

RESULTS OF EXIT POLL ON MAY 2, 2006
by volunteers of the Greater Cleveland Voter Coalition
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Version of July 27, 2006

To the Reader: Please read *Executive Summary* for brief highlights; *Conclusions & Recommendations* for better overall understanding of findings and recommendations; *Design & Results* sections for more detailed descriptions of findings; and *Appendix* for survey instrument and data tables supporting the described Results. The present version includes new statistical analyses not present in the preliminary version presented to the Cuyahoga Election Review Panel on June 9, although the fundamental findings and recommendations are similar.

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EXECUTIVE SUMMARY

The Greater Cleveland Voter Coalition completed exit surveys of 1553 voters at 49 polling places in Cuyahoga County on May 2, 2006, either from 6:30-9:30 a.m. or from 4:30-7:30 p.m. Volunteers were assigned either to “*Problem*” polling places with known reported problems in 2004, or to “*Random*” polling places chosen at random from across the county. *Problem* polling places were of lower income and higher percent African American population than the *Random* places. The latter had similar but not identical demographics to the entire County adult *population*.

Major Findings:

1. On the morning of May 2, a large percentage of voters surveyed (23% at *Problem* polls, 8% at *Random* polls) reported problems voting, in part because voting machines did not function properly, and in part from lack of adequate poll worker guidance. Later in the day, 4% of voters at *Problem* polls and 2% of voters at *Random* polls reported problems voting, presumably because technical problems were fixed and because poll workers had received “on the job training” during the day.
2. *Problem* polling places experienced three times as many problems on the morning of May 2 2006 compared to *Random* polling places. Two facts indicate that these differences were mostly due to poll worker difficulties rather than to selective difficulties either of voters in the *Problem* neighborhoods or the particular batches of machines

supplied to these polls. First, *Problem* polling places were already identified in 2004, when there were no voting machines. Second, voter problems later in the day were about the same at *Problem* and *Random* polling places, yet the demographics of the two groups were different. Therefore, it is likely that later in the day, poll workers had improved and machine problems had finally been fixed, but the voting population had not changed. In other words, the additional 15% of voter difficulties at *Problem* polling places (23% minus 8%) in the a.m. must be attributed to failings of poll worker training, not machines per se.

Although the incidence of problems was clearly correlated with the percentage of African Americans and low income citizens, the data described just above indicate that poll workers and not the voting population were the critical factor. How do we reconcile these findings? We must conclude that poll workers are less well-trained in neighborhoods with high % African Americans or low-income citizens, and that this disparity is perpetuated from one election (2004) to the next (May, 2006). Furthermore, in the absence of any action, selective voter problems and disenfranchisement of voters in low income or high percent African American communities is likely to recur in November 2006. Indeed, the additional burden of complex new rules and ID requirements will almost certainly compound the difficulties and increase this unacceptable inequity, if nothing is done.

3. Other poll worker inadequacies, such as excess issuing of provisional ballots or requests for ID's, may be associated with the incidence of problems voting, but our results were not conclusive.

4. Many voters were uninformed as to the operation and significance of the printer paper trail.

Recommendations:

- Target more highly trained technicians and poll workers to low-income and/or high percent African American polling places to reduce the disparity in successful voting;
- Test and weed out poll workers who do not serve voters well, especially in low-income and high percent African American communities, so that high quality replacements can be made;
- Institute a quantitative accounting system to track whether improved technician and poll worker targeting and training has eliminated income or racial disparities between polling places.
- Improve technician preparation and poll-worker training (see Greater Cleveland Voter Coalition report on Poll Worker training, available around July 31 at www.clevelandvotes.org);
- Expand pre-election voter education on use of voting machines and on paper trail significance and checking;
- Use “teaching machines” at the polls for voters unfamiliar with the new voting machines;

- Ask that the Board of Elections formally commit to broad-ranging policies and practices which redress our current voting system which in many respects, beginning with registration and ending at the polling place, in effect denies the vote to many low-income or African-American citizens (See the Voter Coalition’s report to the Cuyahoga Election Panel, at:
http://urban.csuohio.edu/cei/GCVC_Report_to_Election_Comm_revised.doc)

DESIGN AND OPERATION OF THE SURVEY

Volunteers were randomly assigned to conduct voter exit surveys at either 6:30-9:30 a.m. or 4:30-7:30 p.m. and at two types of polling places: those that had reported 3 to 16 complaints in November 2004 as part of the Election Protection Election Incident Recording System (“*Problem*” polling places), and those chosen at random from a countywide list of polling places (“*Random*” polling places). The ID and names of polling places used in this study are given in Appendix Item 1. The demographics of the two groups (Table 1), based on geographic/demographic 1999 information from Cleveland State University, were quite different:

Table 1 : Demographic characteristics of exit poll groups (expressed as average values for the polling places in each group). % African American refer to population 18 years of age and over. Household incomes are medians of all polling places for each group.

	<i>Problem</i> a.m.	<i>Random</i> a.m.	<i>Problem</i> p.m.	<i>Random</i> p.m.	Cuyahoga County
% African American	60%	31%	65%	22%	25%
Median Household Income	\$29,700	\$40,750	\$25,400	\$39,000	\$40,351

The *Random* group had a significantly higher average income and lower percent of African Americans than the *Problem* group. The median of household incomes of both *Random* groups was similar to that of 573 countywide polling places (\$40,351) whereas the racial composition of the *Random* a.m. group, more so than the *Random* p.m. group, showed a somewhat (and significantly) higher percent of African Americans than the county polling places as a whole. Thus the so-called “*Random*” groups had demographic characteristics similar but not identical to the county as a whole.

