

## **RCV Analysis of Selected San Francisco Districts, November 2008**

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### **Background and summary**

In this report I examine selected RCV results for the November 2008 Supervisorial contests. Instead of doing a full rehash and analysis of each race, I focus on the choices made by voters, in order to better understand how voters perceived political races, ideological and identity politics, and the power of certain influences. Regardless on one's feeling on RCV, having a voter's record of three choices gives us a window on to how voters view candidate races that we wouldn't ordinarily have.

Here, I provide crosstabs and frequency tables for races in District 1, 3, 9, and 11 – all the districts in which there were RCV contests. DOE provided ballot image data for each district, but the races in D4, 5, and 7 weren't close (and only had a couple candidates running). Data were the final San Francisco Department of Elections ballot image data.<sup>1</sup>

In choosing one to three of several candidates in each race, voters had to weigh their identity, ideological, and endorsement preferences – and we see evidence of all three in the results. Many voters chose to vote “progressive” or “moderate” only<sup>2</sup>, while others, especially Chinese, stuck to ethnic identity vote slates<sup>3</sup>. It is also clear that in some parts of San Francisco, certain media outlets or endorsing organizations held a lot of sway. Finally, there was a subset of voters that didn't care about any of the above.

### **District map and names table**

Map 1 shows a San Francisco political district map for reference, along with selected neighborhoods. Table 1 shows all of the names and initials used in the tables for each district in this report.

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<sup>1</sup> Thanks to Steven Hill of New America Foundation and Steven Cary for the open-source code of converting raw ballot image data to usable data. Saved me a lot of time.

<sup>2</sup> I use these political ideology terms loosely, for lack of more comprehensive or even meaningful terms.

<sup>3</sup> The term “slate” is used to denote a single voter's 1-2-3 ballot choices

