLY **CANCEL**

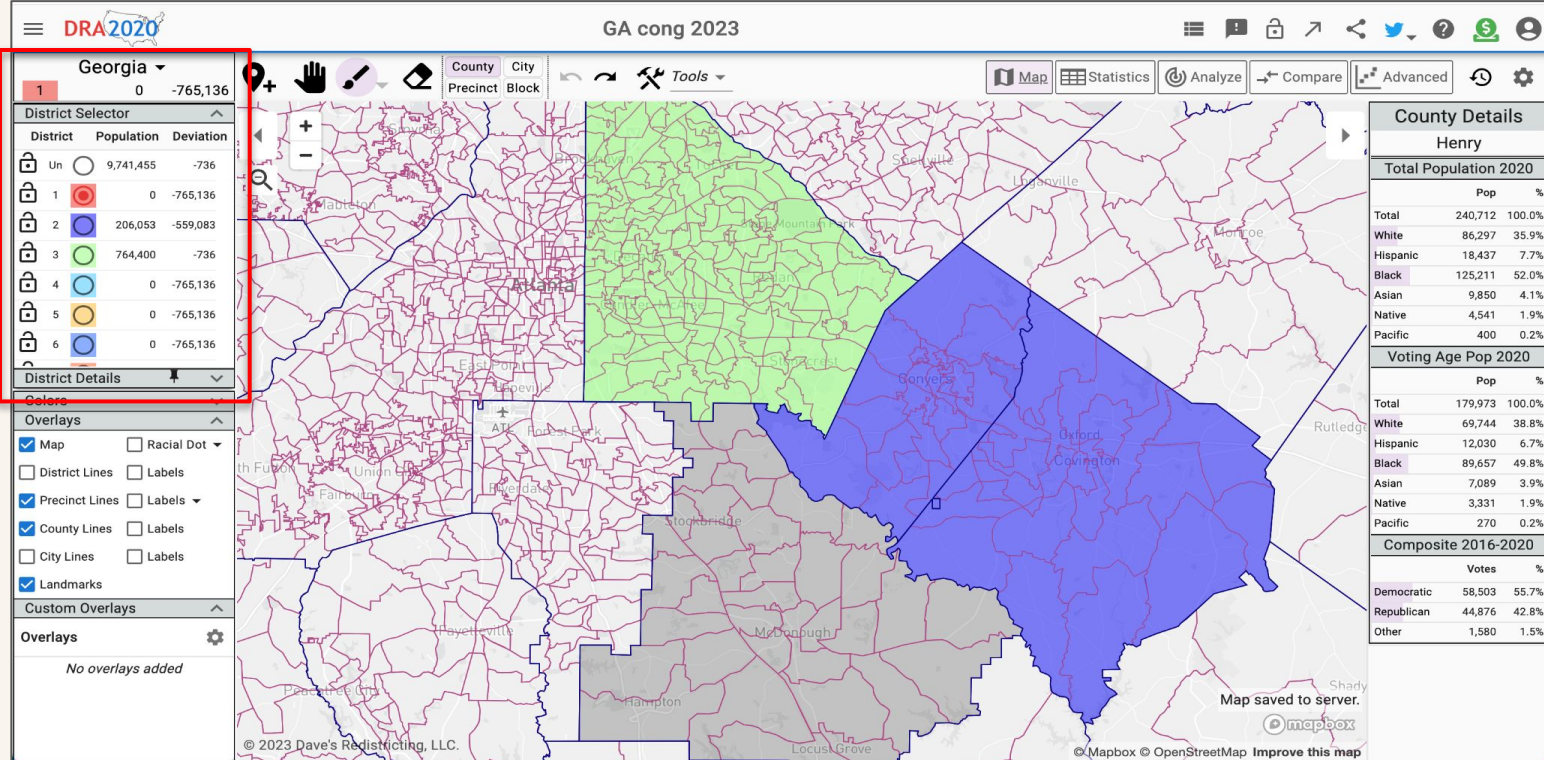
Drawing Maps



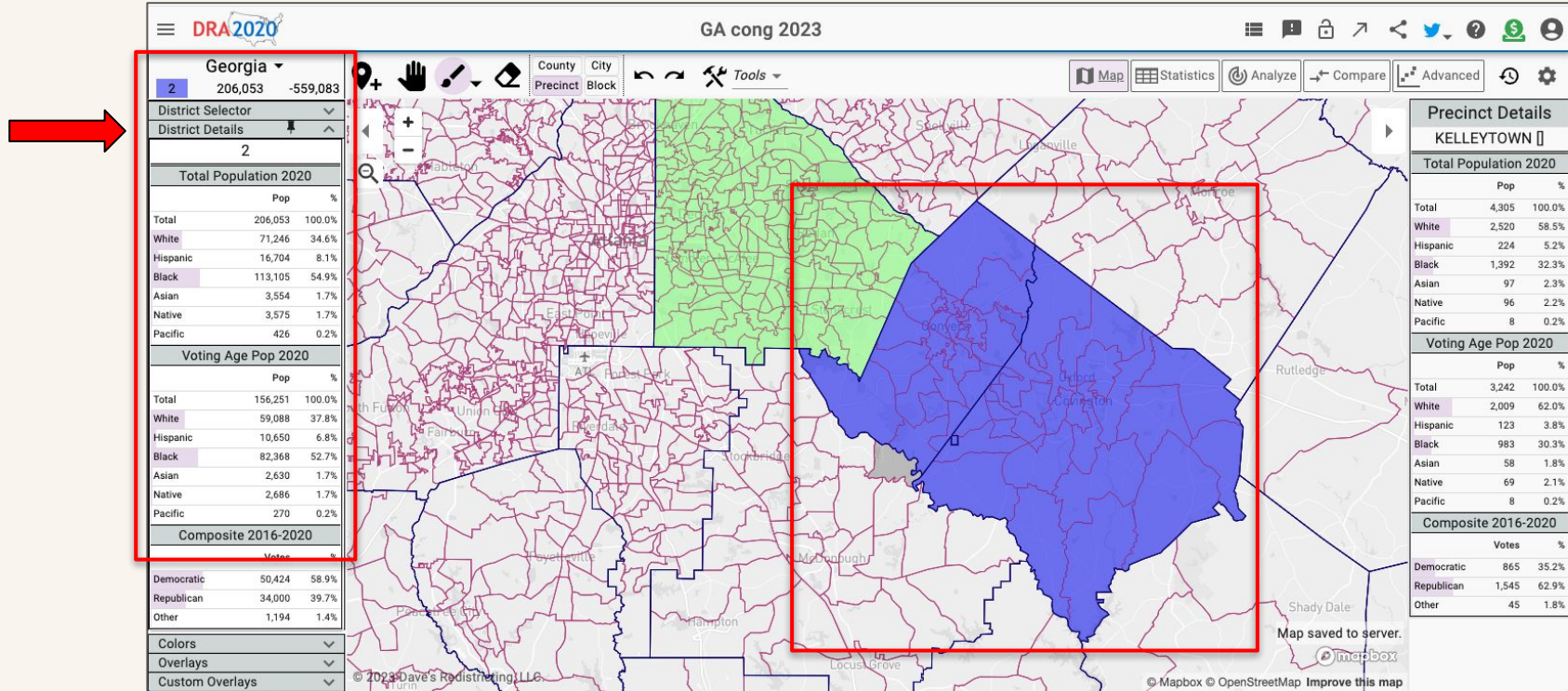
Drawing Maps



Drawing Maps



Drawing Maps



Analyzing Maps

- ◆ **Statistics:** provides a breakdown of districts by race/ethnicity
 - ◆ **Analyze:** provides summary data on the population, and a DRA indicator for 'opportunities for minority representation' across the map as a whole
 - ◆ **Advanced:** contains a Demographic Voting Analysis
-
- ◆ To change the data analyzed, go to:
 - a. Settings → Data Selector → Primary datasets