The 1533 surveys obtained from 49 polling places as follows:

Table 2.

	<i>Problem</i>		<i>Random</i>	
	a.m.	p.m.	a.m.	p.m.
Number of polling places surveyed	13	13	8	14
Number of surveys obtained	277	428	274	554
Total surveys in each group	705		828	
Total surveys	1533			

The following questions were asked (See Appendix, item 2, for poll format):

- 1: “Did you vote?”
- 2: “Did you have any problems voting?”
- 3: “Did anyone ask you to show identification?”
- 4: “Did you vote a provisional ballot?”
- 5: “Did you have any problems or delays using the new voting machines?”
- 6: “Did the paper record printed next to the machine correctly show the votes you made?”
- 7: “Did you at any time feel uncomfortable while voting?”

Question 6 was dropped because the results were ambiguous – many voters were not even aware of the paper trail even after voting. Instead, we recorded voter comments on this topic as well as other topics in the survey that asked voters for comment (see below). Most volunteers were able to complete 8 to 50 surveys at each polling place (Results from 2 polling places with inadequate number or completion were not used). The median number of surveys collected per polling place was 31. Therefore, in order to compare results, the data used for statistical analyses were the percent of Yes or No answers obtained at each polling place (e.g. % (Yes)/(Yes + No)), and did not include the numbers of voters who gave no response. Answers were obtained to questions 1 and 2 in most surveys, but the number of voters responding to later questions was variable. Therefore, the results from a given polling place to a given question were not included if more than 50% of voters did not give either a yes or no response. The percentage data from the 4 groups (*Problem a.m.*, *Problem p.m.*, *Random a.m.*, *Random p.m.*) were compared using the Mann-Whitney U test, one-tailed, and differences were considered significant if the probability of the result by chance was less than 0.05.

Correlation analyses were done by the NODIS group at Cleveland State University, and the non-parametric Spearman coefficient was considered significant if it fell within a non-zero confidence interval.

Other sub-questions on the poll requested voter comments, and these were treated as described next.

Classification and ranking of voter comments:

Although 5 of the questions on the original survey instrument (Appendix, Item 2) asked the voter to supply a description of the problem encountered, our surveyors instead received a wide variety of comments which they recorded, and which were transcribed. In order to characterize these comments so that we could analyze their frequency, we developed a “comment classification” system (Appendix, item 4), and asked 3 independent observers to review the data from all polling places and classify each comment according to this system. There were 21 classification categories, and a miscellaneous category. The numbers of comments reported by each of the 3 independent observers in each category were averaged to reduce personal bias in this somewhat subjective process. Finally, for each of the four groups (*Problem* poll a.m., *Problem* poll p.m., *Random* poll a.m., *Random* poll p.m.), the average numbers of comments for each classification were ranked, and the top 7 most frequent comments for each group were used for the Results/Discussion section and for conclusions. In most cases, there was perfect agreement between the 3 observers with respect to the 5 most frequent comments, and 1-2 disagreements from the averaged results with respect to the 6th and 7th ranking comment.

RESULTS

I. Responses to specific Yes-No poll questions

In this section, results are discussed from four groups: “*Problem*” polling places were those identified with problems in the 2004 election; “*Random*” polling places were selected at random from across Cuyahoga County. Both groups were subdivided into “a.m.” (6:30-9:30 a.m.) and “p.m.” (4:30-7:30 p.m.) groups. For all questions analyzed, we asked: a) Did *Problem* polling places experience more problems on May 2 than *Random* polling places, and b) Were there differences between a.m. and p.m. results? See Appendix Item 3 for numerical tabulations supporting the following description of results. In the following, the word “significant” means comparisons were statistically significantly different, i.e. had less than 5% chance of being accidentally different; the word “apparent” refers to differences that are worth mentioning but are not statistically significant.

Question 1: “Did you vote?”

About 5% of voters at *Problem* polls were unable to vote in the morning, but by late afternoon, half as many were still unable to vote, and this result was statistically significant. Apparently, the problem was less at *Random* polling places, with again half as many experiencing inability to vote in the afternoon. Indeed, by late afternoon, only a few voters were unable to vote at either *Problem* or *Random* polling place.

Question 2: “Did you have any problems voting?” and Question 5: “Did you have any problems or delays using the new voting machines?”

The results for both questions were very similar, both in magnitude and in the observed statistical differences between different groups of polling places. At *Problem* polls, which started in the a.m. with about 23% of voters reporting problems, the incidence of problems declined (significantly) almost 3-fold by the afternoon (Figure 1). *Random* polls, which began in the a.m. with one-third as many problems as *Problem* polls, also declined 3-fold by the afternoon. In fact, by the afternoon, there was no statistical difference between the percent of voters reporting problems at *Problem* and *Random* polls.

These results do not appear to depend on an accident in the choice of different morning and afternoon polling places. In 8 cases, the same polling places were surveyed both in the a.m. and p.m., and again, a 3-fold drop in percent of problems was observed.

