2008 POLLWORKER SURVEY

ANALYSIS REPORT

February, 2008 Presidential Primary Election

Prepared By: Paul Drugan
Prepared For: The Los Angeles County Registrar-Recorder/County Clerk
Preparation Date: April, 2008

TABLE OF CONTENTS

Part I: Executive Summary

Continued analysis of the LA County RRCC Poll Worker Survey conducted after the 2008 Presidential Primary Election showed improvements in almost every category. Despite increased turnout and the complex nature of the presidential contest, polling places opened on time, equipment functioned relatively well and Precinct Coordinators continued to assist poll workers with problems they faced at the polls.

For example, 99.7 percent of respondents mentioned that Precinct Coordinators visited them on Election Day, up from 87.9 percent two years earlier. Additionally, 77.3 percent said that Precinct Coordinators contacted them before Election Day, an increase of over 11 percent from two years ago.

There are several areas where improvements can be made, however. Although more than 72 percent of respondents reported that equipment operated properly than they did in 2006, only 32 percent said that the equipment was repaired and 21 percent said it was replaced.

Part II: Background

The Los Angeles County Registrar-Recorder/County Clerk began collecting data from poll worker surveys during the 2006 Gubernatorial Election. This is the second survey to be administered since LA County implemented new InkaVote and InkaVote Plus voting equipment in 2006. The survey was slightly modified from its initial design but the questions remained the same. The only modifications included question rewording and database changes that made data collection and data entry more efficient. These changes are discussed in the Methodology Section below.

As in prior years, Neighborhood Voting Center (NVC) Directors and Inspectors filled out the Surveys. 4,461 surveys were mailed out and 2,485 were returned. This constitutes a 56 percent rate of return and is similar to the 2006 rate of 58 percent.

The survey concentrated on equipment function, Check In Center (CIC) operations and election day Precinct Coordinator support. The survey sought responses regarding whether or not respondent's equipment functioned, what time they dropped off their ballots on election night, what time their machinery was either repaired or replaced and how long their wait was at the CIC.

The survey captured valuable data for analysis purposes. All questions used for analysis were binary ("yes" or "no") or categorical (11:30,12:30, 1:30..etc.). Data was exported, coded and analyzed using SPSS statistical software. Database changes allowed several variables that were not able to be analyzed in the previous 2007 Poll Worker Survey Report to be added to the current analysis. These changes are discussed in **Part 4: Methodology and Justification.**

Part III: Research Aim

The primary goal of this research project is twofold: it seeks to provide scientifically sound data analysis used for programmatic and equipment evaluation, and this and future projects will enable the Registrar-Recorder/County Clerk and RR/CC managers to track improvements and trends over the course of several elections.

Additionally, with data collected from each election type (Presidential Primary, Statewide Direct Primary, Gubernatorial Primary and General Elections) comparative analysis can be utilized to isolate potential variable relationships within and across election types.

Part IV: Methodology and Justification

A. Questionnaire and Database Redesign

Both the survey questionnaire and the database were redesigned in order for data to be collected and entered to facilitate effective analysis.

All questions except questions one and eleven were changed to allow the respondent to select only one choice per question. Previously, most questions were set up so that the respondent wrote in the answer instead of selecting from a set of pre-selected categories (See Appendix B for questionnaire changes). The question changes facilitated an ordered set of categorical or binary (yes/no) choices that could be entered easily into the database and coded for relevant analysis.

The MS Access database was also modified to accommodate the questionnaire redesign and to provide ordered categories to reduce the number of variable recodes.

B. Database Coding and Re-Coding Methodology

Data was imported from MS Access into SPSS for coding, recoding and analysis. Variable fields were renamed and some were recoded to rearrange categories within questions. An explanation of the recoding procedure follows below.

Yes/No answers were given new variable names but were not recoded; only chronological data was renamed and recoded. It was necessary to reorder some chronological information because several database categories did not correspond to logical chronology (i.e. 8:30-9:30 before 7:30-8:30). It was also necessary to categorize and code a new variable (Time Served) that designates how many elections each respondent has served.

The table below shows the MS Access variable name and whether it was binary, numerical or chronological, and the new SPSS data table name. An explanation and justification of each recoded item follows. Note that the new variable names may be different than the previous report but the data remains the same.

Table 1. Variable Changes and Recodes

MS Access Variable Name	Binary/Chron./Numerical	SPSS Variable Name	Recode
Time Served	Chronological	Timeserve	Yes
Drop off time	Chronological	Droptime	No
Wait @ drop off	Chronological	Dropwait	No
Contact w/ Pct Coor	Binary	Coorcontact	No
Did coord visit	Binary	Coorvisit	No
If yes # times	Numerical	Coortimes	No
Voters use ABB	Binary	Abbused	No
Reader/ABB function	Binary	Abbpbrfunc	No
Unit Malfunction	Binary	Malunit	No
Time of malfunction	Chronological	Maltime	No
Was Unit Repaired	Binary	Repair	No
When was unit repaired	Chronological	Repairtime	No
Was unit replaced	Binary	Replaced	No
What time	Chronological	Replacetime	No
[1]PBR Received	Binary	Pbrrecvd	No
DOB	Chronological	Age	Yes
Gender	Binary	Gender	No

o Timeserve was recoded to produce proper chronological time frames. The original data was entered as a string variable (single number) from 0 to 75. The recode grouped numerical data into categories for presentation and measurement purposes (i.e., "0-10, 11-20", etc.)

o Age was recoded to produce age in years and further, proper chronological time frames. The original data was entered as birth date, (mm/dd/yyyy) and calculated to produce age in years. Following that calculation, age in years was grouped into categories for presentation and measurement purposes.

---

[1] The question wording for this item in the survey is faulty and therefore any conclusions based on the inclusion of this variable are suspect. The question read "Never received a PBR" instead of "Did you ever Receive a PBR?" This variable will not be used for analysis.

Table 2. Variable Definitions

SPSS Variable Name	Variable Definition
Timeserve	What time did you arrive at CIC
Droptime	What time did you drop off ballots at CIC
Dropwait	How long did you wait at CIC
Coorcontact	Did Coordinator contact you before election day
Coorvisit	Did Coordinator visit you before election day
Coortimes	If yes, how many times
Abbused	Did voters use the Audio Ballot Booth
Abbpbrfunc	Did your equipment function properly
Malunit	If no, which unit malfunctioned
Maltime	What time was the malfunction
Repair	Was the unit repaired
Repairtime	What time was the repair
Replaced	Was the unit replaced
Replacetime	What time was the unit replaced
Pbrrecvd	Never received PBR
Age	Age Range
Gender	Gender

Source: RR/CC Poll Worker Survey, 2008

C. Data Analysis Methodology

The analysis contains three methods of measurement. These are: frequencies, cross tabulations and correlation measurements.