Analyzing Maps

DRA2020 GA cong 2023

Georgia 1 0 -765,136

District Selector

District	Population	Deviation
Un	9,741,455	-736
1	0	-765,136
2	206,053	-559,083

District Details

Colors

Districts

- ☐ Only Current
- ☒ Map Colors
- ☐ Partisan Lean
- ☐ Demographics

Precincts

- ☐ Partisan Lean
- ☐ Swing
- ☐ Demographics

Opacity

Change Palettes

Overlays

- ☒ Map
- ☐ District Lines
- ☒ Precinct Lines
- ☐ County Lines
- ☐ City Lines
- ☒ Landmarks
- ☐ Racial Dot
- ☐ Labels

Custom Overlays

Map Settings

Data Selector

Primary Datasets

Select primary datasets, one from each group, which will be used by District Statistics, Demographics Colors and Partisan Lean Colors.

Shapes 2020 Precincts

Census Total Population 2020

Voting Age Voting Age Pop 2020

Election Composite 2016-2020

Display or Hide Datasets

Show or hide datasets in the Details panels. These choices are for viewing only and are not used by District Statistics, Demographics Colors or Partisan Lean Colors.

APPLY CANCEL

Analyzing Maps

The screenshot displays the DRA2020 web application interface for Georgia's 2023 congressional districts. The main map shows the state of Georgia with district boundaries. The left sidebar contains the District Selector, District Details, and Overlays panels. The right sidebar contains the Map Settings panel, which is highlighted with a red box. The Map Settings panel includes a Data Selector section and a Primary Datasets section.

Map Settings

Data Selector

Primary Datasets

Select primary datasets, one from each group, which will be used by District Statistics, Demographics Colors and Partisan Lean Colors.

Shapes: 2020 Precincts

Census: Total Population 2020

Voting Age: Voting Age Pop 2020

Election: Composite 2016-2020

Display or Hide Datasets

Show or hide datasets in the Details panels. These choices are for viewing only and are not used by District Statistics, Demographics Colors or Partisan Lean Colors.

APPLY **CANCEL**

Analyzing Maps

The screenshot shows the DRA2020 web application interface for Georgia's 2023 congressional districts. The interface is divided into several sections:

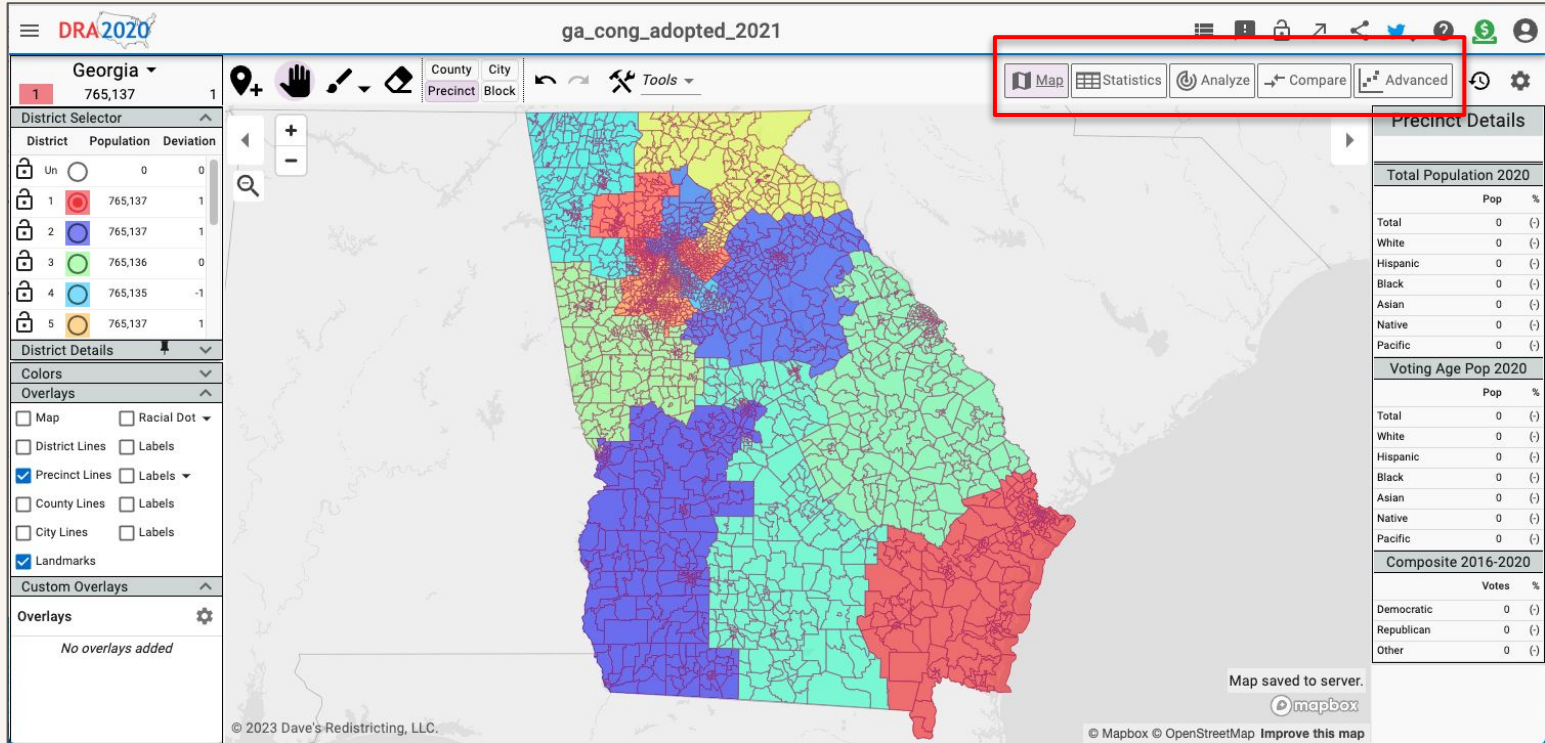
- Header:** Displays "DRA2020" and "GA cong 2023".
- Left Sidebar:**
 - District Selector:** A table showing district details for Georgia.
 - District Details:** A section for selecting map colors and overlays.
 - Overlays:** A section for selecting map overlays.
- Map:** A map of Georgia showing congressional districts. The map is titled "GA cong 2023".
- Right Sidebar:**
 - Map Settings:** A section for selecting map settings.
 - Data Selector:** A section for selecting primary datasets, shapes, and election data.

The **Data Selector** section is highlighted with a red box, and a red arrow points to it. The **Data Selector** section contains the following information:

- Primary Datasets:** Select primary datasets, one from each group, which will be used by District Statistics, Demographics Colors and Partisan Lean Colors.
- Shapes:** 2020 Precincts
- Census:** Total Population 2020
- Voting Age:** Voting Age Pop 2020
- Election:** Composite 2016-2020
- Display or Hide Datasets:** Show or hide datasets in the Details panels. These choices are for viewing only and are not used by District Statistics, Demographics Colors or Partisan Lean Colors.

At the bottom of the right sidebar, there are two buttons: **APPLY** and **CANCEL**.