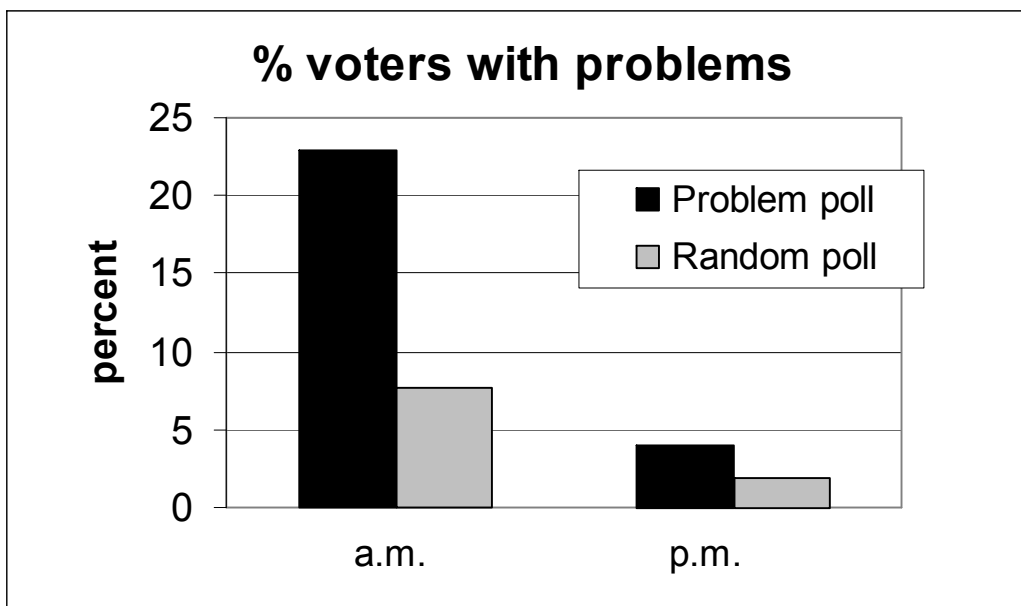


Figure 1

In the preceding, each polling place is treated as a single data point, no matter whether the number of voters responding was large or small. It was important to be sure that the results were not biased by certain polling places with relatively few voters but high percentage of those few reporting problems. Therefore, the individual voter responses at every polling place in each group were tallied and compared between groups (Table 3). Chi-square tests of statistical significance of individual voter responses (Table 3) again showed that in the a.m., *Problem* polling voters reported far greater problems than voters at *Random* polls, that for both *Problem* and *Random* polls, the results in the a.m. were different than in the p.m., and that in the p.m., *Problem* and *Random* voters gave similar results. Thus, the results were very similar to those in Fig. 1, i.e. the same result was obtained whether the individual data points were a single percentage for each polling place or whether they represented all the individual voters who responded in each of the 4 groups.

Individual Voter Responses: “Did you have problems voting?”		
	Yes/(Yes+No)	% Yes
<i>Problem</i> a.m.	63/264	23.9%
<i>Random</i> a.m.	25/258	9.7%
<i>Problem</i> p.m.	24/417	5.8%
<i>Random</i> p.m.	18/542	3.3%

Table 3. Numbers of voters in each group answering Yes or No

Very similar percentages and results and differences between *Problem* and *Random* polls were obtained when, in question 5, voters were asked specifically about problems or delays with voting machines. Also, there was a fair statistical correlation between percent problems at a.m. polling places (*Problem* and *Random*) and percent problems with machines or delays. Therefore, it appears that voting machine delays and problems were the major but not exclusive source of the “non-specific” problems reported in Question 2, i.e. the two questions were somewhat redundant.

The fact that voters had **no** more problems in the afternoon at *Problem* than at *Random* polls is a very important result: it indicates that after a full day of experience, technicians and poll workers were able to manage all polls better and about the same, despite large differences in household income (\$25,400 vs \$39,000) and in % African American citizens (65% vs. 22%) in the two sets of afternoon polling places. Also, if the problems in the a.m. were purely technical and random machine “glitches”, there should be no difference between *Problem* and *Random* polls, but in fact there was a three-fold difference in the a.m. It is also important to remember that the *Problem* polls were chosen because of voter difficulties in 2004, i.e. before the introduction of electronic machines. Therefore, the greater incidence of problems at the beginning of the day were attributable to poorly prepared technicians and poll-workers, who showed later in the day that they were capable of doing better. In addition, greater difficulties at the *Problem* polling places in the a.m. than at *Random* polls indicates that there is an important carryover of poor performance from one election to the next at the same group of polls. This argues for targeting better trained poll workers to known “problem” polls and also doing more intensive training with some type of performance test for all poll workers.

Were the results comparing *Problem* and *Random* poll due to different demographics? If so, demographics of different polling place neighborhoods could be used to predict and therefore prevent excessive problems. Since the demographics of *Problem* and *Random* polls are different (Table 1), to what extent are the results of Question 1 related to either %African American or to household median income?

