

Expert Report of William S. Cooper

Pendergrass v. Raffensperger, No. 1:21-CV-05339-SCJ (N.D. Ga.)

December 12, 2023

Bill Cooper

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

COAKLEY PENDERGRASS et al.,

Plaintiffs,

v.

BRAD RAFFENSPERGER, in his official
capacity as the Georgia Secretary of State,
et al.,

Defendants.

CIVIL ACTION FILE

NO. 1:21-CV-05339-SCJ

DECLARATION OF WILLIAM S. COOPER

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

I. INTRODUCTION

1. My name is William S. Cooper. I have a B.A. in Economics from Davidson College. As a private consultant, I serve as a demographic and redistricting expert for the Plaintiffs.

2. I testified at trial as an expert witness on redistricting and demographics on behalf of the plaintiffs in this lawsuit in February 2022 (preliminary injunction) and at the full trial in September 2023.

3. To date, following the release of the 2020 Decennial Census, I have testified at trial in federal court in nine Section 2 redistricting cases, including *Allen v. Milligan*. Since my September 2023 appearance in this case, I testified at trial on November 26, 2023 in *Nairne v. Ardoin*, a Section 2 lawsuit challenging post-2020 House and Senate districts in Louisiana. I was also deposed on December 5, 2023 in *NAACP v. Reeves*, a Section 2 lawsuit challenging post-2020 House and Senate districts in Mississippi.

II. PURPOSE OF REPORT

4. The Defendants' 2023 Congressional Plan ("2023 Plan") was passed by the Georgia Legislature on December 7, 2023 and signed into law by Governor Kemp on December 8, 2023.

5. The Plaintiffs' attorneys asked me to assess the 2023 Plan vis-à-vis the 2021 Enacted Plan ("2021 Plan") and the Plaintiffs' Illustrative Plan presented at trial, including a comparison of the three plans along standard redistricting metrics.

III. SUMMARY CONCLUSION

6. This Court's October 26, 2023 order required the Defendants to create an additional majority-Black¹ Congressional district in western Metro Atlanta.

¹ In this declaration, "African American" refers to persons who are Single Race Black or Any Part Black (i.e., persons of two or more races and some part Black), including Hispanic Black. In some instances (e.g., for historical comparisons), numerical or percentage references identify Single Race Black as "SR Black" and Any Part Black as "AP Black." Unless noted otherwise, "Black" means AP Black. It is my understanding that following the U.S. Supreme Court decision

Specifically, the court ruled that an area comprised of five CDs -- 3, 6, 11, 13, and 14 -- in the 2021 Enacted Plan violates Section 2. Furthermore, the Court's order instructed that the "[t]he State cannot remedy the Section 2 violations described herein by eliminating minority opportunity elsewhere." (pp. 509-510)

7. Rather than limiting the bulk of the changes in the congressional map to the Section 2 violation area defined by the Court, the 2023 Plan reaches well outside that area to redraw congressional districts in other parts of the state. The 2023 Plan changes nine of the 14 districts, as compared to the 2021 Plan.

8. The 2023 Plan adds a new majority-Black district in western Metro Atlanta in Cobb, Fulton, Douglas, and Fayette Counties but also abolishes majority-minority CD 7 in Gwinnett and Fulton Counties under the 2021 Plan.

9. By contrast, the Illustrative Plan changes the boundaries of just eight of the 2021 Plan districts. The Illustrative Plan creates a new majority-Black District 6 in Cobb, Fulton, Douglas, and Fayette Counties, with no change to CD 7 under the 2021 Plan, which lies entirely outside the Section 2 violation area encompassed by the six CDs noted *supra*.

10. In sum, the 2023 Plan shifts population around to create new majority-Black CD 6, while simultaneously eliminating existing majority-minority CD 7 under the 2021 Plan and the Illustrative Plan.

in *Georgia v. Ashcroft*, 539 U.S. 461 (2003), the "Any Part" definition is an appropriate Census classification to use in most Section 2 cases.