Frequencies are the number of times an event occurs, calculated numerically (i.e. 356 respondents answered "yes" to question 3), and percentages (47 percent of respondents answered "yes"). The measurement is useful for an overview of complete responses and is used to design charts and graphs for single variables. Frequencies are also valuable to track changes in responses over time.

Cross tabulations are numerical and percentage comparisons of two or more variables over time. Cross tabulations are used in this report to measure potential relationships between two variables or to show the relationship in percent of one variable to another (i.e. 36 percent of African American voters voted for John Kerry). Cross tabulations are beneficial for two reasons: they present findings in tabular form and they can measure

relationships by performing standard statistical tests for linearity. For example, one can determine the relationship between Droptime and Dropwait by a cross tabulation table that applies a correlation measure for the strength of the relationship.

The current analysis uses correlations between two variables, although they can also be used for multiple variables. Correlation measures are presented in Table 5. They show direction and strength of the association. For example, the correlation between Droptime and Dropwait showed a positive and significant relationship with a significance level of .000 (anything above .05 is considered not significant) and a Pearson correlation coefficient of .117 which portrays a weak but significant and positive relationship. Therefore, one could say with .99 percent confidence that the two variables could be related. Further, one could test the hypothesis that the wait time at a CIC depended on when the Inspector arrived to drop off ballots.

The analysis is not limited to variables that show relationships; it also presents findings that have no relationships. These variables are presented in statements such as "(t)here is no statistical evidence that age is related to how long an Inspector waited at the CIC…"

Part V: Research Findings

A. Frequency Reports

The frequency report provides responses to each question included in the survey as well as percentages of responses within the category where the majority of responses reside. Also included in the table below are responses from the RR/CC's 2006 Survey for comparison purposes.

Table 4. Frequency Responses

Variable Name	Grouping[2]	Percentage '08	Percentage '06
Timeserve	1 to 10 times	27.6	N/A[3]
Droptime	9:00-9:30 PM	43.9	47.4
Dropwait	1 hour	97.1	95.2
Coorcontact	Yes	77.3	66.1
Coorvisit	Yes	97.4	87.9
Coortimes	3 Times	50.3	50.3
Abbused	No	89.7	82.2
Abbpbrfunc	Yes	73.8	69.7
Malunit	PBR	70.0	71.8
Maltime	Before 7AM	46.2	28.4
Repair	No	68.8	87.9
Repairtime	AM (6-11:59)	67.0	77.8
Replaced	No	79.0	N/A[45]
Replacetime	Afternoon (12-5PM)	47.8	35.1
Pbrrecvd	N/A[6]	N/A	N/A
Age	62-72	29.9	26.2
Gender	Female	61.0	61.9

B. Cross Tabulations

Cross tabulations are performed to determine which variables have potential relationships and to determine the strength and direction of those relationships. The analysis includes variables with the highest measures of association, making them likely candidates for

●

---

[2] Grouping is the response category where the majority of responses fall.
[3] Figures not available for 2006
[4] 2006 data base category improperly constructed – yes and no answers grouped together.
[5] 2006 data base category improperly constructed – yes and no answers grouped together.
[6] Referenced earlier. Incorrect question wording.

further testing. The variables are listed below and explanations based on cross tabulation analysis follows. Cross tabulation tables for each pair of variables with percentages are included in Appendix C.

- Maltime*Repairtime: The time of the malfunction is related to the time of repair. If a malfunction was reported in the morning it tended to be repaired in the morning.
- Dropwait*Droptime: The time that Inspectors waited at the CIC depended on when they dropped off their ballots. Inspectors who dropped them off later tended to wait longer.
- Coorcontact*Coortimes: If a Coordinator contacted an Inspector before Election Day that Coordinator tended to visit the Inspector more times on Election Day.
- Coorcontact*Coorvisit: If a Coordinator contacted an Inspector before Election Day that Coordinator tended to visit the Inspector on Election Day.
- Malunit*Repairtime: The time of repair was related to the type of equipment that malfunctioned.

C. Correlations

Correlation testing was also performed on the above variables to test the strength, direction and significance of their relationships based on cross tabulation tests. All relationships above proved significant, though moderately weak, and positive. That is, they are probably not independent of each other. There is some evidence that the hypothetical statements following each set of variable relationships above are supported at either the 95th or 99th percentiles.

The following correlation table shows the variable relationships, their correlation coefficient, and the significance of the relationship. Significance is suggested if the value in column three is <.05.

Table 5. Correlation Tests

Variable Relationship	Correlation Coeff. (Pearson's R)	Significant (Y/N)	Direction (+/-)
Maltime*Repairtime	.650	Y (.000)	+
Dropwait*Droptime	.117	Y (.000)	+
Coorcontact*Coortimes	.092	Y (.000)	+
Coorcontact*Coorvisit	.140	Y (.000)	+
Malunit*Repairtime	.226	Y (.030)	+

Part VI: Summary and Recommendations

The analysis shows that, in comparison to 2006, improvements can be seen in almost all areas. Almost all Inspectors (97.1 percent) waited an hour or less at Check in Centers throughout the county. Nearly 11 percent more respondents said their Coordinator contacted them on Election Day and more than 10 percent more said Inspectors visited their polling place on Election Day.

Reported equipment failures dropped nearly 4 percent and the number of respondents who stated that their equipment was repaired if it malfunctioned rose nearly 20 percent. However, 79 percent of respondents mentioned that if their equipment malfunctioned it was not replaced.

Recommendations made in the 2006 report were implemented. This resulted in improved data entry, analysis and database design. Some data was not available in 2006 as previously noted and one question needs to be reworded but the questionnaire is otherwise sound and will be used as a data collection tool from this point forward.

The survey will be conducted in all future countywide elections tracking trends and allowing analysis across all election types.

APPENDIX A

What time did you drop off your ballots?