Map 1: San Francisco districts and neighborhoods

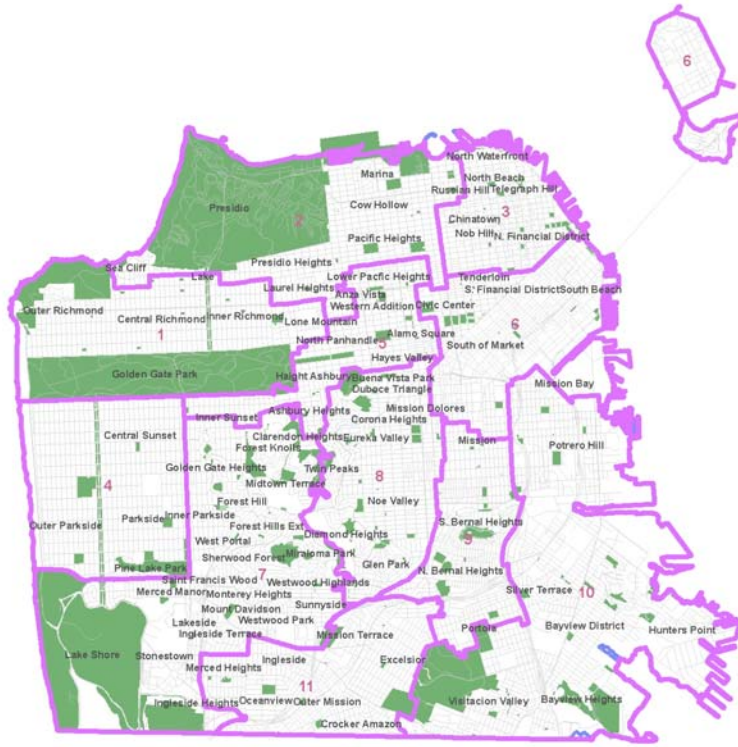


Table 1: Names and initials used in this report

ALL		D9	
WRITE-IN	WI	EVA ROYALE	ER
NULL	--	VERN MATHEWS	VM
OVER-VOTE (?)	++	MARK SANCHEZ	MS
<b>D1</b>		ERIC STOREY	ES
ERIC MAR	EM	TOM VALTIN	TV
ALICIA WANG	AW	DAVID CAMPOS	DC
JASON JUNGREIS	JJ	ERIC QUEZADA	EQ
BRIAN J. LARKIN	BL	<b>D11</b>	
SUE LEE	SL	JULIO RAMOS	JR
SHERMAN R. D'SILVA	SS	AHSHA SAFAI	AS
GEORGE FLAMIK	GF	MYRNA LIM	ML
FIDEL CHRYS GAKUBA	FG	ELI M. HORN	EH
NICHOLAS C. BELLONI	NB	JOHN AVALOS	JA
<b>D3</b>		MARY GOODNATURE	MG
DENISE MCCARTHY	DM	RANDY KNOX	RK
LYNN JEFFERSON	LJ	ADRIAN BERMUDEZ	AB
JOSEPH ALIOTO, JR.	JJ	A. JACKSON MATTESON	AM
MIKE DENUNZIO	MD		
TONY GANTNER	TG		
DAVID CHIU	DC		
CLAUDINE CHENG	CC		
WILMA PANG	WP		
MARK QUESSEY	MQ		

## D1

District 1 ended up being a race between Eric Mar, progressive member of the San Francisco Board of Education, and Sue Lee (moderate), formerly of the San Francisco Planning Commission. A third candidate, Alicia Wang, was relatively well-known but never gained a lot of traction. Mar was endorsed by the San Francisco Democratic Party, the *Bay Guardian*, and most of the other progressive organizations. Lee was endorsed by most of the center-left to moderate groups, like Alice, Wallenberg, Plan C, etc. Wang, although entering the race before Lee, received no significant first-choice endorsements.

Figure 1 shows the first choice versus second choice crosstab for all voters. Note 2867 voters didn't vote for a Supervisor in D1.<sup>4</sup> Things I see as relevant:

- 20% of Wang's votes went to Mar, 50% to Lee. 15% sole-voted for Wang<sup>5</sup>
- Almost identical numbers for Lee: Of the second choice votes of her supporters – 50% to Wang, 18% to Mar, 21% sole-voted
- Of Mar's supporters, **36%** sole-voted; 26% went to Wang, 25% went to Lee.

Mar's supporters by far were the most likely not to want anyone else; namely, a moderate. After the first-choice vote, support for Lee and Wang was pretty similar. Table 2 shows the top ten slate frequencies in D1.<sup>6</sup> Notice Mar was the first choice in the top three, and his sole-vote slate was the most of any slate by a lot. This was the *Bay Guardian* Slate.<sup>7</sup>

We can conclude that people who supported Mar felt more strongly about him than supporters of Lee or Wang felt about them, at least in the first choice. This is what won the race for Mar. The fact 20% of Wang's second-choice votes went to Mar<sup>8</sup> allowed Mar to win in the RCV runoff (other than the obvious he got more first-choice votes). Had Wang been more popular than Lee in the first round, and their roles were reversed, the results probably would have ended similarly, though I suspect Mar's victory margin would have been a little larger. Suffice to say, had there been a true runoff given the actual results we see, Lee would have defeated Mar. Moreover, had Wang not been in the race, Lee probably would have won; however, given the low first-choice total for Wang, it is unlikely (though not impossible) she would have defeated Mar without Lee in the race.<sup>9</sup>

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<sup>4</sup> Defined by null and over-voters

<sup>5</sup> 'Sole' is defined as bullet voting – same candidate three times – or voting for someone first and then no one else.

<sup>6</sup> These tables omit people who didn't vote for a Supervisor at all.

<sup>7</sup> This will be a recurring theme – the percentage of 'I only vote *Bay Guardian*' voters per district.

<sup>8</sup> The 20% mark is surprisingly consistent for 1-2 combinations of political 'enemies', through districts and through years.

<sup>9</sup> I did look at demographics, and the most important correlator – by far – was % renting per precinct, where Mar did the best. Looking at % Asian, only Wang has a somewhat strong overall positive correlation, indicating almost all of her support was Asian.