IV. ANALYSIS

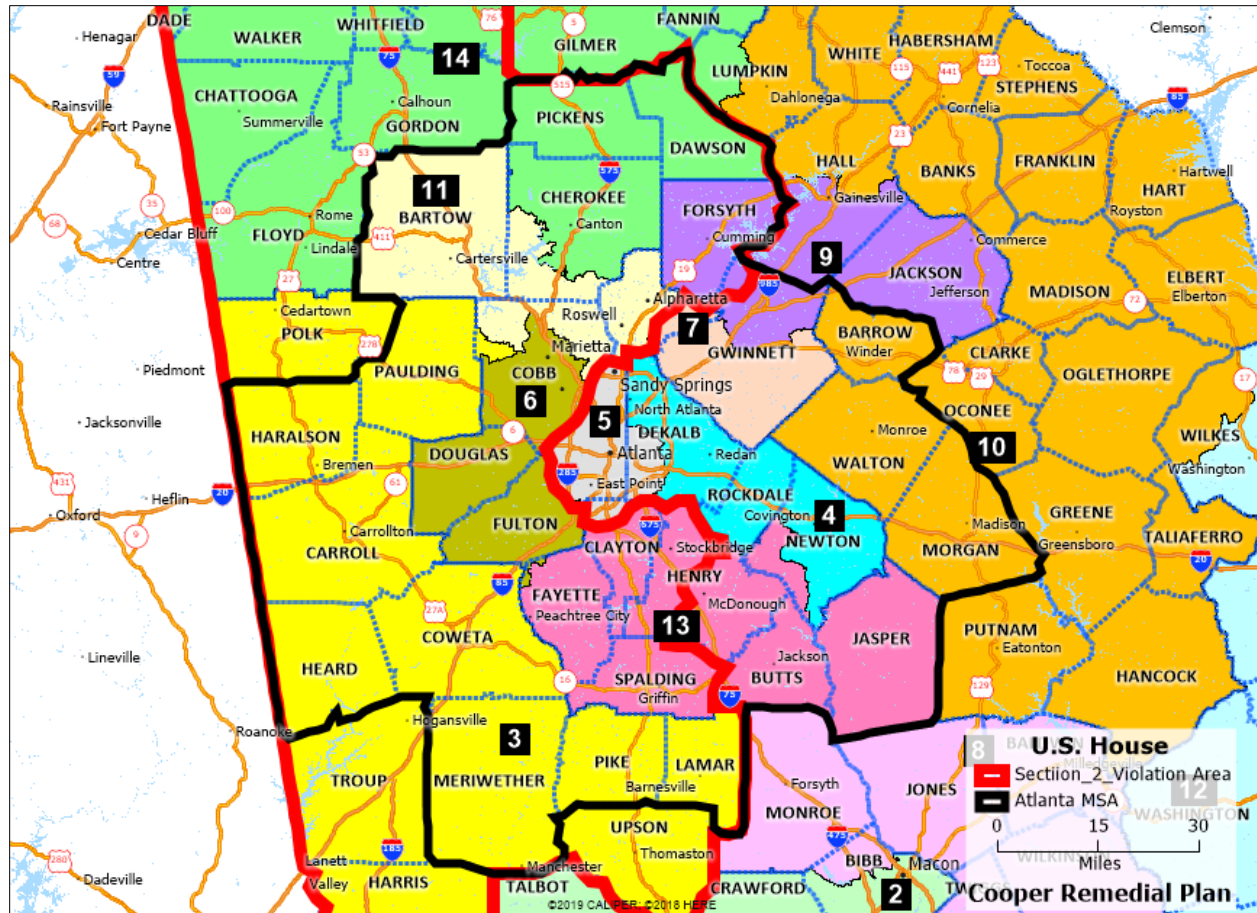
A. Vote Dilution Overview – Inside & Outside the Section 2 Violation Area

11. **Exhibit A-1** summarizes population by race/ethnicity, voting age, and citizen voting age under the Illustrative Plan. **Exhibit A-2** (2023 Plan) and **Exhibit A-3** (2021 Plan) provide the same demographic breakout.

12. The map in **Figure 1** depicts the Atlanta MSA (black lines) under the Illustrative Plan, with an overlay of the Section 2 violation area (red lines).

District 6, the additional majority-Black district, is anchored in Cobb, Douglas, and Fulton Counties, along with a small part of Fayette County. District 7 is in Gwinnett and Fulton Counties. District 7 remains outside the violation area and is exactly the same as CD 7 under the 2021 Plan. Gwinnett County encompasses CD 7 and CD 9 to the north.