Bar chart values:
- 8:00 - 8:30 pm: .5% / 1.9%
- 8:31 - 9:00 pm: 12.9% / 15.1%
- 9:01 - 9:30 pm: 47.4% / 43.9%
- 9:31 - 10:00 pm: 30.9% / 29.9%
- 10:01 - 10:30 pm: 6.3% / 7.5%
- 10:31 - 11:00 pm: 1.4% / 1.3%
- 11:01 - 11:30 pm: .3% / .3%
- 11:31 - 12:00 am: .2% / .2%
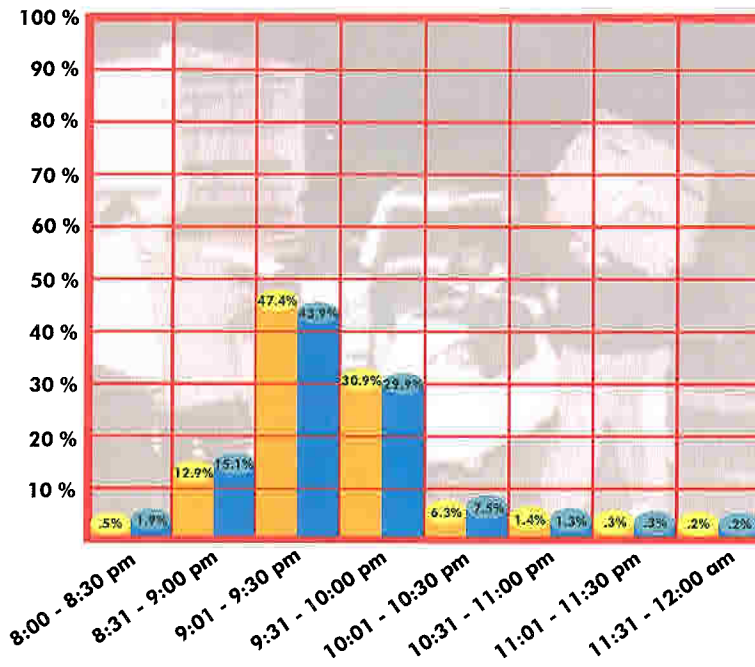
2006

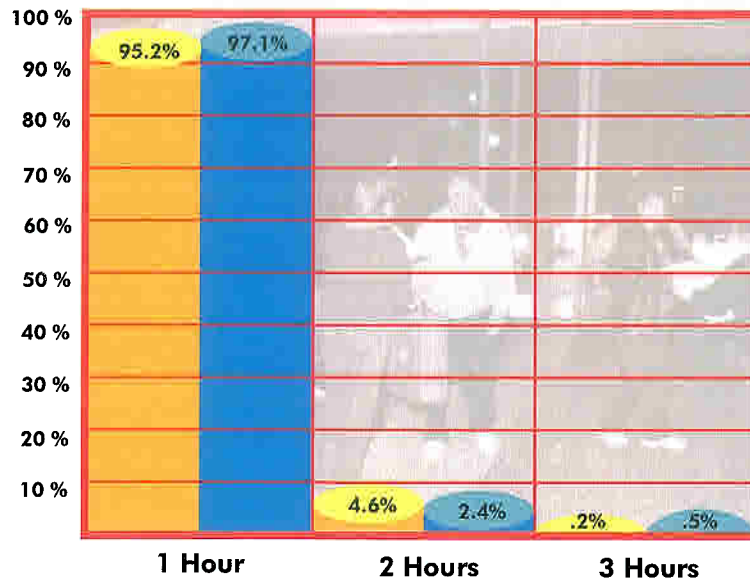| WHAT TIME DID YOU DROP OFF YOUR BALLOTS		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	8:00 - 8:30 PM	19	.5	.5	.5
	8:30 - 9:00 PM	451	12.9	12.9	13.5
	9:00 - 9:30 PM	1657	47.4	47.4	60.9
	9:30 - 10:00 PM	1079	30.9	30.9	91.8
	10:30 - 11:00 PM	221	6.3	6.3	98.1
	11:00 - 11:30 PM	50	1.4	1.4	99.5
	11:30 - 12:00 PM	11	.3	.3	99.8
	9.00	6	.2	.2	100.0
	Total	3494	99.9	100.0	
Missing System		3	.1		
Total		3497	100.0		

2008

WHAT TIME DID YOU DROP OFF YOUR BALLOTS		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	8:00 - 8:30 PM	45	1.5	1.9	1.9
	8:30 - 9:00 PM	366	14.7	15.1	16.9
	9:00 - 9:30 PM	1067	42.9	43.9	60.8
	9:30 - 10:00 PM	726	29.2	29.9	90.7
	10:30 - 11:00 PM	182	7.3	7.5	98.2
	11:00 - 11:30 PM	32	1.3	1.3	99.5
	11:30 - 12:00 PM	8	.3	.3	99.8
	9.00	4	.2	.2	100.0
	Total	2430	97.8	100.0	
Missing System		55	2.2		
Total		2485	100.0		

How long was wait at Check-In-Center?

95.2% 97.1%

4.6% 2.4% .2% .5%

1 Hour   **2 Hours**   **3 Hours**

2006

HOW LONG WAS WAIT AT CHECK-IN-CENTER	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid 0 TO 30 Minutes	2310	66.1	67.6	67.6
1 hour	298	8.5	8.7	76.3
1.5 hours	621	17.8	18.2	94.5
2 hours	155	4.4	4.5	99.1
3 hours	8	.2	.2	99.3
N/A	1	.0	.0	99.3
Other	23	.7	.7	100.0
Total	3416	97.7	100.0	
Missing System	81	2.3		
Total	3497	100.0		

2008

HOW LONG WAS WAIT AT CHECK-IN-CENTER	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid 0 TO 30 Minutes	1771	71.3	75.4	75.4
1 hour	373	15.0	15.9	91.3
1.5 hours	114	4.6	4.9	96.2
2 hours	56	2.3	2.4	98.6
3 hours	11	.4	.5	99.0
Other	23	.9	1.0	100.0
Total	2348	94.5	100.0	
Missing System	137	5.5		
Total	2485	100.0		

Did Coordinator contact you before Election Day? 2006 2008

	NO	YES
2006	33.9%	66.1%
2008	22.7%	77.3%
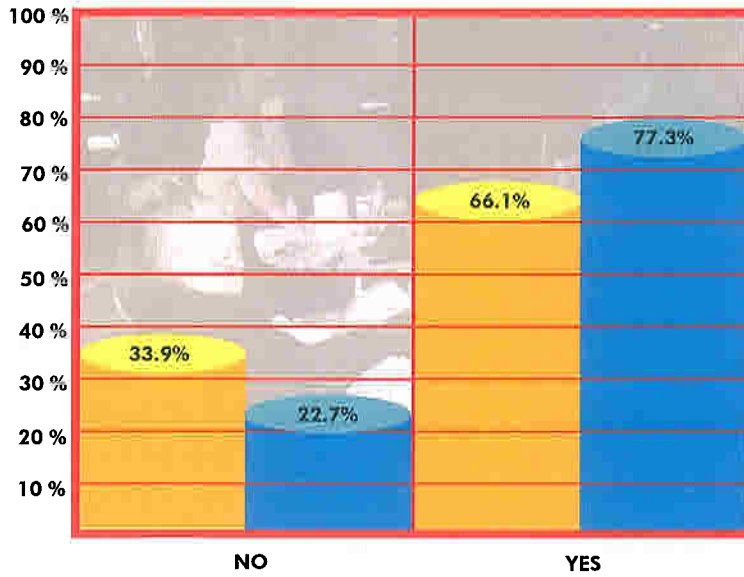
2006