**Table 2: Top ten D1 slate frequencies**

Slate	Count	Frequency	Notes <sup>10</sup>
EM -- --	3340	11.5%	<i>Bay Guardian</i> - DCCC
EM AW SL	1728	6.0%	Mixed
EM SL AW	1613	5.6%	Mixed
SL AW --	1474	5.1%	Moderate
SL -- --	1429	4.9%	Moderate-sole
SL AW EM	1292	4.5%	Mixed
SL EM AW	1059	3.7%	Mixed
AW SL EM	728	2.5%	Mixed
EM EM EM	720	2.5%	<i>Bay Guardian</i> - DCCC
EM SL --	651	2.2%	Mixed

### D3

This race was never as close as advertised, as David Chiu won easily over a crowded field of folks from all over the ideological and identity spectrum. Chiu, the most liberal of the main candidates, ran a strong field campaign and gathered support from many parts of the district. He had the Democratic Party endorsement (though McCarthy got a second-choice nod) and most of the other progressive endorsements. Joe Alioto Jr and Claudine Cheng split many of the moderate endorsements, though Alioto was more of a target from progressive campaign workers and was seen as the moderate frontrunner.

Figure 3 shows the first choice versus second choice crosstab for all voters. Note 2847 voters didn't vote for a Supervisor in D1. Things I see as noteworthy:

- 21% of Alioto's supporters sole-voted and 19% of Chiu's supporters sole-voted. Interestingly, the largest sole-vote went to Republican Mike DiNunzio.
- 50% of Chiu's second choice votes went to Claudine Cheng, 31% of Cheng's votes went to Chiu, showing some non-ideological Asian strength. 13% of Chiu's second-choice votes went to Alioto.
- 19% of Alioto's second-choice votes went to Chiu, the most of any other candidate.<sup>11</sup>
- 32% of Chiu's second-choice votes went to fellow liberal Denise McCarthy (the most of his). Of McCarthy's second choice votes, they split somewhat evenly among Chiu (24%), Lynn Jefferson (19%), and Alioto (19%).

There were clearly many voter strategies occurring simultaneously – they looked at race, politics, and to a much lesser extent, gender. The frequency of slates reveal collections of identity voting based on the above (Table 3). Note the most frequent slate was the “progressive” slate, with Chiu, McCarthy, and Tony Gantner. This was the *Bay Guardian* slate. Second was the Chiu sole-vote, and third was the Asian slate vote with Chiu, Cheng, and Wilma Pang. There were a slew of other combinations, but notice how many fewer mixed slates there were with all the

<sup>10</sup> I'm not including Asian here since the top three finishers were all Asian

<sup>11</sup> See note 6



**Table 3: Top 15 slate frequencies in D3**

Slate	Count	Frequency	Notes
DC DM TG	1414	5.1%	SFBG
DC -- --	1385	5.0%	Progressive-sole
DC CC WP	1075	3.9%	Asian
JJ -- --	906	3.3%	Moderate-sole
DC DM --	612	2.2%	DCCC
DC DC DC	445	1.6%	Progressive
CC DC WP	407	1.5%	Asian
DC JJ DM	377	1.4%	Mixed
DC DM LJ	361	1.3%	Mixed (female?)
DC WP CC	355	1.3%	Asian
JJ JJ JJ	355	1.3%	Moderate-sole
DC DM JJ	352	1.3%	Mixed
JJ DC DM	333	1.2%	Mixed
DM -- --	291	1.1%	Progressive-sole
JJ DM LJ	267	1.0%	Mixed (female?)

potential identities in play. Also note that the first all-female slate (of more than one candidate) was tied for 47<sup>th</sup> in slate frequency, showing no strong all-female synergy.

In a true runoff, Chiu would have won easily. He had too much support from the Asian, non-Asian, and even non-progressive community.