Figure 1
Illustrative Plan: Atlanta MSA (Black lines)
Sec. 2 Violation Area (Red lines – partial display)



13. As the population and CVAP summaries in the Exhibit A series make clear, CD 7 in the 2021 Enacted Plan is a majority-minority district based on VAP (67.22% minority) and based on CVAP (58.21% minority).² CD 7 in the Enacted

² The citizen voting age population (“CVAP”) reported herein are based on block group level estimates published by the U.S. Census Bureau’s American Communities Survey (“ACS”). In the summary population exhibits that I have prepared for each plan, I report the “NH DOJ Black CVAP” metric. The “NH DOJ Black CVAP” category includes voting age citizens who are either non-Hispanic (“NH”) single-race (“SR”) Black or NH Black and White. An “Any Part NH Black CVAP” category cannot be calculated from the 5-Year ACS Census Bureau Special Tabulation.

The most current 5-year ACS data available is from the 2017-2021 ACS Special Tabulation, with a survey midpoint of July 1, 2019. It is available at:

<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>.

Plan is a majority-minority congressional district in Metro Atlanta, where the minority population has increased by 1.74 million persons since 2000³—accounting for two thirds (68.9%) of the statewide population increase this century—and where, according to the Governor’s Office of Planning and Budget, the minority population will continue to increase over the course of this decade.⁴

14. The Illustrative Plan preserves CD 7 as a majority-minority district. Thus, the Illustrative Plan contains six majority-minority districts – one more than the 2021 Plan and one more than the 2023 Plan.

15. By contrast, under the 2023 Plan, the minority CVAP in CD 7 drops to 23%. And CD 7’s Gwinnett County neighbor, CD 9, stretches north all the way from suburban Gwinnett County to rural Rabun Gap and the North Carolina state line. CD 9 has a minority CVAP of just 27.44%.

16. The map in **Figure 2** depicts the Atlanta MSA (black lines) under the 2023 Plan, with an overlay of the Section 2 violation area (red lines). The Figure 2 map shows how the area encompassed by CD 7 under the 2021 Plan has been modified in an area outside the Section 2 violation area. Gwinnett County— a

The block-level disaggregation is based on a publicly available file from the Redistricting Data Hub. It is available at:

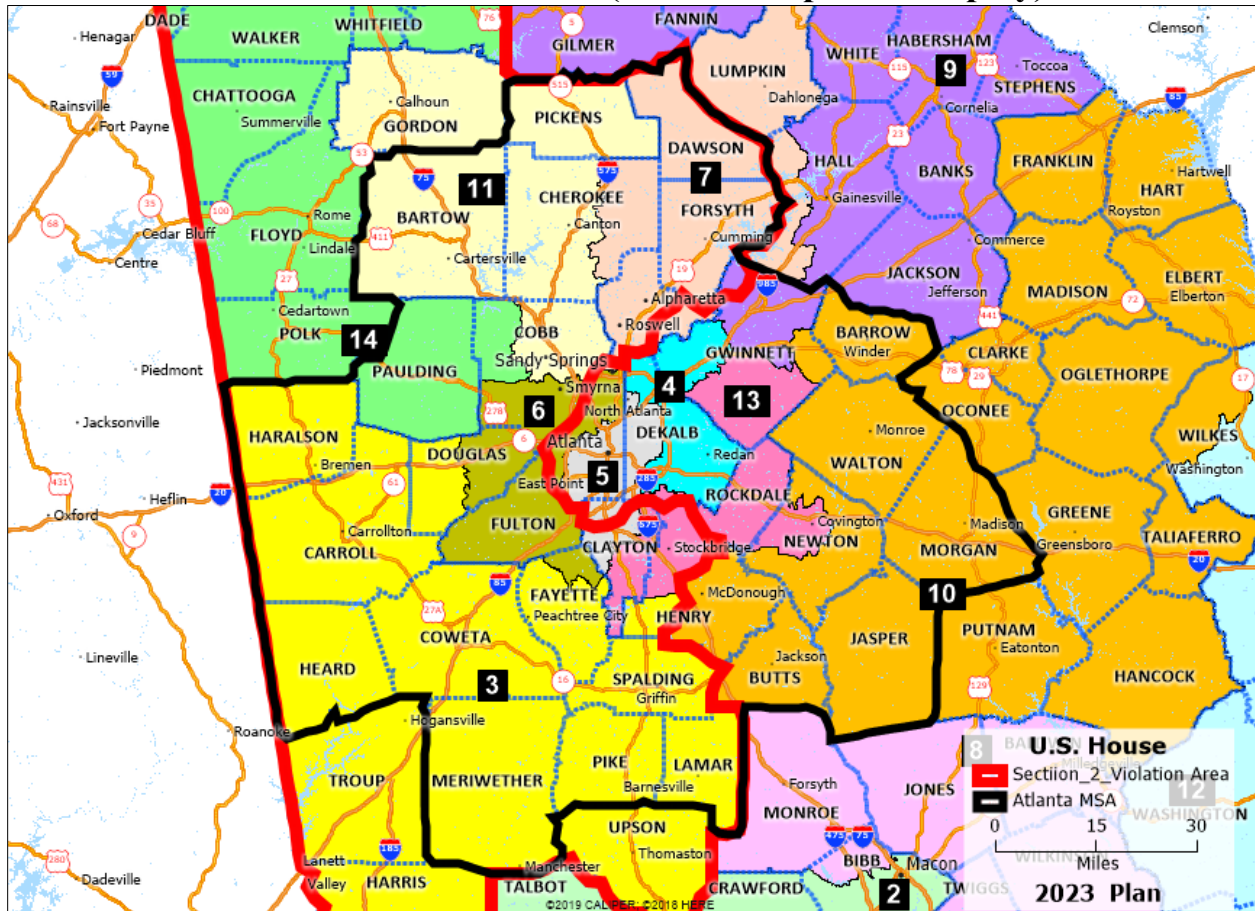
<https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-2020-block-level-2021/>.