DID COORDINATOR CONTACT YOU BEFORE ELECTION DAY		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	1185	33.9	33.9	33.9
	Yes	2311	66.1	66.1	100.0
	Total	3496	100.0	100.0	
Missing System		1	.0		
Total		3497	100.0		

2008

GENDER		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	553	22.3	22.7	22.7
	Yes	1879	75.6	77.3	100.0
	Total	2432	97.9	100.0	
Missing System		53	2.1		
Total		2485	100.0		

Did Coordinator visit on Election Day?
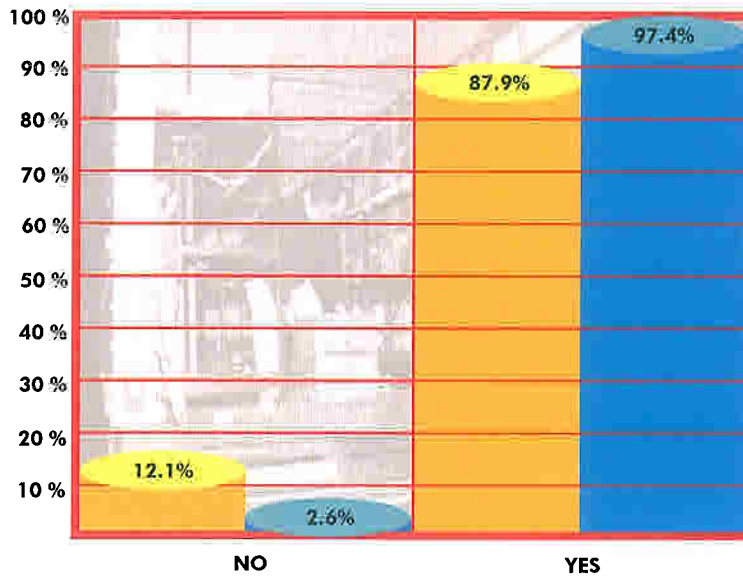
2006

DID COORDINATOR VISIT YOU ON ELECTION DAY		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	423	12.1	12.1	12.1
	Yes	3073	87.9	87.9	100.0
	Total	3496	100.0	100.0	
Missing System		1	.0		
Total		3497	100.0		

2008

DID COORDINATOR VISIT YOU ON ELECTION DAY		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	63	2.5	2.6	2.6
	Yes	2389	96.1	97.4	100.0
	Total	2452	98.7	100.0	
Missing System		33	1.3		
Total		2485	100.0		

How many times did Coordinator visit?
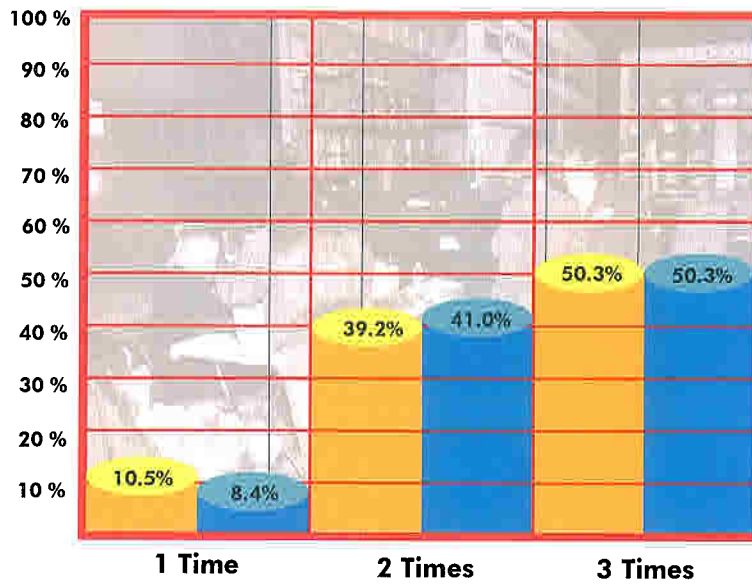
2006

HOW MANY TIMES DID YOUR COORDINATOR VISIT		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	1	315	9.0	10.5	10.5
	2	1178	33.7	39.2	49.7
	3	1512	43.2	50.3	100.0
	Total	3005	85.9	100.0	
Missing System		492	14.1		
Total		3497	100.0		

2008

HOW MANY TIMES DID YOUR COORDINATOR VISIT		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	1	201	9.1	8.4	8.4
	2	981	39.5	41.0	49.4
	3	1209	48.7	50.5	99.9
	4	2	.1	.1	100.0
	5	1	.0	.0	100.0
	Total	2394	96.3	100.0	
Missing System		91	3.7		
Total		2485	100.0		

Did voter use Audio Ballot Booth?

100 % 90 % 80 % 70 % 60 % 50 % 40 % 30 % 20 % 10 %

82.2% 89.7% 17.8% 10.3%

NO   YES
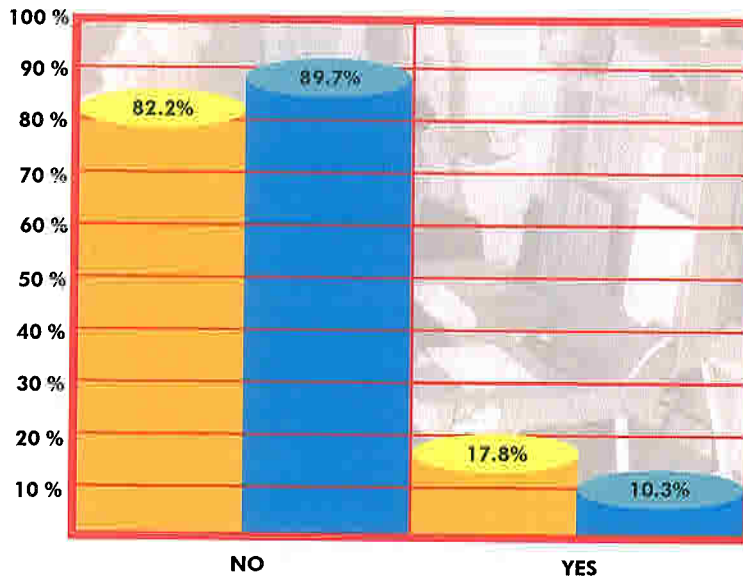
2006

DID VOTER USE AUDIO BALLOT BOOTH		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	2872	82.1	82.2	82.2
	Yes	624	17.8	17.8	100.0
	Total	3496	100.0	100.0	
Missing System		1	.0		
Total		3497	100.0		

2008

DID VOTER USE AUDIO BALLOT BOOTH		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	2195	88.3	89.7	89.7
	Yes	252	10.1	10.3	100.0
	Total	2447	98.5	100.0	
Missing System		38	1.5		
Total		2485	100.0		

Did equipment function properly?