## D9

District 9 saw three progressives battle it out, all of whom represented some different section of the left. Mark Sanchez was a Green who was the President of the Board of Education; David Campos was on the Police Commission and DCCC, and Eric Quezada was a housing activist close to Chris Daly. All three candidates had legitimate field campaigns, but Campos received the important SFBG and DCCC endorsements. Other neighborhood endorsements split among the three of them.

Figure 4 shows the first choice versus second choice crosstab for all voters. Note 2117 voters didn't vote for a Supervisor in D1. Some points:

- More of Campos' second choice votes went to Quezada (38%) than Sanchez (34%). About 14% of Campos voters sole-voted.
- Remarkably, Quezada second-choice votes tied between Campos and Sanchez (35%). About 17% of his voters sole-voted.
- 40% of Sanchez's vote went to Campos, 30% to Quezada. 15% of Sanchez voters sole-voted.

- Although Eva Royale did poorly, her second choice votes went to Sanchez (26%) and then Campos (19%). These were the two candidates who also did well in the more conservative Portola.<sup>12</sup>
- All in all, after the first choice was made, second-choice voting and preferences were extremely close among supporters of the three front-runners.

Table 4 shows the frequencies for the top 20 slates. The first thing that leaps out is that there wasn't a sole-vote slate until 7<sup>th</sup> place, showing that voters felt they had several good choices.<sup>13</sup> The *Bay Guardian* slate was the most frequent, where ten percent of voters chose this slate. Otherwise, the slates were pretty mixed.

A runoff would have been close between Campos and Sanchez. Incidentally, had the *Bay Guardian* endorsed Sanchez, he probably would have won. That may not have been enough for Quezada, however.

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<sup>12</sup> Sanchez also did best among higher-homeowning precincts, indicating he was the choice among more moderate voters in general. Latinos split their vote. This is reminiscent of how moderates put Ross Mirkarimi on their ballots (somewhere) in D5 in 2004.

<sup>13</sup> Even when adding the bullet vote plus one-choice-only slates, the Campos sole-vote was still 7<sup>th</sup> – 4.6% of the total.



Figure 3: D9 First-choice votes versus second-choice vote by individual district voters

