

RCV analysis and maps of the San Francisco Supervisorial and the Oakland Mayoral races

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In this report I look at some of the RCV voting patterns in San Francisco Districts 2,6,8,10, and the City of Oakland. Not all districts will be treated with the same amount of complexity because of the differing number of candidates. Results in D2 and D8 were relatively straightforward while there were many candidates in D6 and D10 from which to choose - yielding much more complex RCV scenarios. Oakland is obviously its own world. I don't cover the campaigns themselves in great detail, but instead, I focus on what the voters *actually did* at the ballot box. People familiar with the races can back out why they think voters did what they did.

For ease of analysis, I concentrate on second choice votes and not third choices. Obviously, third choices matter - especially in close races like D2 and D10. And they were quite important in Oakland. However, I'm simply trying to establish basic transfer trends.

Never before had a candidate in San Francisco won via RCV after coming in second or lower, but it happened twice this year in D2 and D10. I has always posited that it was possible if a candidate lost by less than around 5 points it would be possible if the second and third choices broke heavily towards one candidate. This scenario played out both times, but as we saw in Oakland a candidate can come back from an even greater margin if there was an overwhelming push towards one candidate, and very few exhausted ballots.

D2

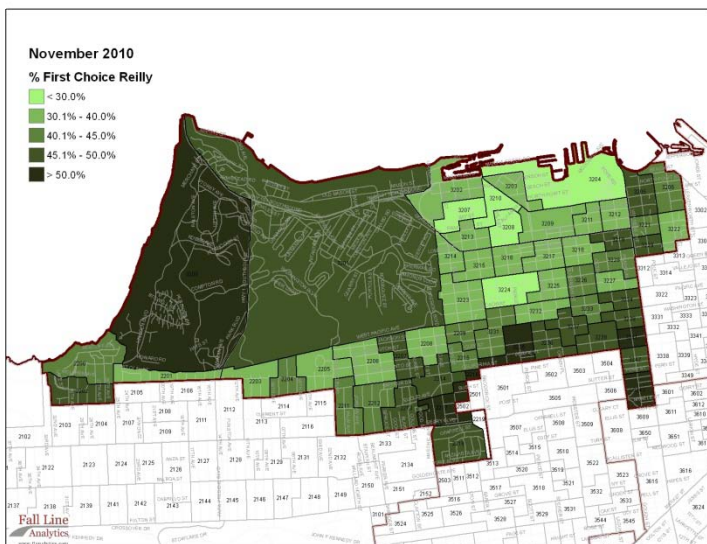
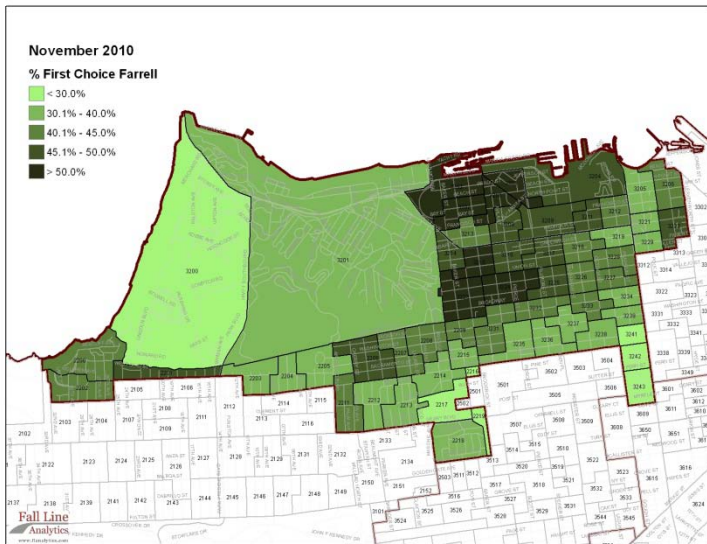
Mark Farrell lost in the first round to Janet Reilly by 199 votes, but overtook her in RCV, winning by 258 votes (around 1 percentage point). From polling, the race was close throughout the cycle, even when Reilly had much higher name recognition. There were also four other people in the race, including two candidates who took some votes: Kat Anderson (7%) and Abraham Simmons (8.6%). D2 is a conservative district, and Farrell, Simmons, and Anderson were viewed as the moderate or conservative candidates. Reilly was generally regarded as more liberal.

In the campaign itself, Reilly had many more endorsements than Farrell, and was backed by most of the San Francisco political powers that be. She relied heavily on mail, while Farrell ran an aggressive field campaign and, having grown up in D2, relied more heavily on a family and friends network to spread his message. At the end of the race, independent expenditures put out a lot of online and mail messaging, largely against Reilly.

The maps show that Farrell performed better in the Marina and Cow Hollow, while Reilly polled better in Pac Heights, the Presidio, and Russian Hill.¹

¹ The overall turnout map for San Francisco is presented in the ballot measure analysis.

Maps for % Farrell and % Reilly



RCV analysis shows pretty clearly that Farrell won due to the redistribution of Simmons and (especially) Anderson's votes. Both candidates actively told voters to put Farrell second, in a soft anyone-but-Reilly message. Table 1 shows a crosstab of first and second votes for each candidate. Note Anderson's seconds went to Farrell 32% to 19% over Reilly, and Simmons' seconds went to Farrell 28% to 24%. Also, 28% Farrell supporters sole/bullet voted for Farrell and for Reilly voters it was over 50%, a very high number, indicating more voters wanted her and no one else.²

² In this report, sole voting (choosing a candidate first and then no one else), and bullet voting (choosing the same candidate three times) are considered together, since in the voters' minds, they are choosing but one candidate.

Continuing the pattern of the "magic 20%" where the seconds of supporters for the two main candidates in a race go to the other at around a 20% clip, 22% of Reilly seconds went to Farrell and 18% of Farrell seconds went to Reilly.

Table 1: Crosstab of 1st choice vs 2nd choice in D2

Candidate 1st		Candidate 2nd								Total
		ABRAHAM SIMMONS	BARBARA BERWICK	JANET REILLY	KAT ANDERSON	MARK FARRELL	NULL	VILMA B. GUINTO PEORO	WRITE-IN	
ABRAHAM SIMMONS	Count	212	130	493	336	573	276	44	4	2068
	% within Candidate_1st	10.3	6.3	23.8	16.2	27.7	13.3	2.1	0.2	100.0
	% within Candidate_2nd	5.9	8.4	11.5	10.7	11.1	2.6	11.3	10.0	7.2
BARBARA BERWICK	Count	62	50	89	74	167	54	37	0	533
	% within Candidate_1st	11.6	9.4	16.7	13.9	31.3	10.1	6.9	0.0	100.0
	% within Candidate_2nd	1.7	3.2	2.1	2.4	3.2	0.5	9.5	0.0	1.8
JANET REILLY	Count	1020	501	1620	1069	2177	3359	116	12	9874
	% within Candidate_1st	10.3	5.1	16.4	10.8	22.0	34.0	1.2	0.1	100.0
	% within Candidate_2nd	28.6	32.3	37.7	34.1	42.3	31.2	29.7	30.0	34.2
KAT ANDERSON	Count	255	187	319	169	543	208	21	1	1703
	% within Candidate_1st	15.0	11.0	18.7	9.9	31.9	12.2	1.2	0.1	100.0
	% within Candidate_2nd	7.1	12.0	7.4	5.4	10.5	1.9	5.4	2.5	5.9
MARK FARRELL	Count	1991	648	1726	1462	1630	2060	145	13	9675
	% within Candidate_1st	20.6	6.7	17.8	15.1	16.8	21.3	1.5	0.1	100.0
	% within Candidate_2nd	55.8	41.7	40.1	46.6	31.7	19.1	37.1	32.5	33.5
NULL	Count	13	9	23	11	27	4794	3	1	4881
	% within Candidate_1st	0.3	0.2	0.5	0.2	0.6	98.2	0.1	0.0	100.0
	% within Candidate_2nd	0.4	0.6	0.5	0.4	0.5	44.5	0.8	2.5	16.9
VILMA B. GUINTO PEORO	Count	15	28	29	15	29	20	23	0	159
	% within Candidate_1st	9.4	17.6	18.2	9.4	18.2	12.6	14.5	0.0	100.0
	% within Candidate_2nd	0.4	1.8	0.7	0.5	0.6	0.2	5.9	0.0	0.5
WRITE-IN	Count	1	0	1	2	1	2	2	9	18
	% within Candidate_1st	5.6	0.0	5.6	11.1	5.6	11.1	11.1	50.0	100.0
	% within Candidate_2nd	0.0	0.0	0.0	0.1	0.0	0.0	0.5	22.5	0.1
Total	Count	3569	1553	4300	3138	5147	10773	391	40	28911
	% within Candidate_1st	12.3	5.4	14.9	10.9	17.8	37.3	1.4	0.1	100.0
	% within Candidate_2nd	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The RCV slate³ ranking (top 10 of 323, Table 2) shows this was a two-person race, with Reilly and Farrell bullet/sole voting taking the large plurality. Overall, Farrell appeared on 14,619 ballots, and Reilly appeared on 14,036 ballots. Given this fact and the RCV redistribution pattern, I surmise Farrell would have won a run-off.