Analyzing Maps



Analyzing Maps

- ◆ **Statistics:** provides a breakdown of districts by race/ethnicity

DRA2020

ga_cong_adopted_2021

Statistics

Notes

Map

Statistics

Analyze

Compare

Advanced

Population

Shapes

Partisan Lean

Demographics (VAP)

DOWNLOAD

ID ↑

Total

+/-

Dem

Rep

Oth

Total

White

Minority

Hispanic

Black

Asian

Native

Pacific

Un

0

0%

0%

0%

0

0%

0%

0%

0%

0%

0%

0%

0%

1

765,137

0%

40.98%

57.41%

1.61%

589,266

60.41%

39.59%

6.78%

28.17%

2.99%

2%

0.29%

2

765,137

0%

53.59%

45.36%

1.05%

587,555

42.73%

57.27%

5.12%

49.29%

1.89%

1.54%

0.22%

3

765,136

-0%

32.08%

66.22%

1.7%

586,319

66.83%

33.17%

5.33%

23.32%

2.55%

2.09%

0.12%

4

765,135

-0%

75.76%

22.62%

1.61%

589,470

28.25%

71.75%

10.12%

54.52%

6.74%

1.7%

0.13%

5

765,137

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80.04%

18.18%

1.78%

621,515

37.92%

62.08%

6.67%

49.6%

5.39%

1.35%

0.14%

6

765,136

-0%

36.81%

60.69%

2.5%

574,797

66.63%

33.37%

9.11%

9.91%

12.27%

1.77%

0.13%

7

765,137

0%

58.19%

39.69%

2.12%

566,934

32.78%

67.22%

21.27%

29.82%

15.85%

2.07%

0.16%

8

765,136

-0%

33.74%

65.06%

1.2%

585,857

60.52%

39.48%

6.1%

30.04%

2.03%

1.63%

0.14%

9

765,137

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27.54%

70.5%

1.96%

592,520

68.29%

31.71%

12.89%

10.42%

6.45%

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765,135

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35.44%

62.83%

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588,874

66.2%

33.8%

6.51%

22.6%

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2.51%

595,201

63.99%

36.01%

11.22%

17.95%

4.52%

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12

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-0%

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56.29%

1.36%

588,119

54.65%

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4.87%

36.72%

2.55%

1.67%

0.22%

13

765,137

0%

78.12%

20.53%

1.35%

574,789

18.82%

81.18%

10.52%

66.75%

3.83%

1.71%

0.13%

14

765,135

-0%

28.77%

69.41%

1.82%

579,058

71.33%

28.67%

10.58%

14.28%

1.5%

2.76%

0.11%

765,136

0%

47.18%

51.06%

1.75%

587,162

52.82%

47.18%

9.04%

31.73%

5.07%


1.92%

0.15%

Analyzing Maps

- ◆ **Analyze:** provides summary data on the population, and a DRA indicator for 'opportunities for minority representation' across the map as a whole
 - a. The first table summarizes the district statistics by counting the frequency of districts with populations between bands of 5 percentage points
 - b. The second table calculates the number of proportional seats
 - Both tables include individual race/ethnicity categories as well as all combined (Non-Hispanic Whites relative to all others combined)

Analyzing Maps

 ga_cong_adopted_2021

[Ratings](#) [Requirements](#) [Proportionality](#) [Competitiveness](#) **[Minority Representation](#)** [Compactness](#) [Splitting](#)

Map Statistics **Analyze** Compare Advanced

Minority Representation

All else equal, prefer maps that give minorities more opportunities to elect representatives.

District VAP %	Potential Opportunity Districts (based on map)				
	Minority Hispanic	Black	Asian	Native	Pacific
35% ≤ VAP < 40%	3	0	1	0	0
40% ≤ VAP < 45%	0	0	0	0	0
45% ≤ VAP < 50%	1	0	2	0	0
50% ≤ VAP < 55%	0	0	1	0	0
55% ≤ VAP < 60%	1	0	0	0	0
60% ≤ VAP < 100%	4	0	1	0	0

	Proportional Seats (based on total VAP %)					
	Minority Hispanic	Black	Asian	Native	Pacific	
Total VAP %	47.18%	9.04%	31.73%	5.07%	1.92%	0.15%
Proportional Seats	7	1	4	1	0	0

Rating

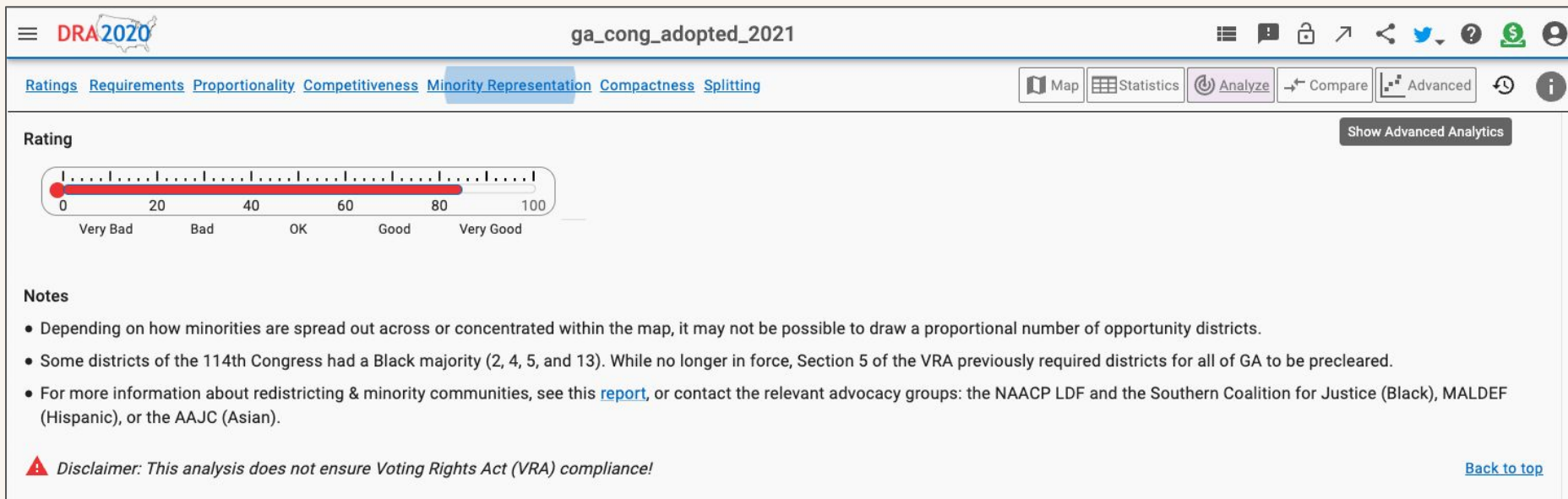
Analyzing Maps

- ◆ **Analyze:** provides summary data on VAP or CVAP, and a DRA indicator for 'opportunities for minority representation' across the map as a whole
 - a. “The rating computes seat probabilities for each category, giving full weight to opportunity-to-elect districts but discounting coalition districts by half, uses what would be a proportional numbers of seats for the different categories as benchmarks, normalizes the number of likely opportunity and coalition districts to a [0–100] scale where bigger is better, and then combines them into a single rating.”
 - b. Put another way...