³ See Figure 4, p.12, Cooper Declaration, Dec.4, 2023.

majority-minority county—is split into four pieces – CDs 4, 9, 10, and 13. In effect, the 2023 Plan replaces a 4-way split in diverse Cobb County in the 2021 Plan with a new 4-way split in diverse Gwinnet County.

Figure 2

2023 Plan: Atlanta MSA (Black Lines)
Section 2 Violation Area (Red lines – partial display)



17. County level population assignments by district are found in **Exhibit B-1** (Illustrative Plan), **Exhibit B-2** (2023 Enacted Plan) and **Exhibit B-3** (2021 Enacted Plan). **Exhibit B-4** is a table that reports 2020 county-level population by race and ethnicity.

18. Under the 2023 Plan, nearly half of CD 9's population (321,360, of whom 183,335 (57.05%) are non-white) comes from Gwinnett County (see **Exhibit B-2**, p 18). This part of the 2023 Plan map in Gwinnett County thus “cracks” the

minority population from what used to be a majority-minority district into a majority white district.

19. Under the 2023 Plan, the bulk of the minority population in the Gwinnett County portion of prior CD 7 is assigned to CD 13, which wraps around the core of Metro Atlanta all the way to Clayton-Fayette-Spalding county line (see **Exhibit B-2**, p 28). This part of the 2023 Plan in Gwinnett County demonstrates “packing” of the minority population into an already existing majority-minority district.

20. As shown in **Exhibit C-1**, 2021 CD 7 is not part of the Section 2 violation area. But the 2023 Plan modifies CD 7 so that 74% of its population comes from inside the Section 2 violation area. The remaining 26% of its population comes from outside the Section 2 violation area – 2021 CDs 5, 7, and 9. Under the 2023 Plan CD 7, both the Section 2 violation area component and the non-Section 2 violation area component are majority-White – resulting in converting District 7 from a majority-minority district in the 2021 Plan to a majority-White district in the 2023 Plan.

21. As shown in **Exhibit C-2**, majority-Black District 6 under the Illustrative Plan is created entirely from the Section 2 violation area in the 2021 Plan. By comparison, under the 2023 Plan, only about 75% of District 6 comes from the Section 2 violation area, including part of CD 3 running from suburban Cobb County all the way to the Tennessee line and suburban Chattanooga. The remaining 25% draws from Enacted 2021 majority-Black District 5, which is unchanged in the Illustrative Plan and wholly outside the Section 2 violation area.

22. Furthermore, as shown in **Exhibit C-2**, the 2023 Plan excludes 51,717 Black voters in the vote dilution area who would have had an opportunity to elect their preferred candidates in Plaintiffs' Illustrative CD 6 but are not included in CD 6 (or any majority-minority district) under the 2023 Plan.

23. **B. Supplemental Plan Metrics**

24. **Exhibit D-1** contains a map packet included with my December 5, 2022 Declaration depicting the Illustrative Plan.

25. **Exhibit D-2** contains a map packet depicting the 2023 Enacted Plan, with corresponding Census 2020 statistics, prepared by the Georgia Legislative & Congressional Reapportionment Office (“GLCRO”). **Exhibit D-3** contains a map packet depicting the 2021 Enacted Plan, with corresponding Census 2020 statistics, prepared by GLCRO.