³ Here, slate refers to the 1-2-3 voter picks.

Table 2 : Top nine slates by frequency for D6

Slate	Count	Freq
JANET REILLY SOLE/BULLET	4827	23%
MARK FARRELL SOLE/BULLET	3453	16%
JANET REILLY MARK FARRELL NULL	747	4%
MARK FARRELL JANET REILLY NULL	744	4%
MARK FARRELL ABRAHAM SIMMONS KAT ANDERSON	694	3%
MARK FARRELL ABRAHAM SIMMONS NULL	586	3%
JANET REILLY MARK FARRELL KAT ANDERSON	521	2%
JANET REILLY MARK FARRELL ABRAHAM SIMMONS	481	2%
MARK FARRELL KAT ANDERSON ABRAHAM SIMMONS	381	2%
<i>Total</i> ⁴	21223	

D6

Jane Kim received the most first-choice votes at 31% and finished with 54% after RCV, defeating Debra Walker in the final round. While the race was considered mainly a three-woman race among Kim, Walker, and Theresa Sparks, Kim and Walker took up much of the media bandwidth. Both Kim and Walker were considered progressives, while Sparks was seen as the relative moderate. There were 11 other candidates in the race as well, but none of them finished with over 5% of the vote.

Some candidates in this race tried to institute a 'progressive bullet voting' strategy, ostensibly to prevent Sparks from winning, but this only took hold among the lesser candidates. Neither Kim nor Walker endorsed the other. At the end, Kim - through a vigorous field effort - was able to gain the vote of both liberals and moderates to secure the win.

The maps below of the three leading candidates show Kim did much better in the eastern half of the district, and the Tenderloin area. The race between Kim and Walker was indeed somewhat close, but Kim was a consistently stronger second choice than Walker. The crosstab of first choice vs second choice (Table 3) reveals these trends:

- 22% of Kim supporters voted for Walker second, but 37% of Walker supporters had Kim second
- Sparks' seconds went to Kim over Walker 21% to 16%.
- James Keys' (incumbent Chris Daly's pick) seconds went to Kim over Walker 25% to 22%.

Table 4 shows the top twenty frequent slates, out of 1988 overall combinations. It is noteworthy that despite all of the work over trying to get voters to diversify their selections via RCV, the top three frequencies - and 20% of the overall selections - were bullet/sole choices for the top three finishers.

⁴ 'Total' in these charts refers to ballots that had a vote for a candidate. Supervisorial undervotes aren't counted.

The next highest slate was the of the *San Francisco Bay Guardian* (SFBG), but it only gained 890 votes, or around 4% of the total. This is a little less than is expected from the SFBG, especially in a progressive district like D6, where the SFBG is often worth 5-10% of the vote.

It is difficult to discern what the Democratic County Central Committee's endorsement was worth. They only endorsed Walker, and her bullet/sole vote was 7%. it's easier to figure the value of specific endorsements when they have a distinct 1-2-3 choice pattern.

D6 maps for Sparks, Walker, and Kim

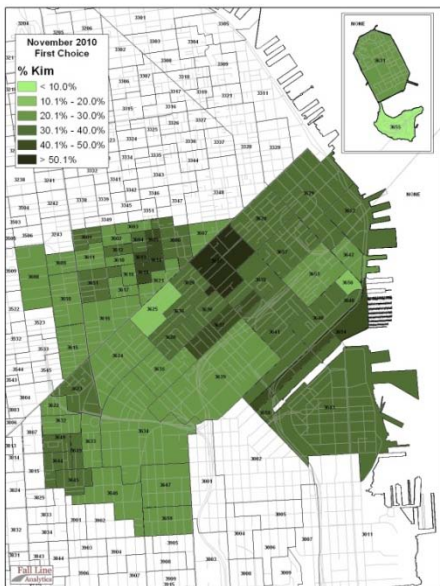
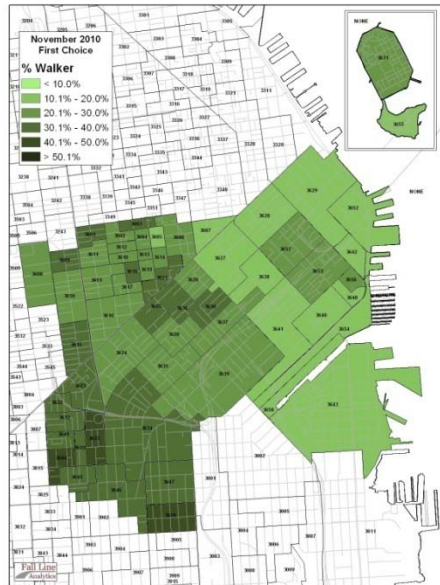
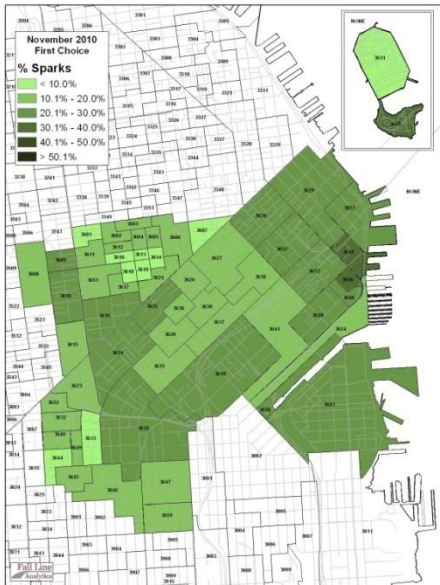