Analyzing Maps

- ◆ Assume 100% of a racial/ethnic minority group vote as a bloc, 100% of a majority group votes as a bloc, and they turnout at the same rate
- ◆ Calculate what number of seats a racial/ethnic group is likely to win in *this* map out of all proportional seats based on their statewide % VAP
- ◆ Repeat this for all racial/ethnic groups and sum; repeat for all minorities combined
- ◆ Multiply by 100 (to normalize to a thermometer scale)
- ◆ Combine these values in a weighted average, with districts for all minorities combined counting half as much as districts for individual racial/ethnic groups

Analyzing Maps



Analyzing Maps

- ◆ Compliance with the Voting Rights Act (VRA) is complicated, and often requires multiple experts in mapping and statistics to properly assess
- ◆ The ‘opportunities for minority representation’ metric in DRA does not assess VRA compliance



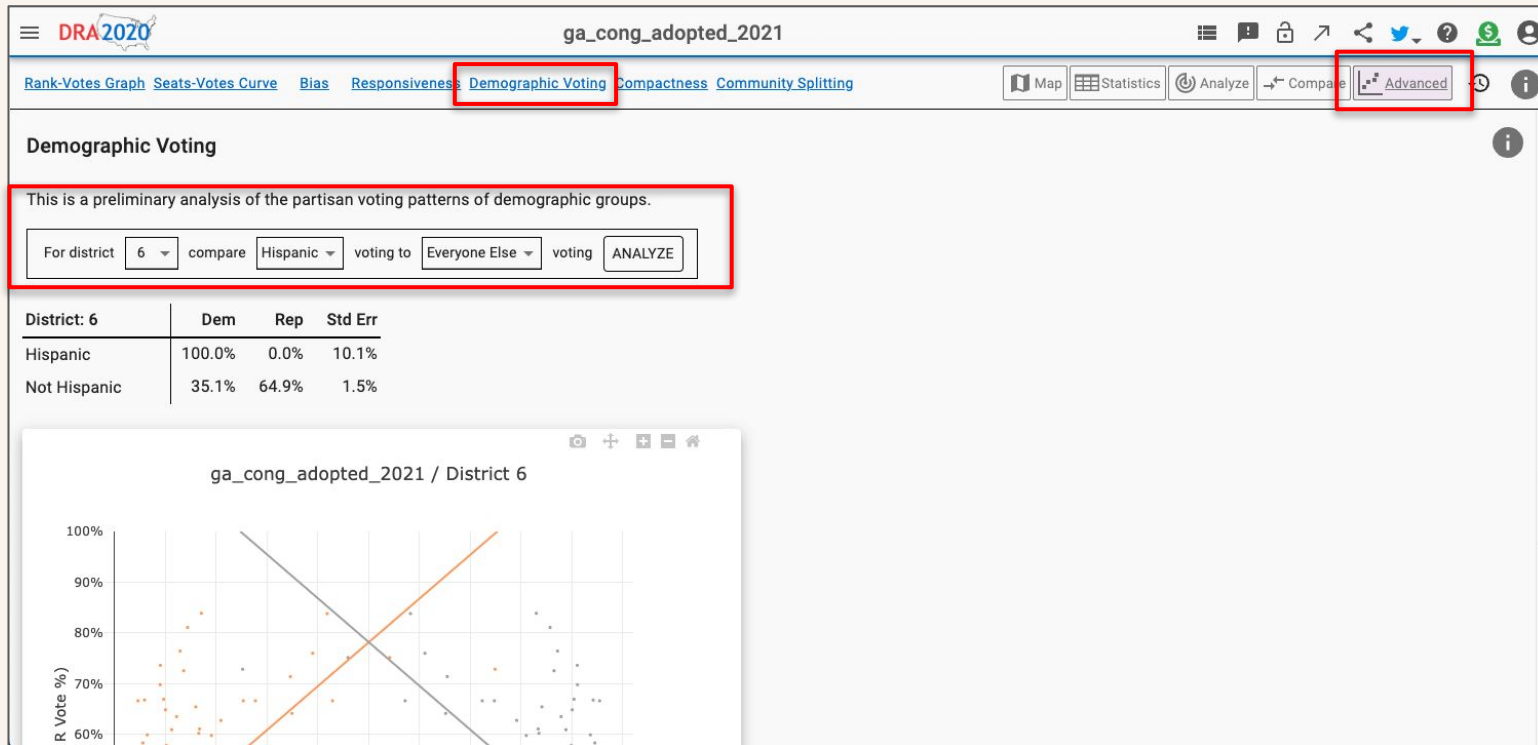
Disclaimer: This analysis does not ensure Voting Rights Act (VRA) compliance!

- ◆ Read more about how the DRA metric of ‘opportunities for minority representation’ is calculated [here](#)