26. To view the Illustrative Plan core components built from districts in the 2021 Plan, refer to **Exhibit E-1** – “Core Constituencies”. Boundaries for six of the 14 districts in the 2021 Plan are the same under the Illustrative Plan –CDs 1, 2, 5, 7, 8, and 12.

27. To view the 2023 Plan core components built from districts in the 2021 Plan, refer to **Exhibit E-2** – “Core Constituencies”. Boundaries for five of the 14 districts in the 2021 Plan are the same under the 2023 Plan –CDs 1, 2, 3, 8, and 12.

28. Additional redistricting metrics comparing the Illustrative Plan with the 2023 Plan are described in below.

(a) Compactness

29. **Exhibit F-1** contains district-by-district compactness scores generated by Maptitude for all districts in the Illustrative Plan, alongside scores for the 2023 Plan (**Exhibit F-2**) and the 2021 Plan (**Exhibit F-3**)

30. The table in **Figure 3** (condensed from the Exhibit F series) reports mean and minimum Reock⁵ and Polsby-Popper⁶ scores.

31. On balance, the Illustrative Plan scores higher than the 2023 Plan according to the widely referenced Reock and Polsby-Popper measures.

32. As reported in Figure 3, the Illustrative Plan has higher compactness scores in both CD 6 and CD 7 than the 2023 Plan.

⁵ “The Reock test is an area-based measure that compares each district to a circle, which is considered to be the most compact shape possible. For each district, the Reock test computes the ratio of the area of the district to the area of the minimum enclosing circle for the district. The measure is always between 0 and 1, with 1 being the most compact. The Reock test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.” Caliper Corporation, *Maptitude For Redistricting* Software Documentation.

⁶ The Polsby-Popper test computes the ratio of the district area to the area of a circle with the same perimeter: $4\pi \text{Area}/(\text{Perimeter}^2)$. The measure is always between 0 and 1, with 1 being the most compact. The Polsby-Popper test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan. See Caliper Corporation, *Maptitude For Redistricting* Software Documentation.

Figure 3
Compactness Scores

	Reock		Polsby-Popper	
	Mean	Low	Mean	Low
Cooper Illustrative Plan	.43	.28	.27	.18
Cooper Illustrative CD 6	.45	NA	.27	NA
Cooper Illustrative CD 7	.50	NA	.39	NA
2023 Plan	.42	.29	.24	.13
2023 CD 6	.40	NA	.25	NA
2023 CD 7	.34	NA	.24	NA
2021 Plan	.44	.31	.27	.16

(b) Political Subdivision Splits

33. This section summarizes Maptitude generated reports for splits of key geographic areas in Georgia—from VTDs to regional commissions—under the Illustrative Plan, the 2023 Plan, and the 2021 Plan.

34. **Exhibit G-1** contains a county and VTD split report for the Illustrative Plan. **Exhibit G-2** reports on the same for the 2023 Plan. **Exhibit G-3** reports on the 2021 Plan.

35. **Exhibit H-1** contains a split report for all 531 municipalities (including the 53 cities and towns that spill over into another county) for the Illustrative Plan. **Exhibit H-2** reports on the same for the 2023 Plan. **Exhibit H-2** reports on the 2021 Plan.

36. The table in **Figure 4** summarizes split counts for counties and 2020 VTDs. The Illustrative Plan scores better than the 2023 Plan on county and municipal splits.

Figure 4**County, VTD, and Municipal Splits**

	Split Counties*	County Splits*	2020 VTD Splits*	Split Cities/ Towns[#]	City/ Town Splits*
Illustrative Plan	15	18	43	37	78
2023 Plan	16	22	37	43	91
2021 Plan	15	21	46	43	91

*Excludes unpopulated areas

[#] Out of 531 municipalities (calculated by subtracting the number of whole cities in the Maptitude report from 531)

(c) Regional Splits

37. The table in **Figure 5** shows regional splits, defined by the 12 state-designated regional commissions and the 15 federally-designated metropolitan statistical areas (“MSAs”).⁷ Regional split reports are found in the **Exhibit I** series.

38. The Illustrative Plan scores higher than the 2023 Plan in two of the three categories, with the same number of whole MSAs.