Table 3 (following page) Crosstab of 1st choice vs 2nd choice in D6

Table 4: Top twenty slates by frequency for D6

Slate	Count	Freq
JANE KIM BULLET/SOLE	1965	9%
DEBRA WALKER BULLET/SOLE	1410	7%
THERESA SPARKS BULLET/SOLE	1057	5%
DEBRA WALKER JANE KIM GLENDON "ANNA CONDA" HYDE	890	4%
JANE KIM DEBRA WALKER THERESA SPARKS	353	2%
DEBRA WALKER JANE KIM THERESA SPARKS	347	2%
JANE KIM GLENDON "ANNA CONDA" HYDE DEBRA WALKER	292	1%
DEBRA WALKER JANE KIM NULL	281	1%
JANE KIM DEBRA WALKER NULL	264	1%
JANE KIM DEBRA WALKER GLENDON "ANNA CONDA" HYDE	241	1%
JANE KIM THERESA SPARKS DEBRA WALKER	222	1%
DEBRA WALKER THERESA SPARKS JANE KIM	217	1%
THERESA SPARKS JANE KIM DEBRA WALKER	205	1%
THERESA SPARKS DEBRA WALKER JANE KIM	195	1%
JANE KIM THERESA SPARKS ELAINE ZAMORA	192	1%
THERESA SPARKS JANE KIM NULL	182	1%
JANE KIM THERESA SPARKS NULL	174	1%
DEBRA WALKER JANE KIM JAMES KEYS	152	1%
JANE KIM DEBRA WALKER JAMES KEYS	124	1%
JANE KIM DEBRA WALKER ELAINE ZAMORA	117	1%
<i>Total</i>	21234	

Finally, Walker was on 10,253 ballots, Kim was on 12,027 ballots, and Sparks was on 7,585 ballots. Given the larger number of ballots of Kim, and her strong second choice finishes (especially from Sparks), I believe Kim would have easily won a runoff had there been one.

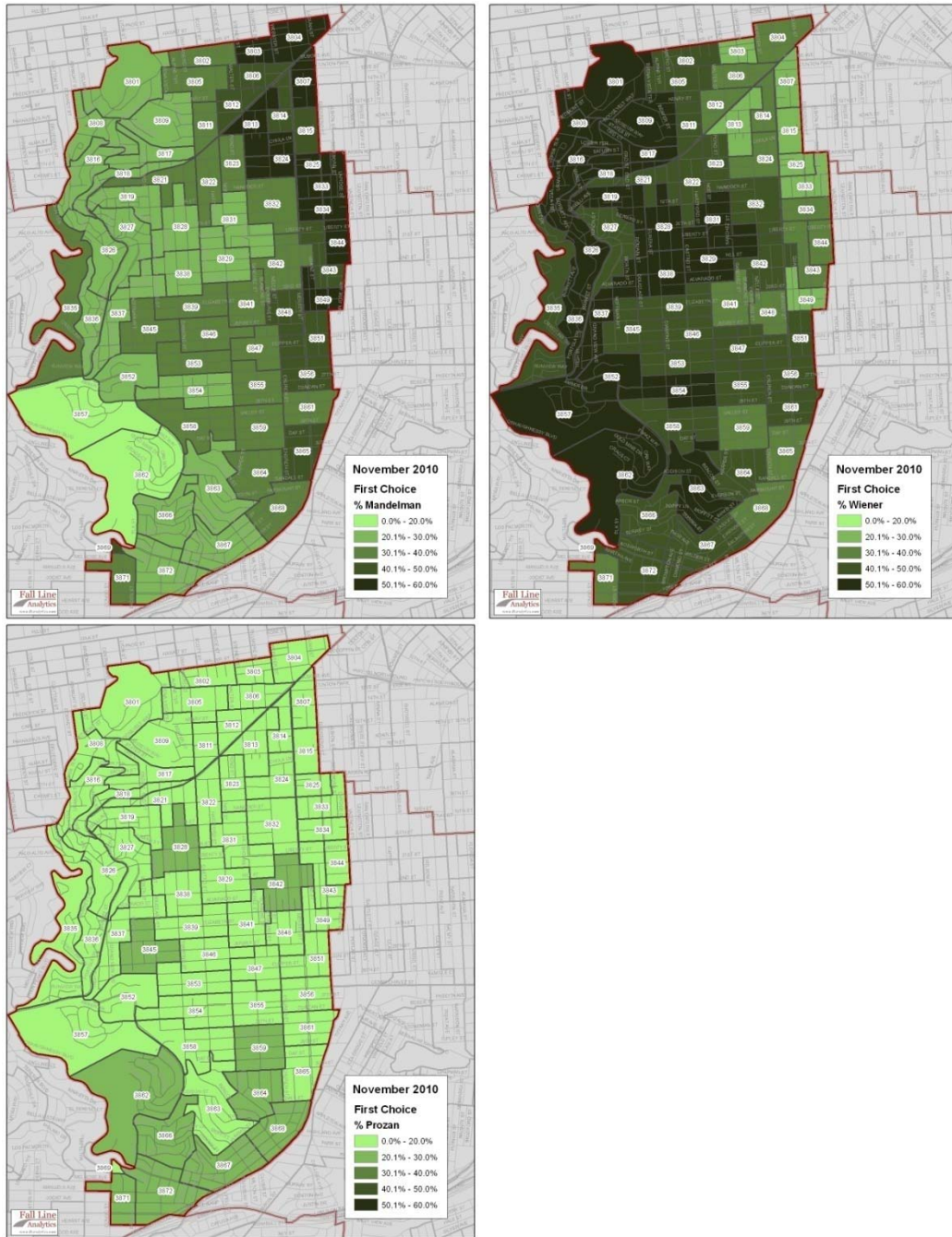
D8

D8 produced the clearest winner of the 2010 cycle, where Scott Wiener won with 42% of the first choice votes, and 55% of the vote after RCV. D8 was probably the highest profile of the races, due to the large amounts of money involved and the large volume of mail and media. Furthermore, D8 - the seat of the LGBT power base - is often considered one of the political power centers of San Francisco.

The race was essentially a two-person race, between Scott Wiener (moderate) and Rafael Mandelman (progressive). The third place finisher, Rebecca Prozan, was loosely affiliated with being a moderate but in general did not factor in the race. However, her second choice votes did put Wiener over the finish line.

The maps for D8 show that Wiener won nearly every neighborhood, expect very liberal Valencia Corridor and Mid-Market.

D8 maps for Wiener, Prozan, and Mandelman



The first choice-second choice crosstab (Table 5) shows Prozan's seconds went to Wiener over Mandelman 42-31%. Bill Hemenger, a true conservative, finished a distant fourth, and his seconds went strongly to Wiener.

Table 5: Crosstab of 1st choice vs 2nd choice in D8

			Candidate_2nd						Total
			BILL HEMENGER	NULL	RAFAEL MANDELMAN	REBECCA PROZAN	SCOTT WIENER	WRITE-IN	
Candidate_1st	BILL HEMENGER	Count	306	341	209	336	593	6	1791
		% within Candidate_1st	17.1%	19.0%	11.7%	18.8%	33.1%	.3%	100.0%
		% within Candidate_2nd	13.5%	3.6%	3.2%	2.6%	8.0%	7.7%	4.6%
	NULL	Count	14	3579	25	25	16	0	3659
		% within Candidate_1st	.4%	97.8%	.7%	.7%	.4%	.0%	100.0%
		% within Candidate_2nd	.6%	37.6%	.4%	.2%	.2%	.0%	9.5%
	RAFAEL MANDELMAN	Count	349	2606	1627	5122	2676	34	12414
% within Candidate_1st		2.8%	21.0%	13.1%	41.3%	21.6%	.3%	100.0%	
% within Candidate_2nd		15.4%	27.4%	24.9%	40.2%	36.2%	43.6%	32.2%	
REBECCA PROZAN	Count	329	657	1841	598	2432	3	5860	
	% within Candidate_1st	5.6%	11.2%	31.4%	10.2%	41.5%	.1%	100.0%	
	% within Candidate_2nd	14.5%	6.9%	28.1%	4.7%	32.9%	3.8%	15.2%	
SCOTT WIENER	Count	1266	2337	2842	6675	1665	12	14797	
	% within Candidate_1st	8.6%	15.8%	19.2%	45.1%	11.3%	.1%	100.0%	
	% within Candidate_2nd	55.9%	24.5%	43.4%	52.3%	22.6%	15.4%	38.4%	
WRITE-IN	Count	0	5	0	1	1	23	30	
	% within Candidate_1st	.0%	16.7%	.0%	3.3%	3.3%	76.7%	100.0%	
	% within Candidate_2nd	.0%	.1%	.0%	.0%	.0%	29.5%	.1%	
Total		Count	2264	9525	6544	12757	7383	78	38551
		% within Candidate_1st	5.9%	24.7%	17.0%	33.1%	19.2%	.2%	100.0%
		% within Candidate_2nd	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Looking at the top 13 (of 151) D8 slate frequencies in D8 (Table 6), it's interesting that Mandelman received more sole/bullet votes than Wiener. However, Wiener did well on ballots where more than one candidate was listed.