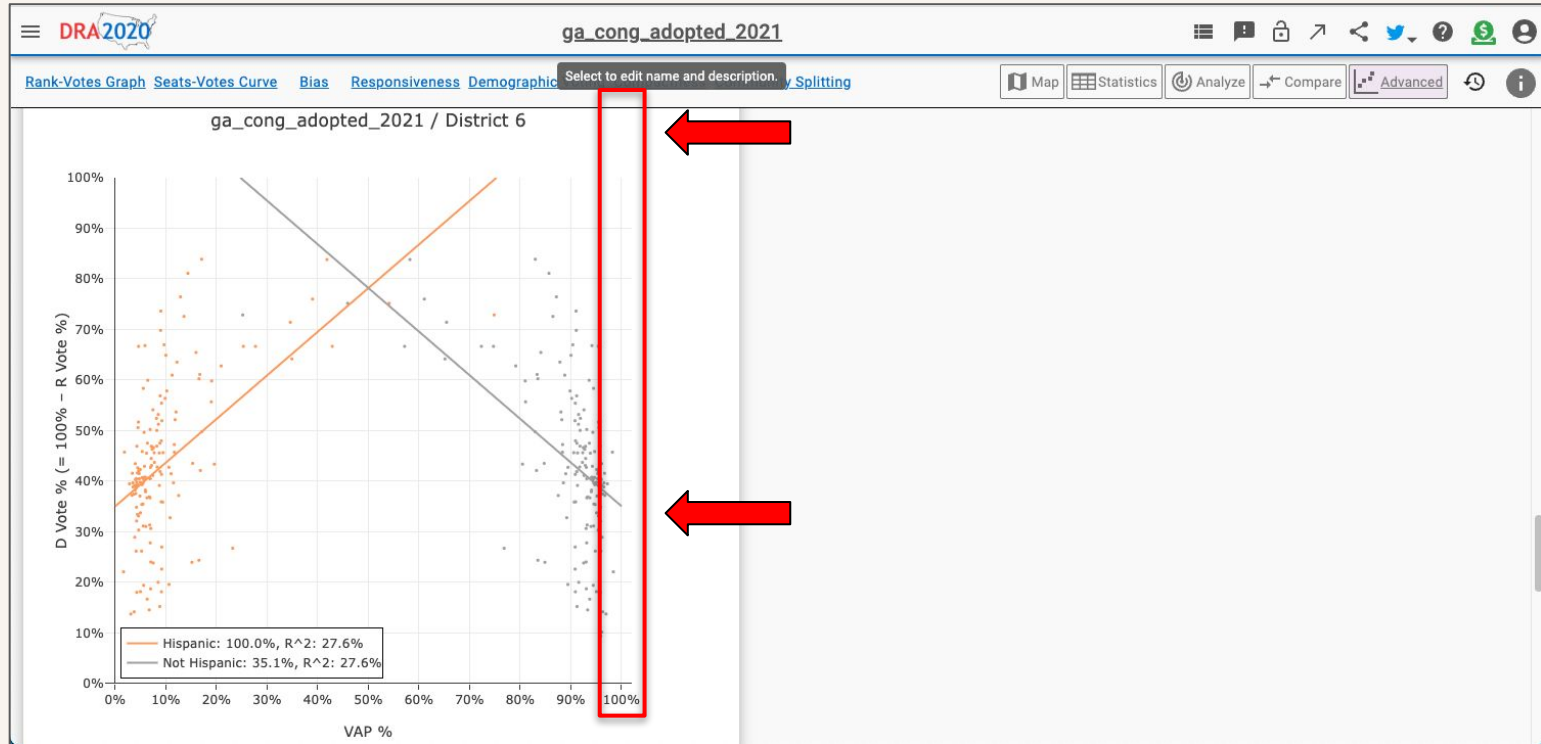
Analyzing Maps

- ◆ **Advanced:** contains a Demographic Voting Analysis
 - a. Select any racial/ethnic group to compare against White or all other groups
 - b. Within a district, it plots the % VAP (or CVAP) of your selected groups versus the % Democratic vote by precinct
 - c. It then calculates best fit lines and displays this data visually
 - d. It uses these best fit lines to estimate what % of the vote would be Democratic or Republican, if a group comprised 100% of a precinct, and then displays it in a table