Choice\_1 \* Choice\_2 Crosstabulation

		Choice_2										Total
		--	++	DC	EQ	ER	ES	MS	TV	VM	WI	
Choice_1 --	Count	2117	5	21	11	9	2	20	3	3	0	2191
	% within Choice_1	96.6%	.2%	1.0%	.5%	.4%	.1%	.9%	.1%	.1%	.0%	100.0%
	% within Choice_2	44.9%	3.0%	.3%	.2%	.4%	.2%	.3%	.2%	.5%	.0%	7.6%
	% of Total	7.3%	.0%	.1%	.0%	.0%	.0%	.1%	.0%	.0%	.0%	7.6%
++	Count	64	98	38	35	5	5	43	10	7	1	306
	% within Choice_1	20.9%	32.0%	12.4%	11.4%	1.6%	1.6%	14.1%	3.3%	2.3%	.3%	100.0%
	% within Choice_2	1.4%	59.0%	.6%	.5%	.2%	.6%	.7%	.8%	1.3%	2.6%	1.1%
	% of Total	.2%	.3%	.1%	.1%	.0%	.0%	.1%	.0%	.0%	.0%	1.1%
DC	Count	850	18	488	3577	622	178	3225	370	106	6	9440
	% within Choice_1	9.0%	.2%	5.2%	37.9%	6.6%	1.9%	34.2%	3.9%	1.1%	.1%	100.0%
	% within Choice_2	18.0%	10.8%	7.9%	52.7%	30.9%	21.3%	50.7%	29.7%	19.0%	15.4%	32.7%
	% of Total	2.9%	.1%	1.7%	12.4%	2.2%	.6%	11.2%	1.3%	.4%	.0%	32.7%
EQ	Count	501	16	1864	434	382	77	1864	148	45	6	5337
	% within Choice_1	9.4%	.3%	34.9%	8.1%	7.2%	1.4%	34.9%	2.8%	.8%	.1%	100.0%
	% within Choice_2	10.6%	9.6%	30.2%	6.4%	19.0%	9.2%	29.3%	11.9%	8.1%	15.4%	18.5%
	% of Total	1.7%	.1%	6.5%	1.5%	1.3%	.3%	6.5%	.5%	.2%	.0%	18.5%
ER	Count	218	9	347	266	129	130	470	126	135	0	1830
	% within Choice_1	11.9%	.5%	19.0%	14.5%	7.0%	7.1%	25.7%	6.9%	7.4%	.0%	100.0%
	% within Choice_2	4.6%	5.4%	5.6%	3.9%	6.4%	15.6%	7.4%	10.1%	24.2%	.0%	6.3%
	% of Total	.8%	.0%	1.2%	.9%	.4%	.5%	1.6%	.4%	.5%	.0%	6.3%
ES	Count	147	0	104	64	120	63	91	119	93	1	802
	% within Choice_1	18.3%	.0%	13.0%	8.0%	15.0%	7.9%	11.3%	14.8%	11.6%	.1%	100.0%
	% within Choice_2	3.1%	.0%	1.7%	.9%	6.0%	7.6%	1.4%	9.6%	16.7%	2.6%	2.8%
	% of Total	.5%	.0%	.4%	.2%	.4%	.2%	.3%	.4%	.3%	.0%	2.8%
MS	Count	687	13	3037	2265	570	168	423	365	86	2	7616
	% within Choice_1	9.0%	.2%	39.9%	29.7%	7.5%	2.2%	5.6%	4.8%	1.1%	.0%	100.0%
	% within Choice_2	14.6%	7.8%	49.2%	33.4%	28.4%	20.1%	6.7%	29.3%	15.4%	5.1%	26.4%
	% of Total	2.4%	.0%	10.5%	7.8%	2.0%	.6%	1.5%	1.3%	.3%	.0%	26.4%
TV	Count	73	4	227	106	104	91	142	51	59	0	857
	% within Choice_1	8.5%	.5%	26.5%	12.4%	12.1%	10.6%	16.6%	6.0%	6.9%	.0%	100.0%
	% within Choice_2	1.5%	2.4%	3.7%	1.6%	5.2%	10.9%	2.2%	4.1%	10.6%	.0%	3.0%
	% of Total	.3%	.0%	.8%	.4%	.4%	.3%	.5%	.2%	.2%	.0%	3.0%
VM	Count	52	2	42	27	69	120	79	52	23	0	466
	% within Choice_1	11.2%	.4%	9.0%	5.8%	14.8%	25.8%	17.0%	11.2%	4.9%	.0%	100.0%
	% within Choice_2	1.1%	1.2%	.7%	.4%	3.4%	14.4%	1.2%	4.2%	4.1%	.0%	1.6%
	% of Total	.2%	.0%	.1%	.1%	.2%	.4%	.3%	.2%	.1%	.0%	1.6%
WI	Count	7	1	4	3	0	0	0	0	1	23	39
	% within Choice_1	17.9%	2.6%	10.3%	7.7%	.0%	.0%	.0%	.0%	2.6%	59.0%	100.0%
	% within Choice_2	.1%	.6%	.1%	.0%	.0%	.0%	.0%	.0%	.2%	59.0%	.1%
	% of Total	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.1%	.1%
Total	Count	4716	166	6172	6788	2010	834	6357	1244	558	39	28884
	% within Choice_1	16.3%	.6%	21.4%	23.5%	7.0%	2.9%	22.0%	4.3%	1.9%	.1%	100.0%
	% within Choice_2	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	16.3%	.6%	21.4%	23.5%	7.0%	2.9%	22.0%	4.3%	1.9%	.1%	100.0%