Table 6: Top fourteen slates by frequency for D6

Slate	Count	Freq
RAFAEL MANDELMAN SOLE/BULLET	3976	11%
SCOTT WIENER SOLE/BULLET	3715	11%
SCOTT WIENER REBECCA PROZAN RAFAEL MANDELMAN	2875	8%
RAFAEL MANDELMAN REBECCA PROZAN SCOTT WIENER	2573	7%
SCOTT WIENER REBECCA PROZAN NULL	2029	6%
RAFAEL MANDELMAN REBECCA PROZAN NULL	1891	5%
RAFAEL MANDELMAN SCOTT WIENER REBECCA PROZAN	1835	5%
SCOTT WIENER RAFAEL MANDELMAN REBECCA PROZAN	1829	5%
SCOTT WIENER REBECCA PROZAN BILL HEMENGER	1599	5%
REBECCA PROZAN SCOTT WIENER RAFAEL MANDELMAN	1253	4%
REBECCA PROZAN SOLE/BULLET	1137	3%
REBECCA PROZAN RAFAEL MANDELMAN SCOTT WIENER	1106	3%
REBECCA PROZAN SCOTT WIENER NULL	650	2%
<i>Total</i>	34993	

Wiener was on 24,680 ballots, and Mandelman was on 22,055. Given the strong first-place finish of Wiener and Prozan's transfer, Wiener would have easily won a runoff had there been one. D8 can no longer be considered a progressive or even that liberal a district.

D10

D10 was an unwieldy 22 candidate race where the first place finisher after the first round, Lynette Sweet, finished with 12% of the vote. In fact, 5 candidates clustered at the top: Tony Kelly (11.8%), Malia Cohen (11.8%), Marlene Tran (11.5%), and Steve Moss (11.1%). However, after 19 rounds of RCV, it was Malia Cohen who emerged victorious, with 52.7% of vote over second-place finisher Tony Kelly. This is the first time a *third*-place finisher ended up winning with RCV.

D10 is a district of disparate neighborhoods. The maps show clearly that no candidate was really able to escape his/her own neighborhood. However, Cohen did do marginally better in other neighborhoods than her own (Bayview/Hunters Point), and she was seen as the acceptable second choice to many of the voters in D10. Furthermore, Cohen employed a strong second-choice and even third-choice strategy in her campaign which ended up helping her win.

In order to get a handle on what happened in the RCV runs, Table 7 shows the first choice vs second choice crosstab. In a race like this, knowing the third choice as well is valuable, but we're just trying to get an idea of the trends. This is difficult enough as it is.

To sum it up, Cohen was helped by two major influxes on transfer votes: from DeWitt Lacy and from Sweet. Lacy was the DCCC first choice, and Cohen was the second. We'll see below why this was important. Sweet and Cohen were the two main African-American women in the race, it made sense that they received the most of each others' votes. Cohen received the most of Sweet's seconds with 15%, and Sweet received 14% of Cohen's votes - also the most.

Cohen in fact benefitted by many of the candidates' second choices, especially the African-American ones. She received 10% of Chris Jackson's votes. It wasn't the most (Kelly with 17%), but they occupy different political spaces. Cohen received 30% of Lacy's second choices. Cohen did less well with the Potrero candidates and the Asian candidates, but she did well enough to hold on.

The Asian/PI bloc showed a trend of voting for single and other API candidates only. Tran's seconds went 44% to Teresa Duque, and 48% of Duque's seconds went to Tran. Add to that the 13% or so null second choice vote for each candidate, over 60% of Tran/Duque supporters had no non-API second choice. Future non-API candidates are going to have to work hard to get API votes, even for second and third choices.

D10 results maps for Tran, Cohen, Kelly, Moss, and Sweet

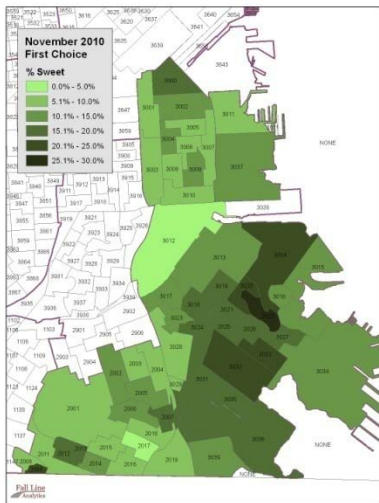
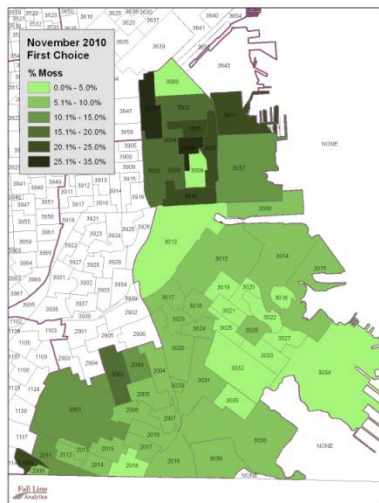
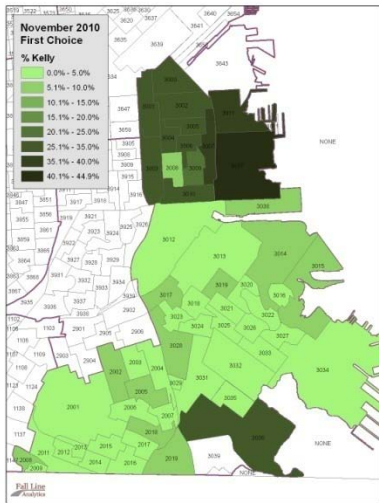
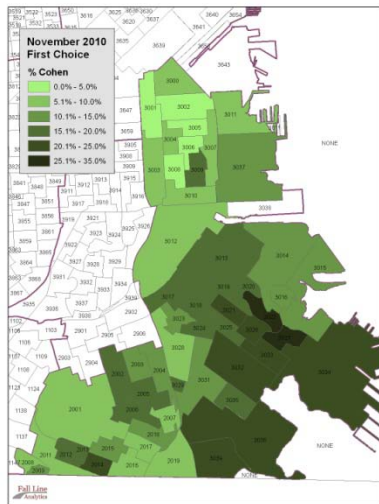
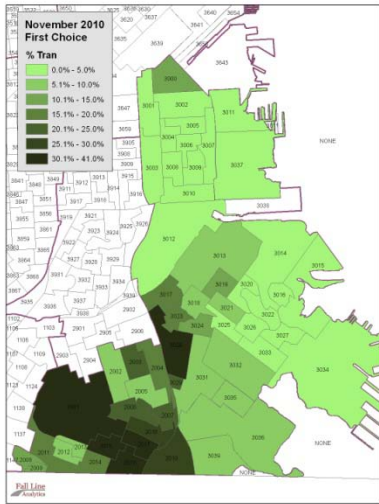