To investigate these demographic influences, polling place-related census data (kindly supplied by NODIS at CSU) were used to plot, in pooled a.m. data from both *Problem* and *Random* polls, the incidence of problems as a function of percent African American population at each polling place (Figure 2). The correlation between %African American population and % polling place problems was significant (Spearman coefficient -0.4914 with confidence limits -0.7750 to -0.2277). Even in the afternoon, there was still a

correlation of problems with % African American population of the polling place (Spearman coefficient -0.3894 with confidence limits -0.7706 to -0.0081), even though the level of problems was far less (Fig. 1). Thus, especially in the a.m., when problems were pronounced, and even in the p.m. when problems were relatively few, there were more problems at polling places with higher African American populations.

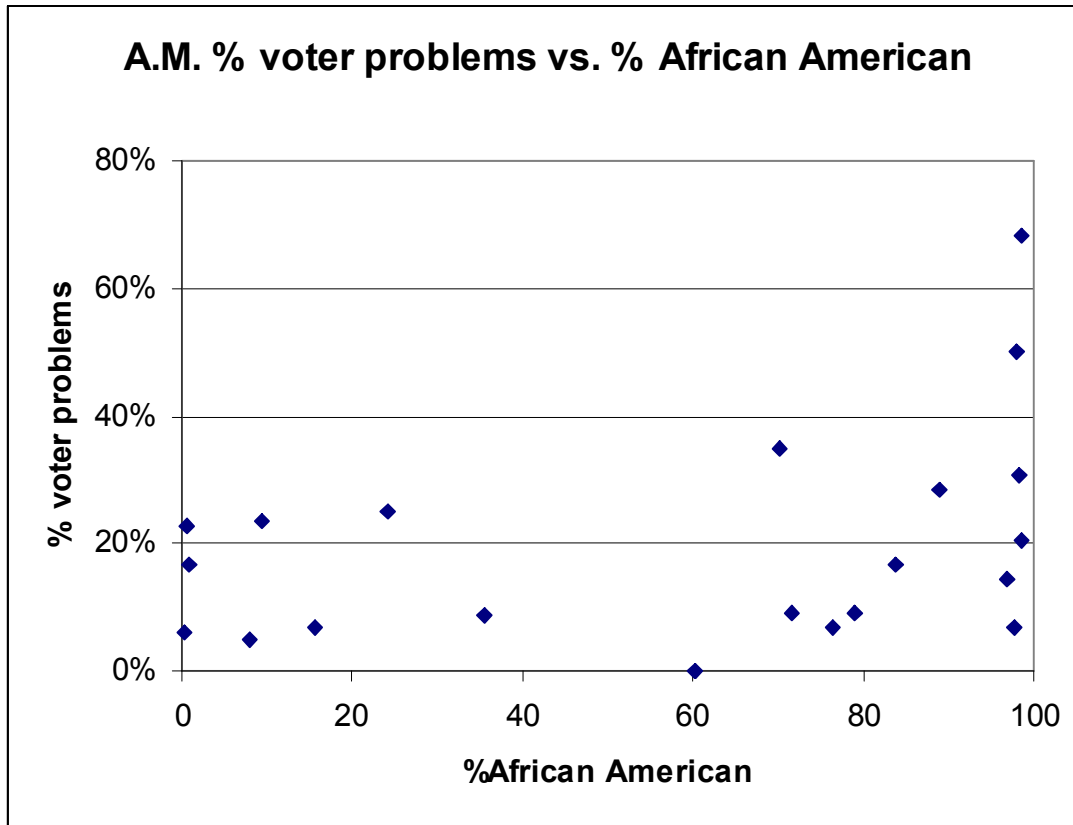


Figure 2.

The combined data from *Problem* and *Random* polls in the a.m. were tested for an effect of median household income in polling place neighborhoods. Polling places where median income was less than \$39,000 had an average of 24% voter problems whereas when median income was \$39,000 or greater, there were only 8% problems in the a.m. (Figure 3). This result was highly statistically significant. In addition, the percent of problems at pooled *Random* and *Problem* a.m. polling places showed a significant negative correlation with household income (Spearman coefficient -0.4914 confidence limit -0.7550 to -0.2277) as did pooled p.m. results (Spearman coefficient -0.3894 with confidence limits -0.7706 to -0.0081).

Taken together, these result suggests that low income and higher percent African American neighborhoods should receive better trained poll workers so that their chances of voting without problems are the same as for all Cuyahoga County citizens.