	NO	YES
2006	30.3%	69.7%
2008	26.2%	73.8%
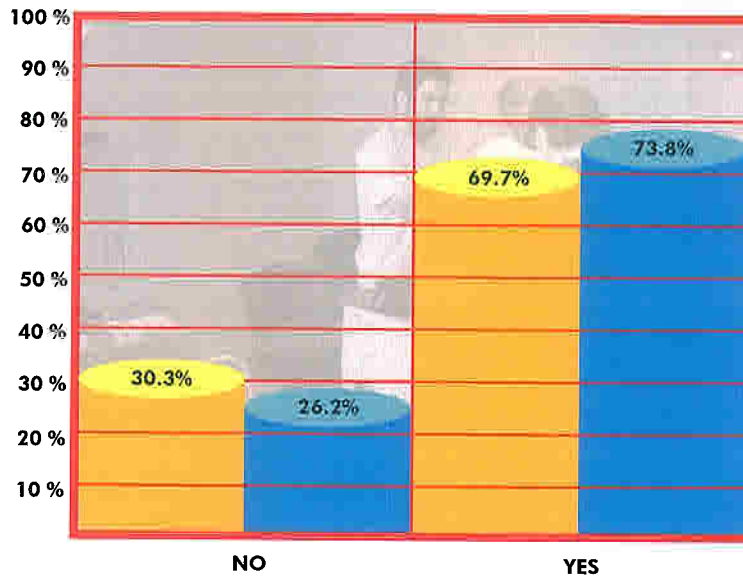
2006

DID EQUIPMENT FUNCTION PROPERLY		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	1060	30.3	30.3	30.3
	Yes	2436	69.7	69.7	100.0
	Total	3496	100.0	100.0	
Missing System		1	.0		
Total		3497	100.0		

2008

DID EQUIPMENT FUNCTION PROPERLY		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	635	25.6	26.2	26.2
	Yes	1786	71.9	73.8	100.0
	Total	2421	97.4	100.0	
Missing System		64	2.6		
Total		2485	100.0		

If unit malfunctioned, which one?
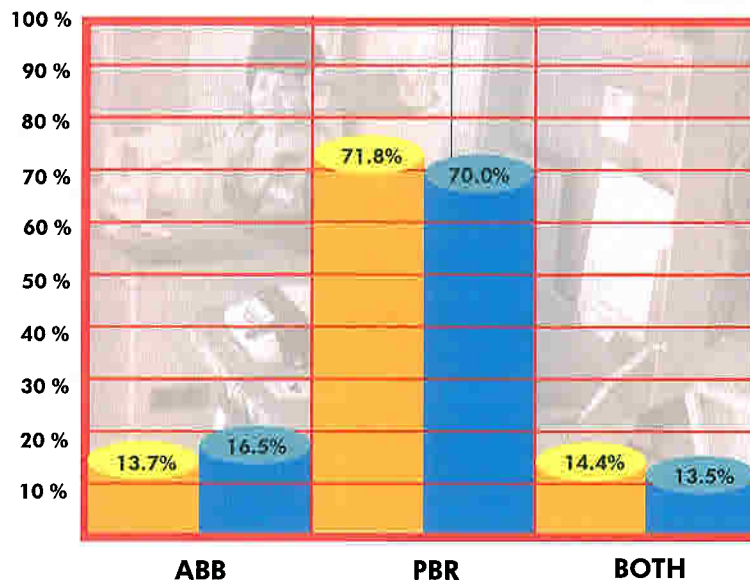
2006

IF UNIT MALFUNCTIONED, WHICH ONE?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	ABB	134	3.8	13.7	13.7
	PBR	701	20.0	71.8	85.6
	BOTH	141	4.0	14.4	100.0
	Total	976	27.9	100.0	
Missing System		2521	72.1		
Total		3497	100.0		

2008

IF UNIT MALFUNCTIONED, WHICH ONE?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	ABB	108	4.3	16.5	16.5
	PBR	457	18.4	70.0	86.5
	BOTH	88	3.5	13.5	100.0
	Total	653	26.3	100.0	
Missing System		1832	73.7		
Total		2485	100.0		

What time did unit malfunction?

Chart axis labels: 100%, 90%, 80%, 70%, 60%, 50%, 40%, 30%, 20%, 10%

Categories: Before 7:00 am, 7:00 - 9:00 am, 9:00 - 11:00 am, 11:00 - 1:00 pm, 1:00 - 3:00 pm, 3:00 - 5:00 pm, 5:00 - 8:00 pm, Other
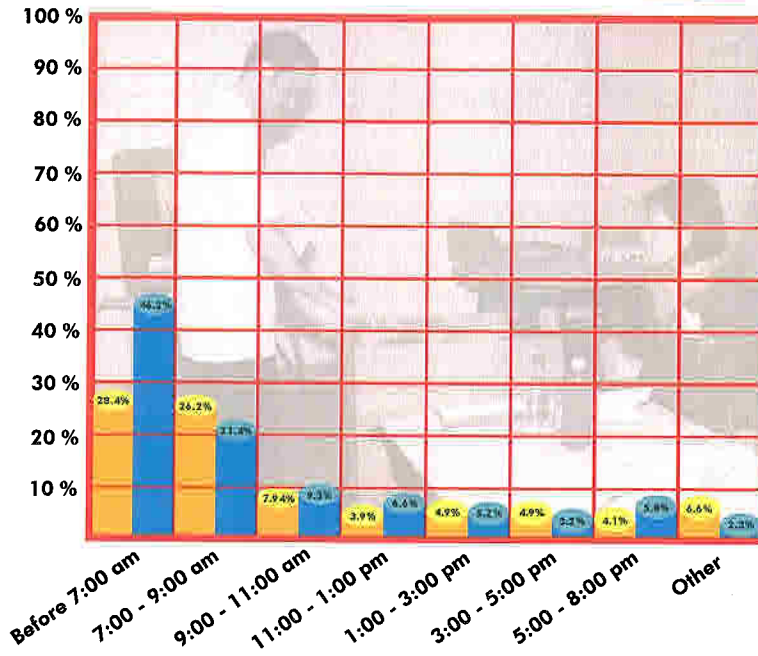
2006