Table 7 (following page) Crosstab of 1st choice vs 2nd choice in D10

Candidate_1st		Candidate_2nd																				Total			
		ASHLEY H RH	CHRIS JACKS	DEWITT M. L	DIANE WESL	ED DONALD	ELLSWORTH	ERIC SMITH	GEOFFREA N	JACKIE NOR	JAMES M. C	KRISTINE EN	LYNETTE SW	M.J. MARIE	MALIA COHE	MARLENE TR	NULL	NYESE JOSH	RODNEY HA	STEPHEN WE	STEVE MOSS	TERESA DUC	TONY KELLY	WRITE-IN	Total
ASHLEY H RHODES	Count	39.0	9.0	5.0	25.0	1.0	3.0	3.0	1.0	10.0	21.0	13.0	13.0	1.0	37.0	22.0	19.0	4.0	8.0	12.0	4.0	1.0	8.0	0.0	259.0
	% within Candidate_1st	15.1	3.5	1.9	9.7	0.4	1.2	1.2	0.4	3.9	8.1	5.0	5.0	0.4	14.3	8.5	7.3	1.5	3.1	4.6	1.5	0.4	3.1	0.0	100.0
	% within Candidate_2nd	18.8	0.7	0.3	5.4	0.4	2.9	0.5	0.3	4.2	4.4	2.3	0.8	0.8	1.9	1.6	0.4	2.2	2.7	3.8	0.3	0.1	0.6	0.0	1.3
CHRIS JACKSON	Count	9.0	108.0	105.0	22.0	22.0	1.0	32.0	11.0	12.0	29.0	24.0	89.0	2.0	111.0	69.0	119.0	3.0	13.0	13.0	74.0	23.0	192.0	2.0	1085.0
	% within Candidate_1st	0.8	10.0	9.7	2.0	2.0	0.1	2.9	1.0	1.1	2.7	2.2	8.2	0.2	10.2	6.4	11.0	0.3	1.2	1.2	6.8	2.1	17.7	0.2	100.0
	% within Candidate_2nd	4.3	8.8	6.1	4.8	9.1	1.0	5.6	3.4	5.0	6.1	4.2	5.7	1.6	5.8	5.0	2.6	1.6	4.3	4.1	5.4	1.7	14.5	6.9	5.3
DEWITT M. LACY	Count	2.0	110.0	107.0	18.0	17.0	2.0	66.0	23.0	10.0	17.0	42.0	98.0	8.0	387.0	23.0	114.0	8.0	15.0	7.0	91.0	7.0	99.0	1.0	1272.0
	% within Candidate_1st	0.2	8.6	8.4	1.4	1.3	0.2	5.2	1.8	0.8	1.3	3.3	7.7	0.6	30.4	1.8	9.0	0.6	1.2	0.6	7.2	0.6	7.8	0.1	100.0
	% within Candidate_2nd	1.0	9.0	6.2	3.9	7.0	1.9	11.6	7.1	4.2	3.6	7.3	6.2	6.5	20.2	1.7	2.5	4.3	5.0	2.2	6.6	0.5	7.5	3.4	6.2
DIANE WESLEY SMITH	Count	17.0	29.0	28.0	61.0	2.0	7.0	5.0	1.0	16.0	28.0	13.0	54.0	4.0	34.0	10.0	41.0	6.0	3.0	5.0	14.0	5.0	6.0	1.0	390.0
	% within Candidate_1st	4.4	7.4	7.2	15.6	0.5	1.8	1.3	0.3	4.1	7.2	3.3	13.8	1.0	8.7	2.6	10.5	1.5	0.8	1.3	3.6	1.3	1.5	0.3	100.0
	% within Candidate_2nd	8.2	2.4	1.6	13.2	0.8	6.7	0.9	0.3	6.7	5.9	2.3	3.4	3.3	1.8	0.7	0.9	3.2	1.0	1.6	1.0	0.4	0.5	3.4	1.9
ED DONALDSON	Count	1.0	7.0	17.0	4.0	35.0	1.0	3.0	2.0	6.0	5.0	5.0	36.0	2.0	21.0	2.0	15.0	0.0	17.0	5.0	11.0	5.0	2.0	0.0	202.0
	% within Candidate_1st	0.5	3.5	8.4	2.0	17.3	0.5	1.5	1.0	3.0	2.5	2.5	17.8	1.0	10.4	1.0	7.4	0.0	8.4	2.5	5.4	2.5	1.0	0.0	100.0
	% within Candidate_2nd	0.5	0.6	1.0	0.9	14.4	1.0	0.5	0.6	2.5	1.1	0.9	2.3	1.6	1.1	0.1	0.3	0.0	5.7	1.6	0.8	0.4	0.2	0.0	1.0
ELLSWORTH "ELL" JENNISON	Count	2.0	5.0	3.0	1.0	0.0	5.0	3.0	0.0	2.0	4.0	4.0	3.0	4.0	2.0	3.0	4.0	6.0	2.0	4.0	2.0	2.0	6.0	0.0	67.0
	% within Candidate_1st	3.0	7.5	4.5	1.5	0.0	7.5	4.5	0.0	3.0	6.0	6.0	4.5	6.0	3.0	4.5	6.0	9.0	3.0	6.0	3.0	3.0	9.0	0.0	100.0
	% within Candidate_2nd	1.0	0.4	0.2	0.2	0.0	4.8	0.5	0.0	0.8	0.8	0.7	0.2	3.3	0.1	0.2	0.1	3.2	0.7	1.3	0.1	0.1	0.5	0.0	0.3
ERIC SMITH	Count	4.0	32.0	49.0	8.0	8.0	0.0	35.0	10.0	3.0	8.0	14.0	12.0	3.0	78.0	7.0	31.0	1.0	3.0	5.0	45.0	3.0	89.0	0.0	448.0
	% within Candidate_1st	0.9	7.1	10.9	1.8	1.8	0.0	7.8	2.2	0.7	1.8	3.1	2.7	0.7	17.4	1.6	6.9	0.2	0.7	1.1	10.0	0.7	19.9	0.0	100.0
	% within Candidate_2nd	1.9	2.6	2.9	1.7	3.3	0.0	6.1	3.1	1.3	1.7	2.4	0.8	2.4	4.1	0.5	0.7	0.5	1.0	1.6	3.3	0.2	6.7	0.0	2.2
GEOFFREA MORRIS	Count	6.0	10.0	12.0	15.0	9.0	1.0	2.0	80.0	11.0	11.0	7.0	34.0	3.0	46.0	6.0	32.0	5.0	16.0	1.0	9.0	8.0	5.0	1.0	330.0
	% within Candidate_1st	1.8	3.0	3.6	4.5	2.7	0.3	0.6	24.2	3.3	3.3	2.1	10.3	0.9	13.9	1.8	9.7	1.5	4.8	0.3	2.7	2.4	1.5	0.3	100.0
	% within Candidate_2nd	2.9	0.8	0.7	3.2	3.7	1.0	0.4	24.5	4.6	2.3	1.2	2.2	2.4	2.4	0.4	0.7	2.7	5.3	0.3	0.7	0.6	0.4	3.4	1.6
JACKIE NORMAN	Count	10.0	15.0	6.0	13.0	1.0	1.0	5.0	5.0	37.0	3.0	4.0	18.0	1.0	20.0	1.0	16.0	5.0	9.0	2.0	6.0	2.0	3.0	0.0	183.0
	% within Candidate_1st	5.5	8.2	3.3	7.1	0.5	0.5	2.7	2.7	20.2	1.6	2.2	9.8	0.5	10.9	0.5	8.7	2.7	4.9	1.1	3.3	1.1	1.6	0.0	100.0
	% within Candidate_2nd	4.8	1.2	0.3	2.8	0.4	1.0	0.9	1.5	15.5	0.6	0.7	1.1	0.8	1.0	0.1	0.4	2.7	3.0	0.6	0.4	0.1	0.2	0.0	0.9