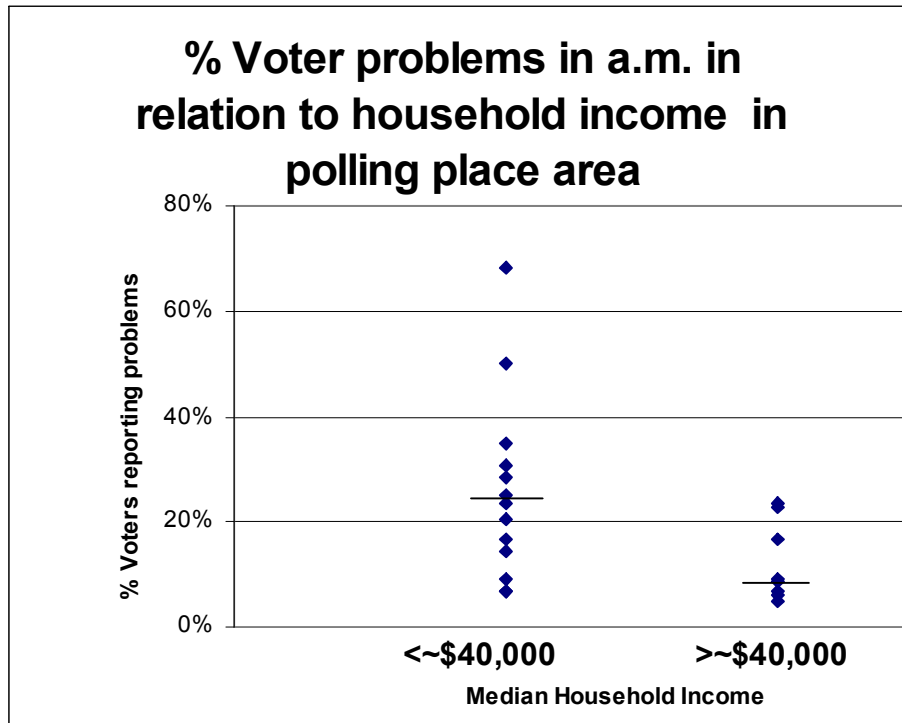


Figure 3. (Short horizontal lines are the median values of the income group)

Questions 3: “Did anyone ask you to show identification?”

Question 4: “Did you vote a provisional ballot?”

Question 7: “Did you at any time feel uncomfortable while voting?”

There was not a significant difference between a.m. and p.m. or between *Problem* and *Random* polls in the responses to these questions. In almost all cases, the incidence of voters reporting ID request, provisional balloting, and feeling uncomfortable was apparently greater at *Problem* than at *Random* polling places. This suggests, but does not prove, that differences in these areas might be found if we had a larger sample size. For now, one can say that the import of these apparent results are consistent with those of questions 1 and 2, discussed above.

II. Voter comments

As explained in the Methods section, the frequency of voter comments on different subjects was related to open-ended survey questions especially about their experiences with the new voting machines and the paper trail printer. Therefore the voter responses naturally tended to be most frequent in the subjects on which they were questioned. The following discussion deals with the 7 (top one-third) most common comments in each of the four groups (*Problem* poll a.m., *Problem* poll p.m., *Random* poll a.m., *Random* poll p.m.) (Appendix, Items 4 and 5).

Voting Machines: As expected, there were more negative comments about the voting machines from voters surveyed in the morning, than later in the day. Many (especially in both a.m. groups) reported that 1 to 3 machines were not working at all, were malfunctioning, or that they needed to wait because of lack of availability of cards or machines. Other comments applied at either time of day. Many (3 of the 4 groups) found the machines confusing and needed time to figure them out. The *Random* group, both in the a.m. and p.m., expressed displeasure with the machine experience, and some said they would vote absentee in the future. In contrast, the *Problem* p.m. group reported a good experience, and as in the *Random* p.m. group, said that people just need to get used to the machines. Three of the 4 groups complained about the lack of privacy while they were casting their votes.

Printers: In 3 of the 4 groups, many voters did not understand that they could lift the flap and read the paper trail, and therefore did not check their votes. Two groups had voters who expected that the printer would give them a receipt for voting. One (*Random* a.m.) group reported that the printers appeared to be malfunctioning.

Poll workers: Some of the *Problem* a.m. group criticized poll workers for being disorganized, while others noted that many had supplied assistance. This contradictory result probably resulted from exposure to a mixture of well- and poorly-trained poll workers. A small number of *Random* p.m. voters also noted they received assistance from poll workers.

“Other comments”. All comments that did not fit into the classification scheme were transcribed, but no major themes emerged.

III. CONCLUSIONS AND RECOMMENDATIONS

1. In the morning hours of May 2, a large percentage of voters surveyed (23% at *Problem* polls, 8% at *Random* polls) reported problems voting with the new machines, in part because they did not function properly, and in part from lack of adequate poll worker guidance. Later in the day, 4% of voters at *Problem* polls and 2% of voters at *Random* polls reported problems. In a large General Election, such as this November, even the problems in the afternoon might involve over 20,000 voters in Cuyahoga County and therefore is unacceptable. The lower percent of voters with problems in the afternoon probably occurred because technical problems were fixed and because poll workers had received “on the job training” during the day.

Recommendations:

- Provide technical preparation and assistance by teams of people separate from regular poll workers, so that voting machines are fully functional by the start of voting, and make such assistance available throughout the day
- Improve training so that poll workers can introduce voters to the new machines and assist them with problems with more knowledge and confidence (See detailed recommendations in “Report to the Cuyahoga County Board of Elections on Poll

Worker Training, revised 7/14/06”, available on the Coalition website (www.clevelandvotes.org) on or about July 31).

- Expand pre-election voter training on machines and on use of the paper trail
- If possible, make “training machines” available at the polls, similar to those used in pre-election voter education, so that voters can become familiar with machine usage without tying up the official voting machines

2. *Problem* polling places experienced about *three times as many problems* on the morning of May 2 2006 compared to *Random* polling places. Two facts indicate that these differences were mostly due to poll worker difficulties rather than to selective difficulties either of voters in the *Problem* neighborhoods or the particular batches of machines supplied to these polls. First, *Problem* polling places were already identified in 2004, when there were no voting machines. Second, voter problems later in the day were about the same at *Problem* and *Random* polling places, yet the demographics of the two groups were vastly different. Therefore, it is likely that later in the day, poll workers had improved and machine problems had finally been fixed, but the voting population had not changed. In other words, the additional 15% of voter difficulties at *Problem* polling places (23% minus 8%) in the a.m. must be attributed to failings of poll worker training, not machines per se.