**Table 4: Top 17 slates in D9**

Slate	Count	Frequency	Notes
DC EQ MS	2663	9.9%	SFBG
MS DC EQ	1861	6.9%	Mixed
DC MS EQ	1691	6.3%	Mixed
MS EQ DC	1608	6.0%	Mixed
EQ MS DC	1288	4.8%	Mixed
EQ DC MS	1274	4.8%	Mixed
DC -- --	833	3.1%	Sole (DCCC)
MS -- --	667	2.5%	Sole
DC MS ER	543	2.0%	Mixed
EQ -- --	487	1.8%	Sole
DC MS --	436	1.6%	Mixed
DC DC DC	403	1.5%	Sole
MS DC ER	389	1.5%	Mixed
EQ EQ EQ	365	1.4%	Sole
MS MS MS	349	1.3%	Sole
DC EQ ER	320	1.2%	Mixed
MS DC --	308	1.1%	Mixed

## D11

Although District 11 had several well-known candidates running, the race came down to two frontrunners, John Avalos – former aide to Chris Daly, and Ahsha Safai, who had worked in the Mayor’s office. Randy Knox was known from being on the Board of Appeals, but got into the race too late and with too few resources. Myrna Lim had run before, but had little support outside her Filipino base. Finally, Julio Ramos was on the Community College Board, but like Knox, didn’t run enough of a campaign to be formidable.

Avalos received nearly all of the main liberal endorsements, and Safai received nearly all of the primary moderate ones. This race ended up being decided in the field in the last days of the campaign. The first-choice vs. second-choice crosstab is in Figure 5. 1873 people didn’t make a choice. Here, we see:

- 20% of voters who supported Knox chose Safai second, 19% supported Avalos
- 19% of voters who supported Lim chose Safai second, 17% supported Avalos
- Ramos’ supporters preferred Avalos second: 23% to 19% for Safai (and 21% to Knox)
- 21% of people who chose Avalos first sole-voted; 23% chose Ramos, 21% chose Knox, 18% chose Safai
- 22% of people who chose Safai first sole-voted, 21% chose Avalos, 19% chose Lim

Figure 5 shows the frequency of the top 15 ballot slates. As usual, the *Bay Guardian* is at the top, with 3% of the total slates. Then, in stark contrast to district 9, the next *six* most frequent slates were sole-votes, showing that voters are more polarized in D11 than elsewhere. It is

important to note that D11 is very racially and ideologically mixed, and voters were pretty wedded to their favorites.

The absence of one of the second-tier candidates like Knox or Lim wouldn't have made a difference to the overall result. But, if this had gone to a runoff, it would have been close. Although I may have given a slight nod to Avalos, either him or Safai could have won. I think we can all agree it would have been ugly.

### Summing it up

In the four districts with RCV races this year (and looking at past years), some common themes emerge. The *Bay Guardian* endorsement slate was always the most frequent one, though to what degree depended on the district. Obviously, in a more progressive district like D9, it counted for more (10%).

Many voters are willing to choose “enemies” 1-2 in their voting. On average, and this is a pretty consistent number, about 20% of voters who choose a frontrunning candidate will choose his ideological counterpart second. Therefore, there is a discernable subset of voters who aren't into the ideological games, and choose people they like in any order. On the other hand, there are also clear sets of voters who vote on straight identity and/or straight ideology. This year, it was hard to read the Asian identity vote in many places because in D1, all three leading candidates were Asian. In D3, the general ‘2/3 of Asian voters always voting Asian 1-2’ seems to hold, if reduced a little due to the large number of candidates. Furthermore, it was hard to tell the Latino identity vote, since in D9 all three front-runners were Latino. In D11, looking at the slate frequency table, there did seem to be an Avalos-Ramos-Adrian Burmudez synergy (pos 13,15).

It is difficult to say if RCV is simulating real “runoffs”. Since 2004, no candidate who has finished first has ever lost.<sup>14</sup> In 2002, Bevan Dufty defeated Eileen Hansen in a runoff where she surely would have won with RCV. But since then, several runoffs may have been close had they occurred, and Sue Lee probably would have won in a runoff this year. With a crowded field of often-similar candidates and the necessity to rank them, voters turn to popular endorsement cards like the *Bay Guardian* and the DCCC, which lean progressive. However, it is always difficult and sometimes dubious to infer the “will of the voters” in alternative scenarios other than the one in which they directly vote.