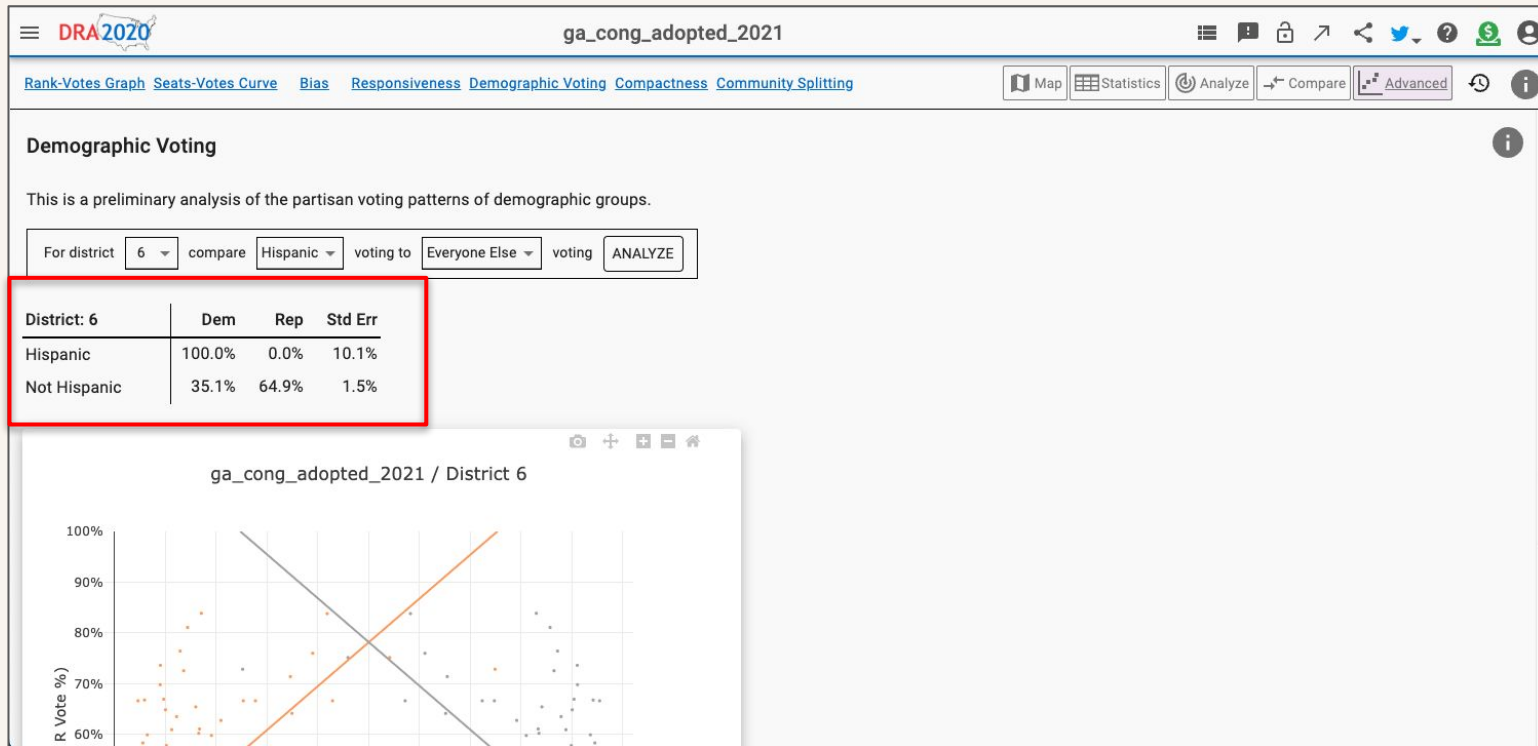
Analyzing Maps



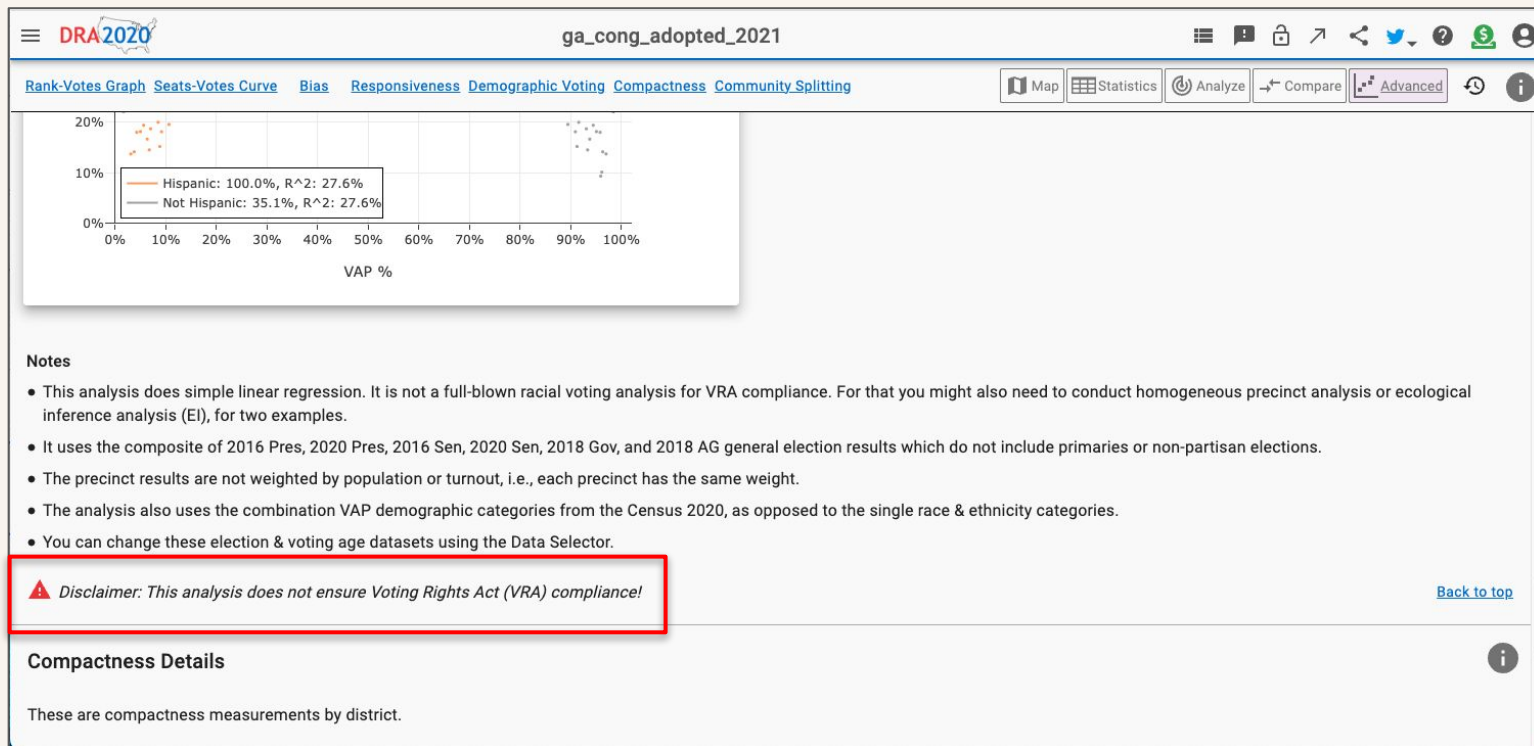
Analyzing Maps



Analyzing Maps



Analyzing Maps



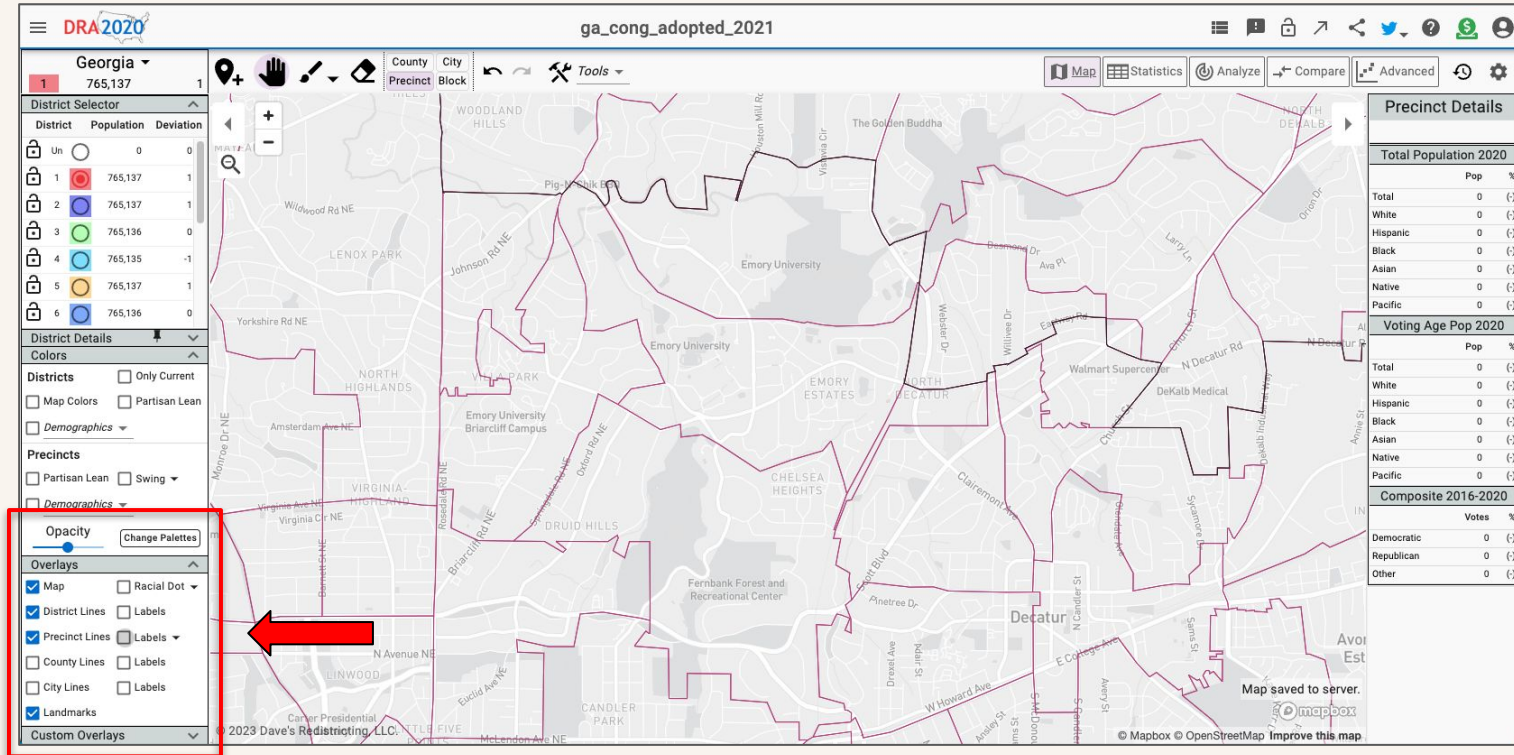
Visualizing Race/Ethnicity

- ◆ **Precinct Labels:** show summary statistics for race/ethnicity by precinct
- ◆ **Precincts/Districts color by Demographics:** change the coloring of precincts or districts to reflect demographics of your choice
- ◆ **Racial Dot Plot:** easily visualize the racial composition of districts and other boundaries