The incidence of problems was clearly correlated with the percentage of African Americans and low income citizens. At the same time, the data described just above indicate that poll workers and not the voting population were the critical factor. How do we reconcile these findings? We must conclude that poll workers are less well-trained in neighborhoods with high % African Americans or low-income citizens, and that this disparity is perpetuated from one election (2004) to the next (May, 2006). Furthermore, in the absence of any action, selective voter problems and disenfranchisement of voters in low income or high African American is likely to recur in November 2006. Indeed, the additional burden of complex new rules and ID requirements, will almost certainly compound the difficulties and increase this unacceptable inequity, if nothing is done.

Recommendations:

- Based on past history and the findings of this survey, low-income and high percent African American polling places must be targeted with highly trained technicians and poll workers. NODIS has a database of polling place demographics which could be used to select polling places most at risk of problems due to associated historic demographic characteristics. For instance, 207 polling places where the neighborhood household income is less than \$30,000 or the percent African American population is 65% or more, would be good candidates for this special attention. Because of the huge disparity in problems based on race and income that we have found, added to the complexity of new election laws and voting machines, this targeting must begin immediately, so it is in place for the November 2006 elections.
- By the same token, there needs to be testing of current poll workers in order to weed out those who do not serve the voters well, and this should begin in low-

income and high percent African American communities, so that high quality replacements can be made.

- These recommendations are even more pressing with the introduction of complex ID and provisional ballot requirements coming into force in November, which will impose a still added burden on poll workers and voters in African-American and low-income areas, where many will lack Driver's licenses or acceptable ID.
- The BOE should institute a quantitative accounting system with each election to track whether improved technician and poll worker targeting and training has in fact eliminated big disparities in polling place problems related to race and income. Factors such as average voter waiting time, number of voters turned away (rather than offered a provisional ballot) for lack of proper ID, average usage time of voting machines, etc. could be used as indicators.
- Problems with voting machines are the tip of the iceberg. In general, it is time that the BOE commits to broad-ranging policies and practices which redress our current voting system which in many respects, beginning with registration and ending at the polling place, deny the vote to many low-income or African-American citizens (See the Voter Coalition's report to the Cuyahoga Election Review Panel, at: http://urban.csuohio.edu/cei/GCVC_Report_to_Election_Comm_revised.doc)

3. Many voters complained of lack of privacy while they voted on the machines.

Recommendation:

- Consider placement of machines, facing walls and at angles so that voter privacy is ensured. In some polling places, portable barriers may be necessary.

4. Many voters were uninformed as to the operation and significance of the printer paper trail.

Recommendation:

- Institute pre-election voter education on the use and purpose of the paper trail;
- Program instructions on the voting machine screen which explain how and why to check the paper trail against the electronic record; and
- Remove or label the plastic paper cover to instruct voters to flip the cover to review the accuracy of the paper record.

ACKNOWLEDGEMENTS:

Thanks to the 40 volunteers who conducted surveys on May 2.

The following individuals were also instrumental in making this study possible:

Turo Dexter, who organized the assignments and internet sign-up system for volunteers;
Pat Longoria, who organized the input of surveys and did much of the work in recording the data on spread sheets;

Pat Longoria, Mariel Wallace, and Meredith Hellmer, who classified voter comments;
Bonnie Beard, who helped enter, check, and collate the data; and

Mark Salling, PhD, Director, Northern Ohio Data and Information Service (NODIS) in the Maxine Goodman Levin College of Urban Affairs at Cleveland State University, who offered many useful suggestions, supplied polling-place related demographic data, and ran statistical analyses of some of the data. The assistance of Ellen Cyran at NODIS was also invaluable.

Cecil Hickman and Bridget Robbins, for suggestions which helped clarify this report.

(However, Norman Robbins is ultimately responsible for the contents of this report).

**APPENDIX ITEM 1: POLLING
PLACES USED IN EXIT POLL**

Problem a.m. polling places

Polling Place ID	Polling Place name
2300	Alexander Graham Bell Elementary School
3490	Almira Elementary School
2420	Captain Arthur Roth School
2360	Everlasting Baptist Church Annex
2380	Fairhill Center for Aging
4120	Gloria Dei Evangelical Lutheran Church
4285	Holy Name Elementary School
4810	Martin Luther King Civic Center
2210	Mt. Haven Baptist Church
6370	North Randall Village Hall
3460	Robert Fulton Elementary School
7350	Shaker Community Building
7340	Woodbury Elementary School

Problem p.m. Polling Places

Polling Place ID	Polling Place name
2930	New Avenues to Independence
3850	Estabrook Recreation Center
5640	Roosevelt Elementary School
2210	Mt. Haven Baptist Church
4810	Martin Luther King Civic Center
2420	Captain Arthur Roth School
3415	Quinn Chapel Church
6370	North Randall Village Hall
2170	Cory United Methodist Church
2060	Miles Elmerge Apartments
4120	Gloria Dei Evangelical Lutheran Church
7340	Woodbury Elementary School
3150	Ambleside Towers Apartment