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<sup>14</sup> To be clear, Ron Dudum did **not** come in first in 2006 – he was in first only on Election Day. After the final count, Ed Jew had first place by a few votes. Close, but still first.

Figure 4: D11 First-choice votes versus second-choice vote by individual district voters

		Choice_1 * Choice_2 Crosstabulation											Total
		--	++	AB	AS	EH	JA	JR	MG	ML	RK	WI	
Choice_1 --	Count	1873	3	3	16	3	32	11	4	14	9	0	1968
	% within Choice_1	95.2%	.2%	.2%	.8%	.2%	1.6%	.6%	.2%	.7%	.5%	.0%	100.0%
	% within Choice_2	38.7%	1.1%	.3%	.4%	.5%	.8%	.3%	.4%	.4%	.3%	.0%	7.3%
	% of Total	7.0%	.0%	.0%	.1%	.0%	.1%	.0%	.0%	.1%	.0%	.0%	7.3%
++	Count	83	176	9	31	3	20	29	4	35	14	0	404
	% within Choice_1	20.5%	43.6%	2.2%	7.7%	.7%	5.0%	7.2%	1.0%	8.7%	3.5%	.0%	100.0%
	% within Choice_2	1.7%	64.5%	1.0%	.8%	.5%	.5%	.7%	.4%	1.0%	.4%	.0%	1.5%
	% of Total	.3%	.7%	.0%	.1%	.0%	.1%	.1%	.0%	.1%	.1%	.0%	1.5%
AB	Count	37	2	40	67	10	56	115	27	37	18	1	410
	% within Choice_1	9.0%	.5%	9.8%	16.3%	2.4%	13.7%	28.0%	6.6%	9.0%	4.4%	.2%	100.0%
	% within Choice_2	.8%	.7%	4.4%	1.7%	1.6%	1.4%	2.7%	2.9%	1.0%	.5%	2.4%	1.5%
	% of Total	.1%	.0%	.1%	.2%	.0%	.2%	.4%	.1%	.1%	.1%	.0%	1.5%
AM	Count	0	0	0	0	0	0	0	0	1	0	0	1
	% within Choice_1	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	100.0%	.0%	.0%	100.0%
	% within Choice_2	.0%	1873	3	3	16	3	.0%	.0%	.0%	.0%	.0%	.0%
	% of Total	.0%	95.2%	.2%	.2%	.8%	.2%	.0%	.0%	.0%	.0%	.0%	.0%
AS	Count	762	38.7%	1.1%	.3%	.4%	.5%	924	196	1138	816	8	5941
	% within Choice_1	12.8%	7.0%	.0%	.0%	.1%	.0%	15.6%	3.3%	19.2%	13.7%	.1%	100.0%
	% within Choice_2	15.8%	83	176	9	31	3	21.7%	21.3%	31.5%	24.5%	19.0%	22.1%
	% of Total	2.8%	20.5%	43.6%	2.2%	7.7%	.7%	3.4%	.7%	4.2%	3.0%	.0%	22.1%
EH	Count	54	1.7%	64.5%	1.0%	.8%	.5%	32	20	45	71	1	391
	% within Choice_1	13.8%	.3%	.7%	.0%	.1%	.0%	8.2%	5.1%	11.5%	18.2%	.3%	100.0%
	% within Choice_2	1.1%	37	2	40	67	10	.8%	2.2%	1.2%	2.1%	2.4%	1.5%
	% of Total	.2%	9.0%	.5%	9.8%	16.3%	2.4%	.1%	.1%	.2%	.3%	.0%	1.5%
JA	Count	816	.8%	.7%	4.4%	1.7%	1.6%	1585	127	766	1419	6	6918
	% within Choice_1	11.8%	.1%	.0%	.1%	.2%	.0%	22.9%	1.8%	11.1%	20.5%	.1%	100.0%
	% within Choice_2	16.9%	0	0	0	0	0	37.3%	13.8%	21.2%	42.5%	14.3%	25.7%