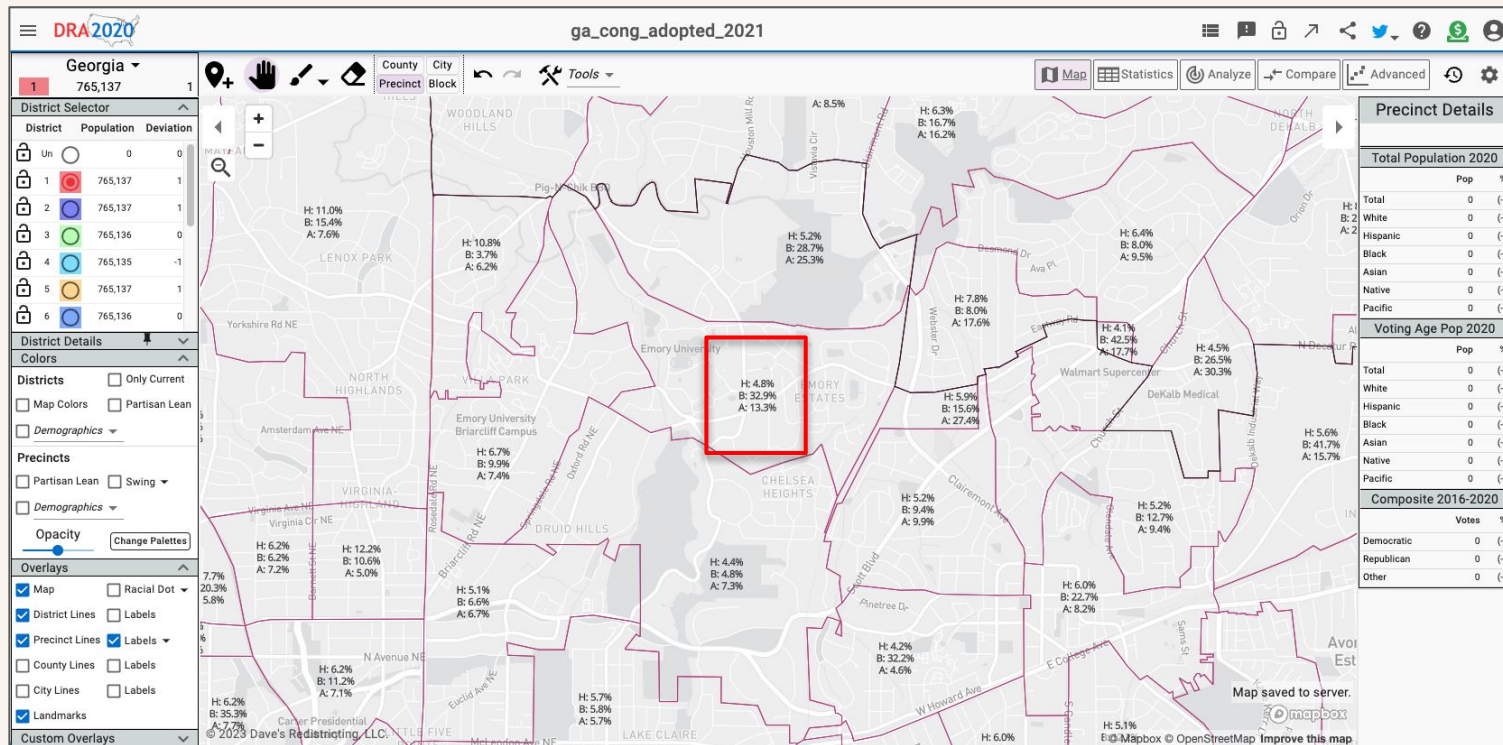
Visualizing Race/Ethnicity

- ◆ **Precinct Labels:** show summary statistics for race/ethnicity by precinct
 - a. Go to Overlays on the left-hand side
 - b. Select the second “Labels” (with the down arrow)
 - c. Select up to 3 labels
 - d. Optional: Select “Show values (except totals) as percentages”