Random a.m. polling places

Polling Place ID	Polling Place name
1405	Macintosh Farms
1490	Brook Park Council Chambers
1720	Noble Neighborhood Library
2590	Mt. Pleasant Library
3825	Mill Creek Community Center
4770	Forest Hill Terrace Apartments
6190	Fire Station No. 1
6320	Church of St. Clarence

Random p.m. polling places

Polling Place ID	Polling Place name
1405	Macintosh Farms
1570	Brecksville City Hall
1590	St. Thomas More Church
1610	Brookridge Elementary School
1720	Noble Neighborhood Library
2510	Alexander Hamilton Recreation Center
3040	Cudell Recreation Center
4770	Forest Hill Terrace Apartments
5220	Lewis F. Mayer Middle School
5920	Mayfield Middle School
6541	All Saints Lutheran Church
6920	St. Charles School
7680	Huntington Green
8027	St. Timothy Manor

APPENDIX ITEM 2: Exit Poll, May 2, 2006

Greeting: "Hi. I'm from a nonpartisan group that is polling voters about the new election equipment and procedures. May I ask you some brief questions?"

Yes No NR (=No response)

1. Did you vote? (If the person did not come to vote, do not fill in: thank them and go on to the next person)

2. Did you have any problems voting?
If 'NO' is the answer, skip to Question 3.
If 'YES', describe the problem on the line below and then go to question 2(a).

(Describe problem):

2(a). Did your problem get solved so you could vote?

3. Did anyone ask you to show identification?
If 'YES' what reason did they give you?

(Reason for ID):

4. Did you vote a provisional ballot?
If 'YES', ask 4(a) and 4(b)

4(a). What was the reason?

4(b). Were you told how to follow up and find out if your vote was counted?

5. Did you have any problems or delays using the new touch-screen voting machines?
If 'YES', please describe:

(Describe problem):

6. Did the paper record printed next to the machine correctly show the votes you made?

7. Did you at any time feel uncomfortable while voting?
If 'YES', explain:

(Describe):

If voter had any trouble voting or voted a provisional ballot, ask the following:

Would you please give us your name, address and telephone number so that we could follow-up with you?
(If voter does not wish to do so, thank them for their help and end the interview.)

Voter Name _____ Phone (_____)

Voter E-mail _____

Volunteer: Very important that you fill in your name and indicate a.m. or p.m. on every form.

Volunteer (print last name) _____ **Time (check one)**
____ a.m.: ____ p.m.

APPENDIX ITEM 3: Tabulation of results for exit poll questions

Question Number		Problem a.m.	Problem p.m.	Random a.m.	Random p.m.	Statistically significant differences (p<.05, Mann-Whitney test)			
						Problem a.m. vs. p.m.	Problem a.m. vs. Random a.m.	Random a.m. vs. Random p.m.	Problem p.m. vs. Random p.m.
1	Median of polling place percentages of those who did not vote	0%	0%	0%	0%				
	Number that did not vote	14	2	7	1				
	Number of voters responding	275	428	271	554				
	Percent of responding voters who said they did not vote	5.1%	0.5%	2.6%	0.2%	+	NS	NS	NS
	Number of polling places with at least 1 person not voting	5	2	2	1				
	Number of polling places included	13	14	8	14				
2	Median of polling place percentages of those who had Problems voting	22.9%	4.0%	7.7%	2.0%	+	+	+	NS
	Number of voters who had Problems	63	24	25	18				
	Number of voters responding	264	417	258	542				
	Percent of responding voters who had Problems	23.9%	5.8%	9.7%	3.3%				
	Number of polling places with at least 1 person having Problems voting	12	8	8	10				
	Number of polling places included	13	14	8	14				

		None of these groups statistically significant from each other			
Question Number		Problem a.m.	Problem p.m.	Random a.m.	Random p.m.
3	Median of polling place percentages of voters asked for ID	4.2%	4%	2.7%	3.0%
	Number of voters asked for ID	18	38	38	21
	Number responding to question	169	395	217	438
	Percent responding voters who were asked for ID	10.7%	9.6%	17.5%	4.8%
	Number of polling places where any voters were asked for ID	8	9	7	7
	Number of polling places included	8	13	7	12
4	Median of polling place percentages of provisional voters	0%	0%	0%	0%
	Number of voters who said they voted provisional ballot	5	9	0	1
	Number of responding voters	150	312	130	371
	Percent of responding voters who voted a provisional ballot	3.3%	2.9%	0.0%	0.3%
	Number of polling places where any voter voted a provisional ballot	2	3	0	1
	Number of polling places included	9	11	5	11

Question Number		Problem a.m.	Problem p.m.	Random a.m.	Random p.m.	Statistically Significant Differences			
						Problem a.m. vs. p.m.	Problem a.m. vs. Random a.m.	Random a.m. vs. Random p.m.	Problem p.m. vs. Random p.m.
5	Median of polling place percentages of voters with problems or delays with voting machines	26%	3%	14.3%	2.0%	+	+	+	NS
	Number of voters with problems or delays with voting machines	38	22	26	15				
	Number of voters who responded to this question	167	375	193	527				
	Percent of responding voters who had problems or delays with voting machines	22.7%	5.9%	13.5%	2.8%				
	Number of polling places with any voters who had problems or delays	8	9	5	8				
	Number of polling places included	8	12	7	13				
7	Median of polling place percentages of voters who felt uncomfortable	9.4%	14.1	9.1%	7.2%	NS	NS	NS	NS
	Number of voters who felt uncomfortable	23	53	15	51				
	Number of voters who responded to this question	176	390	191	522				
	Percent of responding voters who felt uncomfortable	13.1%	13.6%	7.9%	9.8%				
	Number of polling places with any voters who felt uncomfortable	9.0	11	4	10				
	Number of polling places included	9	12	7	14				

APPENDIX ITEM 4: Voter comments ranked in order of descending frequency

Bolded numbers are top 7 rankings not including “o” (= “other”)

Codes are explained below.