JAMES M. CALLOWAY	Count	9.0	28.0	25.0	24.0	8.0	6.0	6.0	13.0	10.0	66.0	12.0	30.0	8.0	29.0	21.0	36.0	10.0	15.0	11.0	20.0	10.0	16.0	0.0	413.0
	% within Candidate_1st	2.2	6.8	6.1	5.8	1.9	1.5	1.5	3.1	2.4	16.0	2.9	7.3	1.9	7.0	5.1	8.7	2.4	3.6	2.7	4.8	2.4	3.9	0.0	100.0
	% within Candidate_2nd	4.3	2.3	1.5	5.2	3.3	5.8	1.1	4.0	4.2	13.9	2.1	1.9	6.5	1.5	1.5	0.8	5.4	5.0	3.5	1.5	0.7	1.2	0.0	2.0
KRISTINE ENEA	Count	5.0	32.0	48.0	8.0	8.0	3.0	34.0	10.0	7.0	11.0	52.0	39.0	4.0	36.0	24.0	38.0	5.0	7.0	24.0	68.0	13.0	66.0	1.0	543.0
	% within Candidate_1st	0.9	5.9	8.8	1.5	1.5	0.6	6.3	1.8	1.3	2.0	9.6	7.2	0.7	6.6	4.4	7.0	0.9	1.3	4.4	12.5	2.4	12.2	0.2	100.0
	% within Candidate_2nd	2.4	2.6	2.8	1.7	3.3	2.9	6.0	3.1	2.9	2.3	9.0	2.5	3.3	1.9	1.7	0.8	2.7	2.3	7.6	5.0	1.0	5.0	3.4	2.6
LYNETTE SWEET	Count	19.0	154.0	174.0	79.0	51.0	4.0	45.0	35.0	43.0	67.0	50.0	391.0	10.0	315.0	41.0	292.0	10.0	50.0	30.0	173.0	21.0	79.0	4.0	2137.0
	% within Candidate_1st	0.9	7.2	8.1	3.7	2.4	0.2	2.1	1.6	2.0	3.1	2.3	18.3	0.5	14.7	1.9	13.7	0.5	2.3	1.4	8.1	1.0	3.7	0.2	100.0
	% within Candidate_2nd	9.1	12.6	10.1	17.1	21.0	3.8	7.9	10.7	18.1	14.1	8.7	24.9	8.1	16.4	3.0	6.4	5.4	16.7	9.6	12.6	1.5	6.0	13.8	10.4
M.J. MARIE FRANKLIN	Count	1.0	4.0	2.0	0.0	0.0	4.0	2.0	3.0	2.0	8.0	3.0	6.0	6.0	5.0	7.0	3.0	6.0	4.0	1.0	6.0	4.0	3.0	0.0	80.0
	% within Candidate_1st	1.3	5.0	2.5	0.0	0.0	5.0	2.5	3.8	2.5	10.0	3.8	7.5	7.5	6.3	8.8	3.8	7.5	5.0	1.3	7.5	5.0	3.8	0.0	100.0
	% within Candidate_2nd	0.5	0.3	0.1	0.0	0.0	3.8	0.4	0.9	0.8	1.7	0.5	0.4	4.9	0.3	0.5	0.1	3.2	1.3	0.3	0.4	0.3	0.2	0.0	0.4
MALIA COHEN	Count	31.0	215.0	178.0	89.0	18.0	12.0	132.0	48.0	26.0	47.0	53.0	300.0	4.0	372.0	57.0	204.0	15.0	29.0	19.0	116.0	32.0	84.0	2.0	2083.0
	% within Candidate_1st	1.5	10.3	8.5	4.3	0.9	0.6	6.3	2.3	1.2	2.3	2.5	14.4	0.2	17.9	2.7	9.8	0.7	1.4	0.9	5.6	1.5	4.0	0.1	100.0
	% within Candidate_2nd	14.9	17.6	10.4	19.3	7.4	11.5	23.1	14.7	10.9	9.9	9.2	19.1	3.3	19.4	4.1	4.5	8.1	9.7	6.1	8.5	2.4	6.4	6.9	10.1
MARLENE TRAN	Count	13.0	95.0	32.0	14.0	9.0	7.0	10.0	18.0	7.0	59.0	35.0	49.0	12.0	60.0	270.0	257.0	9.0	7.0	18.0	63.0	893.0	99.0	1.0	2037.0
	% within Candidate_1st	0.6	4.7	1.6	0.7	0.4	0.3	0.5	0.9	0.3	2.9	1.7	2.4	0.6	2.9	13.3	12.6	0.4	0.3	0.9	3.1	43.8	4.9	0.0	100.0
	% within Candidate_2nd	6.3	7.8	1.9	3.0	3.7	6.7	1.8	5.5	2.9	12.4	6.1	3.1	9.8	3.1	19.6	5.7	4.9	2.3	5.7	4.6	65.6	7.5	3.4	9.9
NULL	Count	4.0	13.0	23.0	12.0	0.0	3.0	5.0	5.0	10.0	10.0	3.0	36.0	2.0	28.0	9.0	2619.0	3.0	4.0	8.0	16.0	19.0	12.0	1.0	2845.0
	% within Candidate_1st	0.1	0.5	0.8	0.4	0.0	0.1	0.2	0.2	0.4	0.4	0.1	1.3	0.1	1.0	0.3	92.1	0.1	0.1	0.3	0.6	0.7	0.4	0.0	100.0
	% within Candidate_2nd	1.9	1.1	1.3	2.6	0.0	2.9	0.9	1.5	4.2	2.1	0.5	2.3	1.6	1.5	0.7	57.7	1.6	1.3	2.5	1.2	1.4	0.9	3.4	13.8
NYESE JOSHUA	Count	2.0	11.0	9.0	11.0	3.0	4.0	0.0	7.0	0.0	0.0	3.0	7.0	2.0	5.0	9.0	11.0	17.0	8.0	2.0	2.0	5.0	16.0	0.0	134.0
	% within Candidate_1st	1.5	8.2	6.7	8.2	2.2	3.0	0.0	5.2	0.0	0.0	2.2	5.2	1.5	3.7	6.7	8.2	12.7	6.0	1.5	1.5	3.7	11.9	0.0	100.0
	% within Candidate_2nd	1.0	0.9	0.5	2.4	1.2	3.8	0.0	2.1	0.0	0.0	0.5	0.4	1.6	0.3	0.7	0.2	9.2	2.7	0.6	0.1	0.4	1.2	0.0	0.7
RODNEY HAMPTON, JR.	Count	8.0	15.0	10.0	9.0	12.0	5.0	6.0	16.0	5.0	10.0	5.0	20.0	4.0	14.0	6.0	20.0	9.0	37.0	9.0	6.0	5.0	4.0	0.0	235.0
	% within Candidate_1st	3.4	6.4	4.3	3.8	5.1	2.1	2.6	6.8	2.1	4.3	2.1	8.5	1.7	6.0	2.6	8.5	3.8	15.7	3.8	2.6	2.1	1.7	0.0	100.0
	% within Candidate_2nd	3.8	1.2	0.6	1.9	4.9	4.8	1.1	4.9	2.1	2.1	0.9	1.3	3.3	0.7	0.4	0.4	4.9	12.3	2.9					

Table 8 lends more insight into what happened in D10. This displays the top 21 slates, out of 3926. Even with 22 candidates, the strong voting trend was to sole/bullet vote for one candidate (five of the top six frequencies). Many voters are clearly not using all three of their options, instead simply choosing their favorites and no one else. The second most frequent slate was that of the SFBG with 3% of the vote. The DCCC endorsement was only tenth (1.5%).