WHAT TIME DID UNIT MALFUNCTION?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	Before 7 AM	277	7.9	28.4	41.4
	7:00 - 9:00 AM	256	7.3	26.2	67.6
	9:00 - 11:00 AM	77	2.2	7.9	75.5
	11:00 - 1:00 PM	38	1.1	3.9	79.4
	1:00 - 3:00 PM	48	1.4	4.9	84.3
	3:00 - 5:00 PM	48	1.4	4.9	89.2
	5:00 - 7:00 PM	40	1.1	4.1	93.3
	Other AM	47	1.3	4.8	98.2
	Other PM	13	.4	1.3	99.5
	Other	5	.1	.5	100.0
	Total	976	27.9	100.0	
Missing System		2521	72.1		
Total		3497	100.0		

2008

WHAT TIME DID UNIT MALFUNCTION?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	Before 7 AM	302	12.2	46.2	46.2
	7:00 - 9:00 AM	140	5.6	21.4	67.6
	9:00 - 11:00 AM	61	2.5	9.3	76.9
	11:00 - 1:00 PM	43	1.7	6.6	83.5
	1:00 - 3:00 PM	34	1.4	5.2	88.7
	3:00 - 5:00 PM	21	.8	3.2	91.9
	5:00 - 8:00 PM	38	1.5	5.8	97.7
	Other	15	.6	2.3	100.0
	Total	654	26.3	100.0	
Missing System		1831	73.7		
Total		2485	100.0		

Was unit repaired?

NO   **YES**
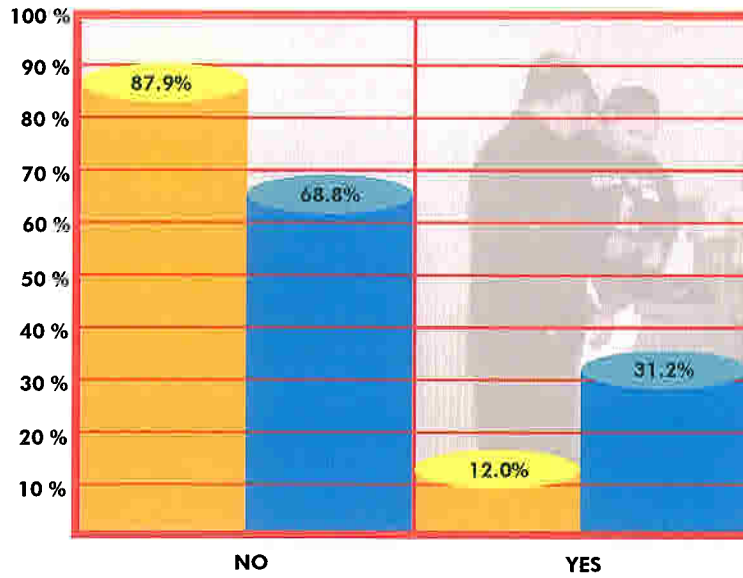
2006

WAS UNIT REPAIRED		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	1	1	.0	.0	.0
	No	3074	87.9	87.9	88.0
	Yes	421	12.0	12.0	100.0
	Total	3496	100.0	100.0	
Missing System		1	.0		
Total		3497	100.0		

2008

WAS UNIT REPAIRED		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	454	8.3	68.8	68.8
	Yes	206	8.3	31.2	100.0
	Total	660	26.6	100.0	
Missing	1	1825	73.4		
Total		2485	100.0		

What time was repair?

	Am 6 - 11:59 am	Afternoon 12:00 - 5:00 pm	PM 5:00 - 8:00 pm
2006	77.8%	21.0%	1.3%
2008	67.0%	27.1%	5.9%
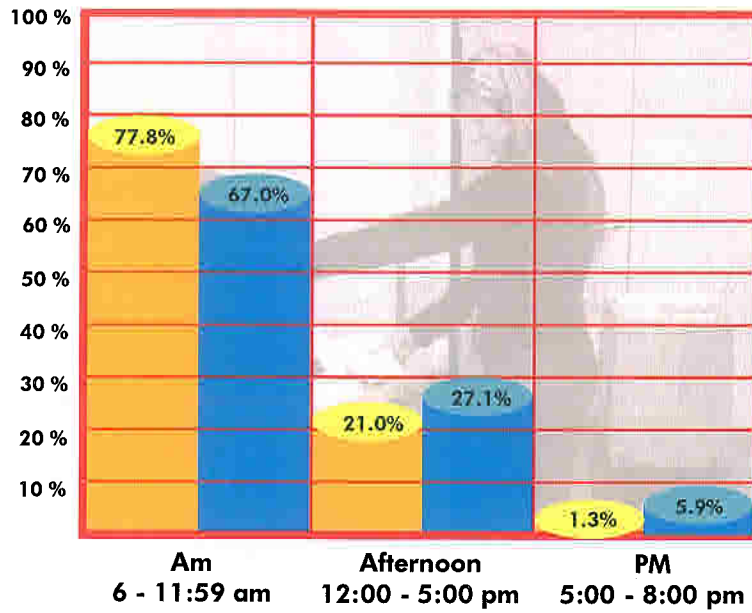
2006

WHAT TIME WAS REPAIR?	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid AM (6 - 11:59)	245	7.0	77.8	77.8
Afternoon (12 - 6)	66	1.9	21.0	98.7
PM (6 - 8)	4	.1	1.3	100.0
Total	315	9.0	100.0	
Missing System	3182	91.0		
Total	3497	100.0		

2008

WHAT TIME WAS REPAIR?	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid AM (6 - 11:59)	126	5.1	67.0	67.0
Afternoon (12 - 5)	51	2.1	27.1	94.1
PM (5 - 8)	11	.4	5.9	100.0
Total	188	7.6	100.0	
Missing System	2297	92.4		
Total	2485	100.0		