Problem am sorted by average		Problem pm sorted by average		Random am sorted by average		Random pm sorted by average	
o	36	prnr	70	mng	70	prnr	149
mcn	28	mprv	27	mwa	27	mprv	33
mf n	27	o	27	mnoc	27	o	20
prnr	27	lik	19	mnov	19	mcn	17
poh	23	mus	11	prpr	11	mf n	13
mwa	19	prpr	10	prfn	10	nlik	8
pong	19	mcn	9	nlik	9	mus	8
mng	18	poh	9	mus	9	poh	7
nlik	14	id-	8	pong	8	lik	6
prpr	10	nlik	7	mcn	7	mnoc	5
mnov	9	pong	7	id-	3	prrd	5
mus	9	prrd	6	prrd	6	id+	4
mprv	8	mnovl	5	mprv	5	pong	2
mnoc	7	mf n	5	poh	5	mwa	2
prrd	6	mwa	4	mf n	4	prpr	2
id-	4	id+	3	o	3	prv	2
lik	4	mnoc	3	lik	3	id-	1
prfn	2	prv	3	prnr	3	mnovl	1
wa	2	mnov	3	id+	0	wa	1
mnovl	2	prfn	2	mnovl	0	prfn	1
id+	0	mng	2	prv	0	mng	0
prv	0	wa	0	wa	0	mnov	0

Codes used to classify voter comments, and Explanation of the codes

Code	Explanation
ld-	Asked to identify self because not on rolls or change of address
id+	Asked to identify self because not on rolls or change of address
lik	Liked machines/experience
mcn	Machine/screen confusing, unsure of use, took time to figure out
mfn	Machine not functioning correctly: ballot incomplete, card didn't work, worked slowly, went blank, not sure it recorded vote
mng	1-3 Machines not working at all
mnoc	Machines - no confidence vote recorded correctly or hacked-don't trust
mnov	Couldn't vote because machines unready or not working
mnovl	Couldn't vote first trip because machines unready/not working - Returned later to vote or said would return to vote later
mprv	No privacy voting
mus	Need to get used to machines/experience
mwa	Long wait, delay waiting for cards or machines, slow start
nlik	Overall nonspecific negative experience; i.e., voting absentee next time, did not like new system, etc.
o	other
poh	Asked for/received help
pong	Poll workers not paying attention, didn't know what to do, disorganized
prfn	Printer malfunction: noisy, ran fast
pnr	Printer not read for any reason -- didn't know to look, didn't see the printer output, didn't check it
prpr	Expected/wanted print-out receipt
prrd	Printer output hard to read
prv	Voted provisional - change of address or name not listed
wa	Long wait, delay - no specifics given

APPENDIX ITEM 5: Top one-third most frequent comments received from voters

GROUP	NUMBER OF COMMENTS	COMMENTS
<i>Problem a.m.</i>	28	Machine/screen confusing, unsure of use, took time to figure out
	27	Machine not functioning correctly: ballot incomplete, card didn't work, worked slowly, went blank, not sure it recorded vote
	27	Printer not read for any reason -- didn't know to look, didn't see the printer output, didn't check it
	23	Asked for/received help
	19	Long wait, delay waiting for cards or machines, slow start
	19	Poll workers not paying attention, didn't know what to do, disorganized
	18	1-3 Machines not working at all
Total number of comments received: 273		
<i>Problem p.m.</i>	70	Printer not read for any reason -- didn't know to look, didn't see the printer output, didn't check it
	27	No privacy voting
	19	Liked machines/experience
	11	Need to get used to machines/experience
	10	Expected/wanted print-out receipt
	9	Machine/screen confusing, unsure of use, took time to figure out
	9	Asked for/received help
Total number of comments received: 237		

GROUP	NUMBER OF COMMENTS	COMMENTS
Random a.m.	70	1-3 Machines not working at all
	27	Long wait, delay waiting for cards or machines, slow start
	27	Machines - no confidence vote recorded correctly or hacked-don't trust
	19	Couldn't vote because machines unready or not working
	11	Expected/wanted print-out receipt
	10	Printer malfunction: noisy, ran fast
	9	Overall nonspecific negative experience; i.e., voting absentee next time, did not like new system, etc
Total number of comments received: 213		
Random p.m.	149	Printer not read for any reason -- didn't know to look, didn't see the printer output, didn't check it
	133	No privacy voting
	17	Machine/screen confusing, unsure of use, took time to figure out
	13	Machine not functioning correctly: ballot incomplete, card didn't work, worked slowly, went blank, not sure it recorded vote
	8	Overall nonspecific negative experience; i.e., voting absentee next time, did not like new system, etc
	8	Need to get used to machines/experience
	7	Asked for/received help
Total number of comments received: 286		