	% of Total	3.0%	.0%	.0%	.0%	.0%	.0%	5.9%	.5%	2.8%	5.3%	.0%	25.7%
JR	Count	343	.0%	.0%	.0%	.0%	.0%	385	104	613	276	2	3626
	% within Choice_1	9.5%	.0%	.0%	.0%	.0%	.0%	10.6%	2.9%	16.9%	7.6%	.1%	100.0%
	% within Choice_2	7.1%	762	21	182	542	135	9.1%	11.3%	17.0%	8.3%	4.8%	13.5%
	% of Total	1.3%	12.8%	.4%	3.1%	9.1%	2.3%	1.4%	.4%	2.3%	1.0%	.0%	13.5%
MG	Count	40	15.8%	7.7%	19.8%	13.6%	21.5%	55	27	102	48	0	455
	% within Choice_1	8.8%	2.8%	.1%	.7%	2.0%	.5%	12.1%	5.9%	22.4%	10.5%	.0%	100.0%
	% within Choice_2	.8%	54	0	14	61	48	1.3%	2.9%	2.8%	1.4%	.0%	1.7%
	% of Total	.1%	13.8%	.0%	3.6%	15.6%	12.3%	.2%	.1%	.4%	.2%	.0%	1.7%
ML	Count	564	1.1%	.0%	1.5%	1.5%	7.6%	761	348	550	426	3	4442
	% within Choice_1	12.7%	.2%	.0%	.1%	.2%	.2%	17.1%	7.8%	12.4%	9.6%	.1%	100.0%
	% within Choice_2	11.7%	816	28	188	1267	106	17.9%	37.7%	15.2%	12.8%	7.1%	16.5%
	% of Total	2.1%	11.8%	.4%	2.7%	18.3%	1.5%	2.8%	1.3%	2.0%	1.6%	.0%	16.5%
RK	Count	256	16.9%	10.3%	20.5%	31.9%	16.9%	352	65	313	239	2	2324
	% within Choice_1	11.0%	3.0%	.1%	.7%	4.7%	.4%	15.1%	2.8%	13.5%	10.3%	.1%	100.0%
	% within Choice_2	5.3%	343	7	308	599	86	8.3%	7.0%	8.7%	7.2%	4.8%	8.6%
	% of Total	1.0%	9.5%	.2%	8.5%	16.5%	2.4%	1.3%	.2%	1.2%	.9%	.0%	8.6%
WI	Count	7	7.1%	2.6%	33.6%	15.1%	13.7%	0	0	2	0	19	29
	% within Choice_1	24.1%	1.3%	.0%	1.1%	2.2%	.3%	.0%	.0%	6.9%	.0%	65.5%	100.0%
	% within Choice_2	.1%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.1%	.0%	45.2%	.1%
	% of Total	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.1%	.1%
Total	Count	4835	273	917	3974	629	4116	4249	922	3616	3336	42	26909
	% within Choice_1	18.0%	1.0%	3.4%	14.8%	2.3%	15.3%	15.8%	3.4%	13.4%	12.4%	.2%	100.0%
	% within Choice_2	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	18.0%	1.0%	3.4%	14.8%	2.3%	15.3%	15.8%	3.4%	13.4%	12.4%	.2%	100.0%

**Figure 5: Top 15 slates in D11**

Slate	Count	Frequency	Notes
JA RK JR	809	3.2%	SFBG
JA -- --	795	3.2%	Sole
AS -- --	747	3.0%	Sole
ML -- --	552	2.2%	Sole
JA JA JA	526	2.1%	Sole
ML ML ML	469	1.9%	Sole
AS AS AS	460	1.8%	Sole
JA AS JR	396	1.6%	Mixed
JA JR AS	387	1.5%	Mixed
AS JA JR	377	1.5%	Mixed
JR JR JR	336	1.3%	Sole
JR -- --	333	1.3%	Sole
JA JR AB	328	1.3%	Latino
JA JR RK	300	1.2%	Mixed (left)
JR JA AB	284	1.1%	Latino