Table 8: Top twenty-two slates by frequency for D6

Slate	Count	Freq
LYNETTE SWEET SOLE/BULLET	636	3.5%
TONY KELLY DEWITT M. LACY CHRIS JACKSON	550	3.1%
MALIA COHEN SOLE/BULLET	519	2.9%
MARLENE TRAN SOLE/BULLET	491	2.7%
STEVE MOSS SOLE/BULLET	441	2.4%
TERESA DUQUE SOLE/BULLET	381	2.1%
MARLENE TRAN TERESA DUQUE NULL	380	2.1%
TONY KELLY SOLE/BULLET	315	1.7%
TERESA DUQUE MARLENE TRAN NULL	310	1.7%
DEWITT M. LACY MALIA COHEN ERIC SMITH	262	1.5%
CHRIS JACKSON SOLE/BULLET	202	1.1%
DEWITT M. LACY SOLE/BULLET	201	1.1%
GEOFFREA MORRIS SOLE/BULLET	103	0.6%
CHRIS JACKSON TONY KELLY ED DONALDSON	87	0.5%
STEVE MOSS TONY KELLY NULL	87	0.5%
MARLENE TRAN TERESA DUQUE CHRIS JACKSON	83	0.5%
TONY KELLY STEVE MOSS NULL	76	0.4%
MARLENE TRAN TERESA DUQUE LYNETTE SWEET	73	0.4%
MARLENE TRAN TERESA DUQUE TONY KELLY	71	0.4%
MARLENE TRAN TERESA DUQUE STEVE MOSS	69	0.4%
LYNETTE SWEET MALIA COHEN CHRIS JACKSON	61	0.3%
<i>Total</i>	18007	

Table 9 shows the number of times each candidate showed up on a ballot. Cohen appeared on the most ballots, giving her some credibility as the eventual winner. Tran was on the fewest. Had there been a runoff, of course Cohen wouldn't have been involved. It would have been between Sweet and Kelly. The winner would have depended on turnout, and given that white Potrero turned out more frequently in past runoffs, Kelly would have had a good shot at winning. he also did a little better than Sweet among Asian second choice votes.

Table 9: Ballot appearances by the five top D10 finishers

Sweet	4352
Kelly	4145
Cohen	4626
Tran	3571
Moss	4055

Finally, it is worth noting that in this race, RCV produced *worse* turnout results than the very low turnout 2000 runoff - which was one of the catalysts for RCV. In 2000, 46% of the voters didn't return for the runoff. Compare this to the 53% of exhausted ballots by the end of the 2010 RCV run.⁵ Fewer voters had a direct say in the final outcome of the D10 race than in one of the lowest-turnout races in recent history.

Oakland

Oakland saw the largest comeback in RCV history, where Jean Quan - 11 points down to Don Perata after the first round - came back to win. Few (if any) observers, me included, thought she had a chance to come back to win after the first round results. Quan was able to win for four general reasons:

- A massive ballot transfer from third-place finisher Rebecca Kaplan
- An extremely successful second- and third-choice campaign
- An anybody-but-Perata campaign among several candidates where their supporters by and large followed the script, catalyzed by a negative anti-Perata campaign
- The low number of overall exhausted ballots

Quan and Kaplan ran a very negative anti-Perata campaign, which was the force required to galvanize the part of the electorate that didn't want to see Perata win. They were also effective in educating their supporters to make sure that Quan and Kaplan (especially) Quan was located somewhere on the ballot. Taken together, there were a very low 11% of exhausted ballots by the end of the RCV runs.

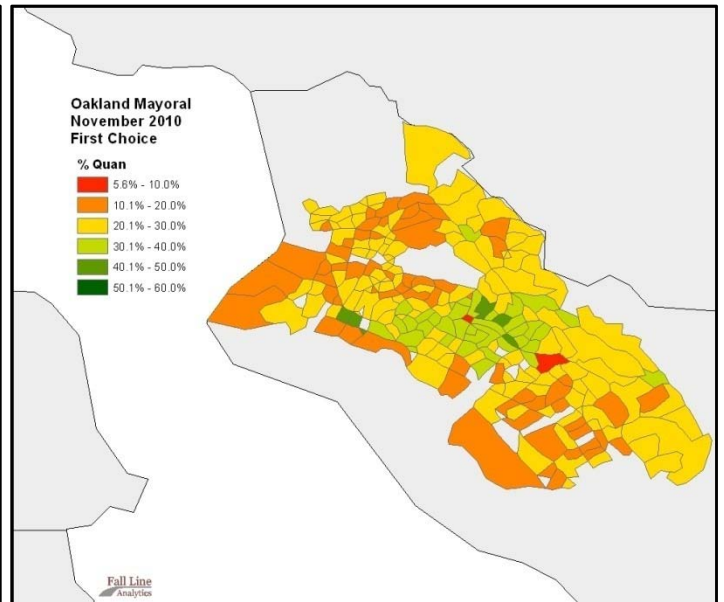
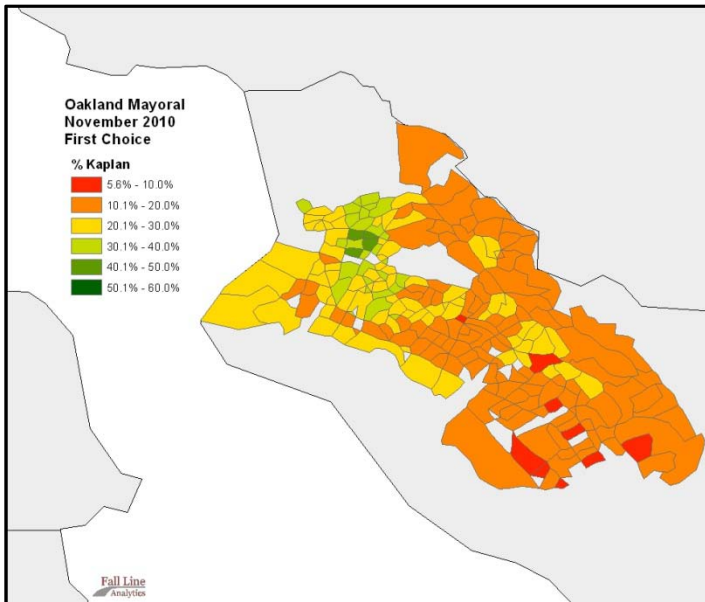
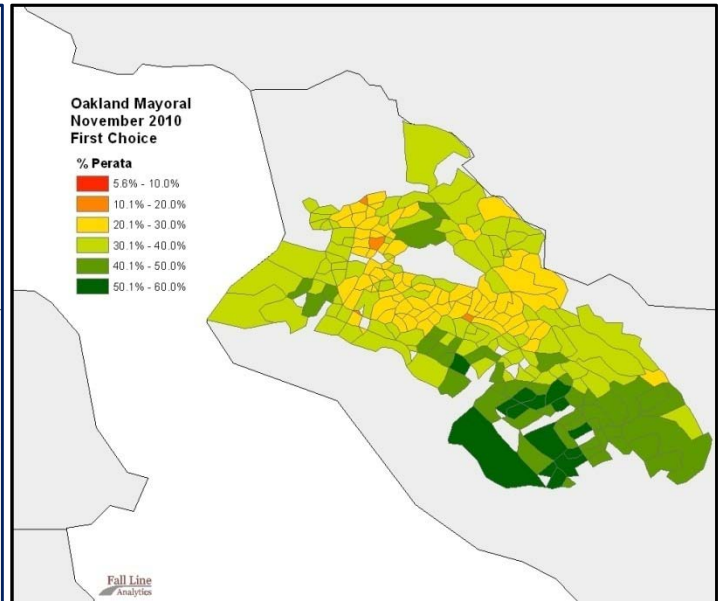
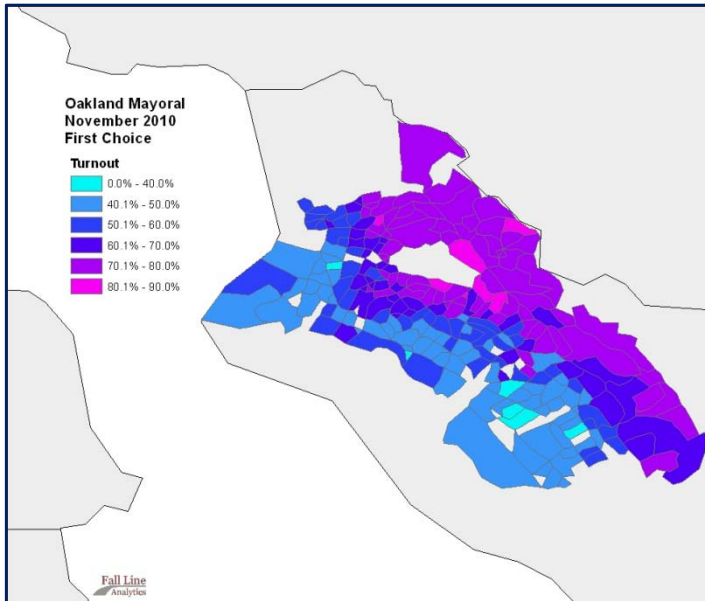
The results maps show that Quan and Kaplan's support came from different parts of the city, allowing them to join forces against the areas where Perata did well.⁶ Perata did well in the more heavily African-American East Oakland and along the waterfront - and did well more consistently in most neighborhoods. but, Quan did real well in Dimond, Glenview, and areas around Lake Merritt. These areas are more heavily Asian. Kaplan did her best in North Oakland, Rockridge, and Temescal - where there are more white liberals. Turnout was strongest in the hills and the neighborhoods circling Piedmont, and lowest in East Oakland.⁷