Visualizing Race/Ethnicity



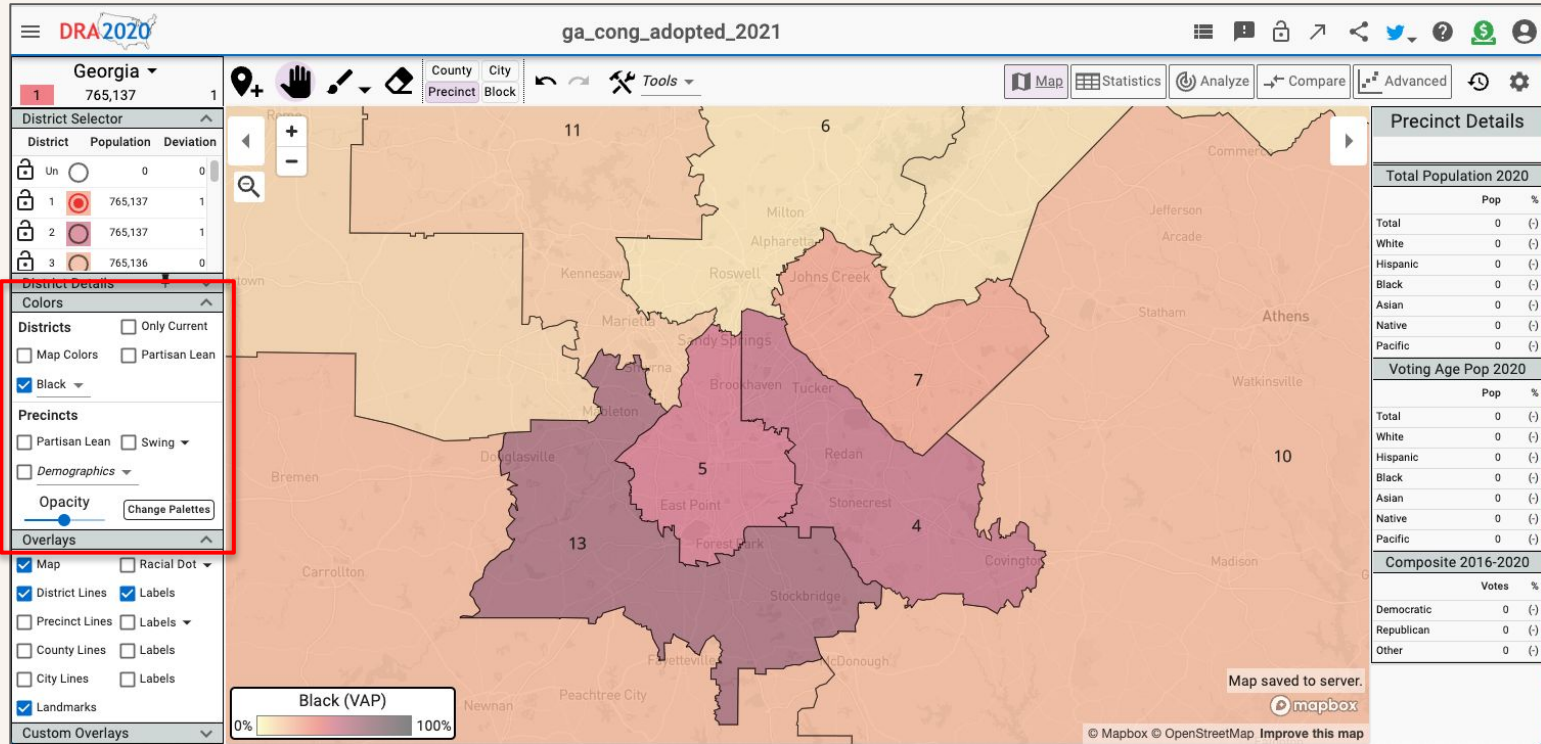
Visualizing Race/Ethnicity



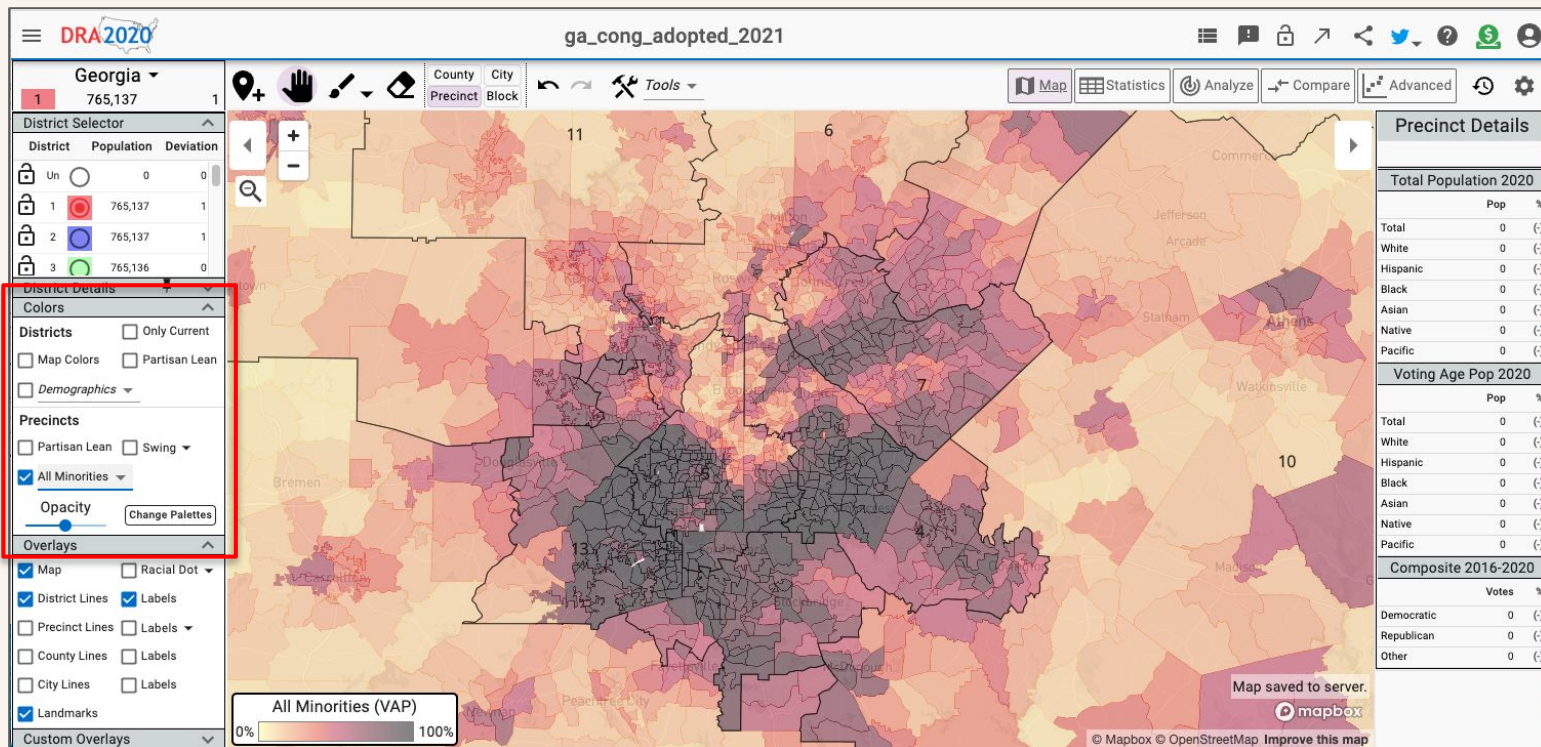
Visualizing Race/Ethnicity

- ◆ **Precincts/Districts color by Demographics:** change the coloring of precincts or districts to reflect demographics of your choice
 - a. Go to Colors on the left-hand side
 - b. Select “Demographics” (with the down arrow) under Districts (top) or Precincts (bottom)
 - c. Select the racial or ethnic group of your choice, or all minorities

Visualizing Race/Ethnicity



Visualizing Race/Ethnicity



Visualizing Race/Ethnicity

- ◆ **Racial Dot Plot:** easily visualize the racial composition of districts and other boundaries
 - a. Each dot represents a single person
 - b. The dot is generated randomly within the census block each person was counted in
 - c. As a result, dots might fall in unexpected places (bodies of water)

Visualizing Race/Ethnicity

◆ Racial/ethnic groups are coded as:

a. White: Blue

b. Black: Green

c. Asian: Red

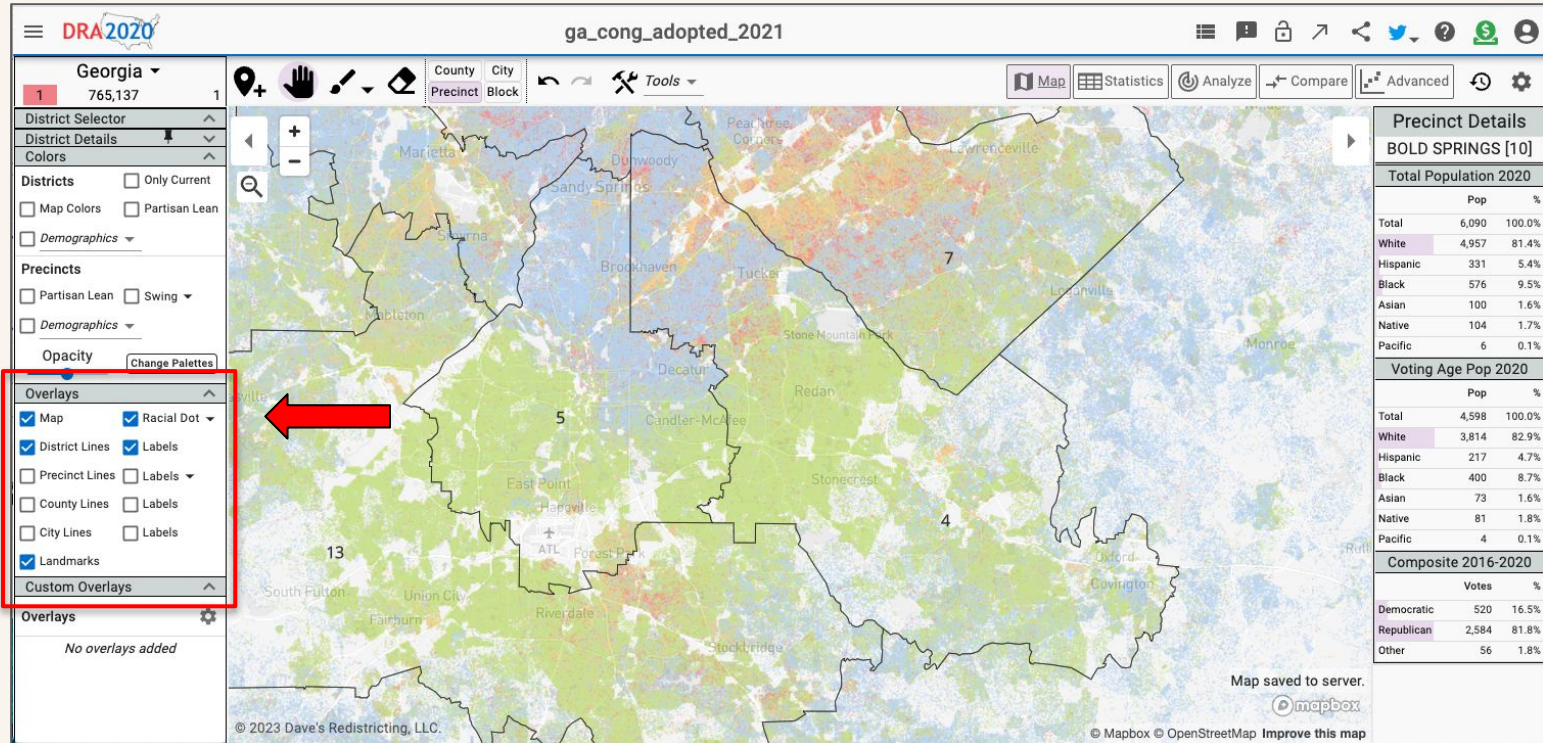
d. Hispanic: Orange

e. Other: Brown

Visualizing Race/Ethnicity

- ◆ **Racial Dot Plot:** easily visualize the racial composition of districts and other boundaries
 - a. Go to Overlays
 - b. Select Racial Dot Plot
 - c. Select the down arrow to select Total Population or Voting Age Population (VAP), and change the opacity

Visualizing Race/Ethnicity



Final Takeaways

- ◆ When drawing or analyzing maps, be sure you understand how the category of race and/or ethnicity you are looking at is defined
 - a. For example, does “Native American” mean “Native American alone,” or “any part Native American,” or something else?
- ◆ Race/ethnicity should not be the predominant factor in drawing, but should be considered for compliance with the Voting Rights Act (VRA)
- ◆ Analysis metrics in DRA provide useful information, but should not be interpreted as a measure of VRA compliance. Read more about DRA and the VRA [here](#).

Questions?