⁷ <https://www2.census.gov/geo/pdfs/reference/GARM/Ch13GARM.pdf>

Figure 5
Split Regional Commissions and MSAs

	Regional Commission Splits	Whole MSAs	MSA Splits
Illustrative Plan	38	8	12
2023 Plan	39	8	22
2021 Plan	37	9	20

#

I reserve the right to continue to supplement my report in light of additional facts, testimony, and/or materials that might come to light.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: December 12, 2023

WILLIAM S. COOPER

Population Summary Report

Georgia U.S. House -- CVAP -- Illustrative Plan

District	% NH Single-Race Black CVAP*	% NH DOJ Black CVAP**	% Latino CVAP	% SR NH White CVAP	% SR NH Asian CVAP	% Minority CVAP
001	29.01%	29.52%	4.69%	62.75%	1.68%	37.25%
002	49.39%	49.830%	3.43%	44.46%	1.25%	55.54%
003	19.96%	20.36%	3.79%	73.64%	1.34%	26.36%
004	55.76%	56.49%	4.13%	34.57%	3.71%	65.43%
005	50.36%	51.05%	3.69%	40.51%	3.36%	59.49%
006	51.39%	52.34%	6.45%	37.69%	2.35%	62.31%
007	32.39%	33.16%	11.55%	42.19%	10.09%	57.81%
008	30.41%	30.80%	4.07%	62.88%	1.52%	37.12%
009	11.40%	11.79%	9.71%	70.03%	7.91%	29.97%
010	15.03%	15.42%	4.14%	77.83%	1.79%	22.17%
011	12.80%	13.34%	6.02%	74.62%	5.34%	25.38%
012	36.67%	37.37%	3.64%	56.34%	1.64%	43.66%
013	50.07%	50.97%	5.40%	39.38%	3.02%	60.62%
014	4.89%	5.27%	5.91%	86.61%	0.95%	13.39%

CVAP Source:

* 2017-2021 ACS Special Tabulation <https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-block-lev>

Note: Citizen Voting Age Population (CVAP) <https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-t>

* Single race NH Black CVAP, **NH DOJ Black= SR NH Black CVAP+SR NH Black/White CVAP

el-2020/
block-level-2020/

Population Summary Report

Georgia U.S. House -- 2020 Census -- Illustrative Plan

District	18+ Pop	18+ SR Black	% 18+ SR Black	18+ AP Black	% 18+ AP Black	18+ Latino	% 18+ Latino	NH18_BLK	% NH18_BLK	NH18 ASN	% NH18 ASN	18+ NH White	% 18+ NH White
001	589266	157770	26.77%	166025	28.17%	39938	6.78%	155810	26.44%	13909	2.36%	355947	60.41%
002	587555	281564	47.92%	289612	49.29%	30074	5.12%	279765	47.62%	8281	1.41%	251047	42.73%
003	580018	112454	19.39%	118709	20.47%	31852	5.49%	111318	19.19%	8692	1.50%	405926	69.99%
004	590640	298897	50.61%	311670	52.77%	58947	9.98%	295959	50.11%	35933	6.08%	177832	30.11%
005	621515	295885	47.61%	308271	49.60%	41432	6.67%	293005	47.14%	28127	4.53%	235652	37.92%
006	587247	282051	48.03%	294976	50.23%	71798	12.23%	279023	47.51%	18798	3.20%	192370	32.76%
007	566934	157650	27.81%	169071	29.82%	120604	21.27%	155029	27.35%	84873	14.97%	185838	32.78%
008	585857	170421	29.09%	175967	30.04%	35732	6.10%	168984	28.84%	9389	1.60%	354572	60.52%
009	564244	59821	10.60%	65790	11.66%	83453	14.79%	58802	10.42%	66506	11.79%	335720	59.50%
010	602127	81481	13.53%	86178	14.31%	39876	6.62%	80886	13.43%	12594	2.09%	447109	74.25%
011	588795	72303	12.28%	80507	13.67%	55168	9.37%	71112	12.08%	41604	7.07%	393920	66.90%
012	588119	207872	35.35%	215958	36.72%	28628	4.87%	206189	35.06%	11446	1.95%	321394	54.65%
013	576337	283204	49.14%	294669	51.13%	46150	8.01%	280414	48.65%	21384	3.71%	207154	35.94%
014	591620	27046	4.57%	30583	5.17%	59266	10.02%	26637	4.50%	6069	1.03%	477852	80.77%
Total	8220274	2488419	30.27%	2607986	31.73%	742918	9.04%	2462933	29.96%	367605	4.47%	4342333	52.82%