⁵ Numbers taken from Steven Hill's analysis at fairvote.org.

⁶ The Oakland maps aren't perfect, because I wasn't able to get the precinct mapping shapefiles for November 2010 in time. However, the precinct maps I used (November 2008) are close, and good enough to show the voting trends pretty clearly.

⁷ Thanks to Corey Cook at USF for help with the Oakland interpretation

Oakland maps for turnout, Perata, Quan, and Kaplan



The maps and the following analysis show that while Perata had a strong first-choice showing, it was Quan/Kaplan (really Perata's opponent) taken together that allowed Quan to win. Perata didn't have enough second-choice support. It's not shown here, but Quan also did well with third-choice votes.

Table 10 is the first choice-second choice crosstab, and sheds more light on the voting patterns. The following patterns are worth noting:

- 21% of Quan's seconds did go to Perata, a number similar to what we see in San Francisco. But 40% of her seconds went to Kaplan. This shows that if Quan had come in third, Perata would have won.
- 46% of Kaplan's seconds went to Perata, while only 15% went to Quan. This remarkable 3:1 transfer to Perata was the sole (technical) reason Quan won.
- 29% of Perata's seconds went to Quan, and 20% went to Kaplan.
- 14% of Quan supporters bullet or sole voted for her, while for Perata it was 22% and for Kaplan it was 8%.

It's clear that Kaplan supporters - the more liberal and educated voters in the hills, knew exactly what they were doing with RCV. Kaplan's very low bullet/sole vote and the very high Quan transfer means they fully understood that they were casting votes against Perata as much as for Kaplan or Quan.

Other than the Kaplan to Quan transfer, the numbers reflect patterns we've come to expect in San Francisco. For the lesser candidates, most supported Quan over Perata, but not by huge numbers (except for MacLeay).

Table 11 shows the most frequent slates in the Oakland Mayoral. The Perata-only slate was first, but Jean-only was five behind him and the Kaplan-only slate was 14th overall. Again, this is further proof that her supporters knew that they had to put Quan on their ballot if they didn't want someone else to win.

Table 11: Top twenty-three slates in Oakland

Slate	Count	Freq
DON PERATA BULLET/SOLE	8182	6.8%
DON PERATA JEAN QUAN REBECCA KAPLAN	4931	4.1%
REBECCA KAPLAN JEAN QUAN JOE TUMAN	4674	3.9%
JEAN QUAN REBECCA KAPLAN JOE TUMAN	4329	3.6%
JEAN QUAN BULLET/SOLE	3704	3.1%
DON PERATA REBECCA KAPLAN JEAN QUAN	3404	2.8%
REBECCA KAPLAN JOE TUMAN JEAN QUAN	3320	2.8%
REBECCA KAPLAN JEAN QUAN DON PERATA	2857	2.4%
JEAN QUAN REBECCA KAPLAN DON PERATA	2492	2.1%
JEAN QUAN DON PERATA REBECCA KAPLAN	2431	2.0%
JOE TUMAN REBECCA KAPLAN JEAN QUAN	2378	2.0%
REBECCA KAPLAN JEAN QUAN NULL	2070	1.7%
JEAN QUAN JOE TUMAN REBECCA KAPLAN	2022	1.7%
REBECCA KAPLAN BULLET/SOLE	1823	1.5%
JEAN QUAN REBECCA KAPLAN NULL	1815	1.5%
REBECCA KAPLAN DON PERATA JEAN QUAN	1791	1.5%
DON PERATA JEAN QUAN JOE TUMAN	1762	1.5%
DON PERATA JOE TUMAN REBECCA KAPLAN	1696	1.4%
DON PERATA REBECCA KAPLAN JOE TUMAN	1522	1.3%
DON PERATA JOE TUMAN JEAN QUAN	1464	1.2%
JOE TUMAN JEAN QUAN REBECCA KAPLAN	1447	1.2%
DON PERATA JEAN QUAN NULL	1431	1.2%
DON PERATA JEAN QUAN MARCIE HODGE	1392	1.2%
<i>Total</i>	119838	

Aside from just running an anti-Perata campaign, though, Oakland voters seemed to have understood from the beginning that they should use all of their choices in RCV voting. We see a lot less of this in San Francisco - where anyone-but coalitions fall through and factions are too wrapped up in their own campaigns to support anyone else.

Whether Quan's victory was a fluke or a new parameter in RCV gaming remains to be seen, but it's now clear that a more distant second-place candidate can win if everything breaks her way. I don't expect this kind of transfer in the upcoming San Francisco mayoral, but after Oakland, D2, and D10, campaigns

will need to take the lesser candidates and their supporters more seriously, although I think it's unlikely we'll see a transfer like Kaplan-Quan again anytime soon.

Finally, thinking about what would have happened in a runoff, Table 12 shows the number of ballots on which each candidate was listed. The fact that Quan was on the most ballots overall, and Perata's support came from parts of Oakland with lower turnout, I surmise Quan would have edged Perata out in a runoff. It's possible, though, that with a stronger negative push back at Quan, and good turnout in East Oakland, Perata could have held on.

Table 12: Times on ballot for Oakland candidates

Perata	65652
Quan	70186
Kaplan	64917