Was unit replaced?
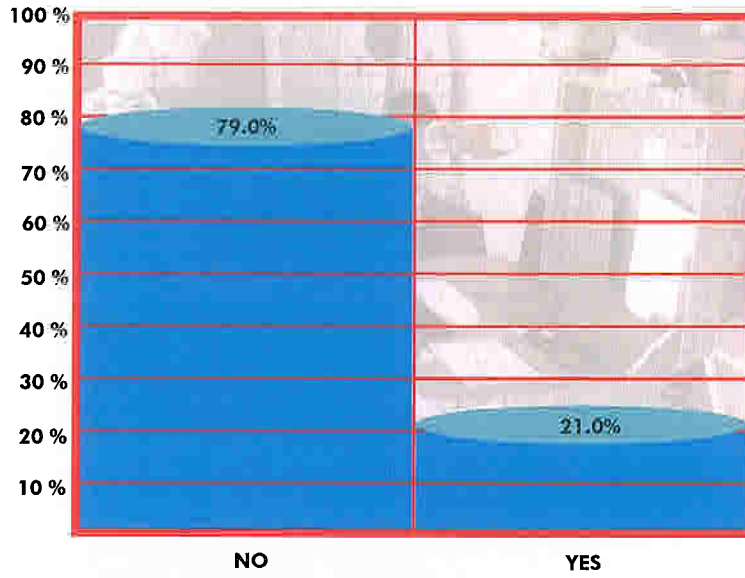
2008				
WAS UNIT REPLACED?	**FREQUENCY**	**PERCENT**	**VALID PERCENT**	**CUMULATIVE PERCENT**
Valid No	471	19.0	79.0	79.0
Yes	125	5.0	21.0	100.0
Total	596	24.0	100.0	
Missing System	1889	76.0		
Total	2485	100.0		

2006 Statistics not available

What time was unit replaced?

	Am 6 - 11:59 am	Afternoon 12:00 - 5:00 pm	PM 5:00 - 8:00 pm
2006	57.1%	35.1%	.3%
2008	45.2%	47.8%	7.0%
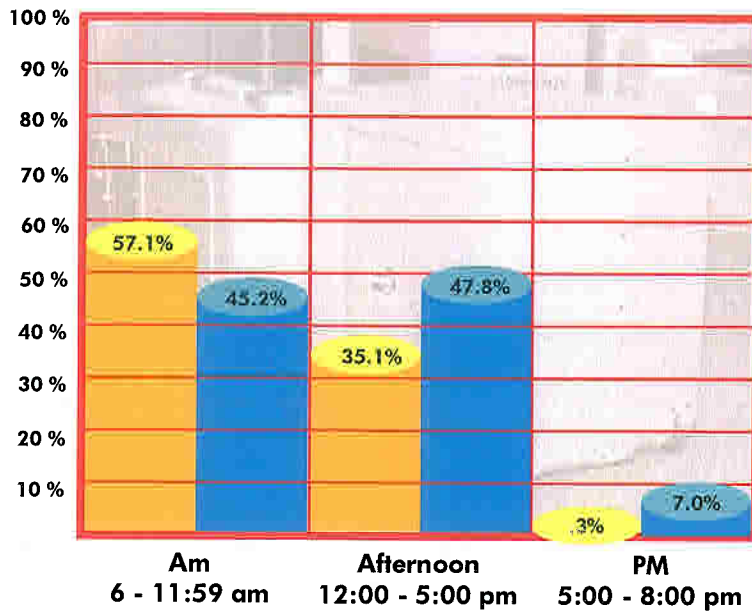
2006

WHAT TIME WAS UNIT REPLACED?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	AM (7 - 11:59)	24	.7	57.1	57.1
	Afternoon (12 - 5)	15	.4	35.7	92.9
	PM (5 - 8)	3	.1	7.1	100.0
	Total	42	1.2	100.0	
Missing System		3455	98.8		
Total		3497	100.0		

2008

WHAT TIME WAS UNIT REPLACED?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	AM (6 - 11:59)	52	2.1	45.2	45.2
	Afternoon (12 - 5)	55	2.2	47.8	93.0
	PM (5 - 8)	8	.3	7.0	100.0
	Total	15	4.6	100.0	
Missing 1		2370	95.4		
Total		2485	100.0		

Did you receive PBR?

- 100 %
- 90 %
- 80 %
- 70 %
- 60 %
- 50 %
- 40 %
- 30 %
- 20 %
- 10 %

58.1%

41.9%

NO

YES
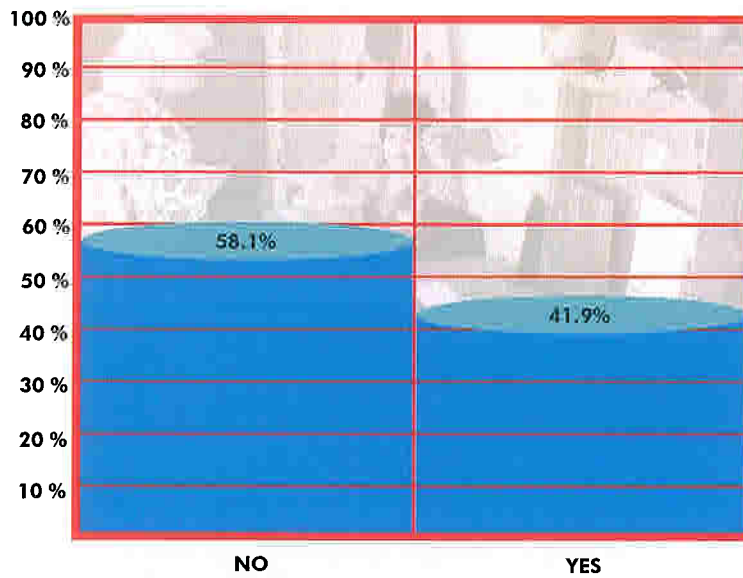
2008

DID YOU RECEIVE PBR?		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	No	151	6.1	58.1	58.1
	Yes	109	4.4	41.9	100.0
	Total	260	10.5	100.0	
Missing	1	2225	89.5		
Total		2485	100.0		

2006 Statistics not available

Age
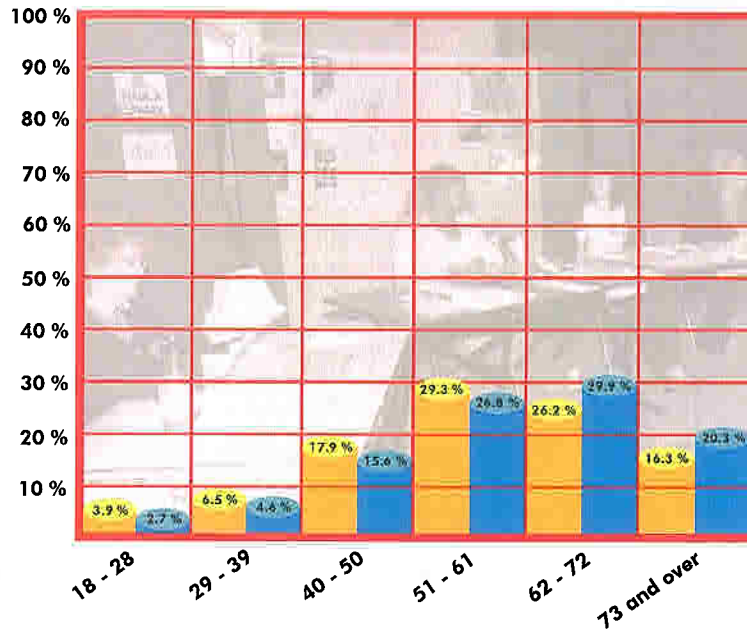
2006

AGE		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	18 to 28	114	3.3	3.9	3.9
	29 to 39	190	5.4	6.5	10.3
	40 to 50	525	15.0	17.9	28.2
	51 to 61	860	24.6	29.3	57.5
	62 to 72	770	22.0	26.2	83.7
	73 and over	480	13.7	16.3	100.0
	Total	2939	84.0	100.0	
Missing System		558	16.0		
Total		3497	100.0		

2008

AGE		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	18 to 28	58	2.3	2.7	2.8
	29 to 39	98	3.9	4.6	7.4
	40 to 50	332	13.4	15.6	23.0
	51 to 61	571	23.0	26.8	49.8
	62 to 72	637	25.6	29.9	79.7
	73 and over	433	17.4	20.3	100.0
	Total	2130	85.7	100.0	
Missing System		355	14.3		
Total		2485	100.0		

Gender
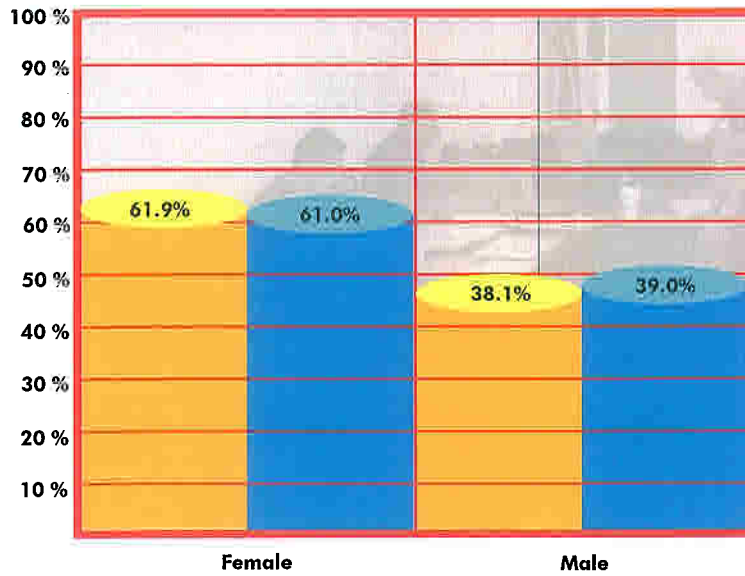
2006

GENDER		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	F	828	23.7	61.9	61.9
	M	510	14.6	38.1	100.0
	Total	1338	38.3	100.0	
Missing System		2159	61.6		
Total		3497	100.0		

2008

GENDER		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	F	1276	51.3	61.0	61.0
	M	817	32.9	39.0	100.0
	Total	2093	84.2	100.0	
Missing System		392	15.8		
Total		2485	100.0		

APPENDIX B

LA County Codebook

2008 Presidential Primary Election

SPSS Variable : 1

Variable Name: Coortimes

Variable Label: How many times did coordinator visit

Coding:
- 1 = 1
- 2 = 2
- 3 = 3

SPSS Variable: 2

Variable Name Droptimea

Variable Label: Drop off time

Coding:
- 1 = 8:00 – 8:30PM
- 2 = 8:30 – 9:00PM
- 3 = 9:00 – 9:30PM
- 4 = 9:30 – 10:00PM
- 6 = 10:00 – 10:30PM
- 7 = 10:30 – 11:00PM
- 8 = 11:00 – 11:30PM
- 9 = 11:30 – 12:00

SPSS Variable: 3

Variable Name: Dropwaita

Variable Label: Drop off wait

Coding   1 = 1 hr.

                2 = 2 hrs.

                3 = 3 hrs

SPSS Variable: 4

Variable Name: Coorcontact

Variable Label: Coordinator contact

Coding: 1 = No

                2 = Yes

SPSS Variable: 5

Variable Name: Coordinator Visit

Variable Label: Did coordinator visit

Coding: 1 = No

                2 = Yes

SPSS Variable: 6

Variable Name: Abbused

Variable Label: Did voters use Audio Ballot

Coding: 1 = No

           2 = Yes

SPSS Variable: 7

Variable Name: Abbfunc

Variable Label: Reader/Audio Function Properly

Coding: 1 = No

           2 = Yes

SPSS Variable: 8

Variable Name: Malunita

Variable Label: Which system malfunctioned?

Coding: 2 = ABB

           3 = PBR

           4 = Both

SPSS Variable: 9

Variable Name: Maltimea

Variable Label: What time was malfunction?

Coding: 2= Before 7AM

              3 = 7 – 9AM

              4 = 9 – 11AM

              5 = 11 – 1PM

              6 = 1 – 3PM

              8 = 3 – 5PM

              9 = 5 – 8PM

              11 = OtherAM

              12= OtherPM

              13 = Other

SPSS Variable: 10

Variable Name Repair

Variable Label: Was unit repaired

Coding: 2 = No

              3 = Yes

SPSS Variable: 11

Variable Name: Replaced

Variable Label: Was unit replaced

Coding: 2 = No

              3 = Yes

SPSS Variable: 12

Variable Name: Whattimea

Variable Label: Time of replacement

Coding: 4 = AM(6-11:59)

            5 = Afternoon(12:00-5:00)

            6 = PM(5:00-8:00)

SPSS Variable: 13

Variable Name Repairtimea

Variable Label: Time of Repair

Coding: 22=AM(6:00AM-11:59AM)

            23=Afternoon(12:00PM-6:00PM)

            24=PM(6:00PM-8:00PM)

SPSS Variable: 14

Variable Name: PBRrecvd

Variable Label: Did you receive a PBR

Coding: 2 = No

            3 = Yes

SPSS Variable: 15

Variable Name: Gender

Variable Label: Gender

Coding   2 = F

                3 = M

SPSS Variable: 16

Variable Name: Agerange

Variable Label: Age Range

Coding: 1 = 18 to 28

                2 = 29 to 39

                3 = 40 to 50

                4 = 51 to 61

                5 = 62 to 72

                6 = 73 and over