

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



FROM: Elections Review Committee

SUBMITTAL DATE:
July 11, 2007

SUBJECT: Report on the November 2006 Election

RECOMMENDED MOTION: That the Board of Supervisors receive and file the attached report, and schedule discussion of this and other election issues at a September Board workshop.

BACKGROUND: On December 12, 2006, Chairman Bob Buster directed formation of an ad hoc Blue-Ribbon panel to review issues arising from the November election. . Five county residents -- Lynn Baldi, Kay Cenicerros, Marcia McQuern, Rob Taylor and Jim Ward -- were appointed to the panel. They met several times, and issued an interim report to the Board on April 24.

Since that time, the committee has held several study sessions, and consulted with the office of the Secretary of State. The Secretary of State is currently testing the electronic voting system used in Riverside and is expected to issue an opinion early next month. The attached report recommends that the county "transition away from the current voting system as soon as practical and move to a hybrid voting system..." subject to the Secretary of State's review.

A Board workshop with the Registrar of Voters has been tentatively scheduled for September.

Kathryn Field

Kathryn Field, Principal Management Analyst

FINANCIAL DATA	Current F.Y. Total Cost:	\$ 0	In Current Year Budget:	n/a
	Current F.Y. Net County Cost:	\$ 0	Budget Adjustment:	n/a
	Annual Net County Cost:	\$ 0	For Fiscal Year:	n/a

SOURCE OF FUNDS: n/a	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION: APPROVE

BY *Kenneth M. Mohr*

Kenneth M. Mohr

County Executive Office Signature

Dept Recomm.: Consent Policy
Per Exec. Ofc.: Consent Policy

Prev. Agn. Ref.: 3.11 of 4/24/07 | **District:** all | **Agenda Number:**

3.25

July 7, 2007

Chairman John Tavaglione
Supervisor Bob Buster
Supervisor Jeff Stone
Supervisor Roy Wilson
Supervisor Marion Ashley

Re: Election Review Committee

Dear Chairman Tavaglione and
Members of the Board,

Our Election Review Committee (ERC) has met fifteen times including an organizational meeting on January 31. Since our formation we have held three noticed formal public hearings (totaling almost nine hours); four meetings with the Registrar of Voters, including a presentation by Sequoia Services; one meeting to update the Board of Supervisors on our progress, and three group study and writing meetings.

Our committee has spent many hours of research into the benefits and problems with electronic voting. Our committee has also researched the experience of several California counties, notably Alameda County, which has created a hybrid system which allows voters to vote using paper ballots using optical scanners to create a record.

It is not possible to accurately assign motives to the public for casting paper ballots at polling places; through absentee votes, or through electronic record. We do know that 40-43% of voters in Riverside County cast paper ballots. The increasingly large minority vote for paper ballots does suggest, however, an ongoing trend. We certainly recognize the influence of long commutes which shorten the opportunity to vote on Election Day, as noted by long lines of voters at some election sites in Riverside County.

The Election Review Committee has also studied the benefits of Riverside County's Sequoia System as a major election tool. Widely used and lauded just a few years ago, concerns with electronic voting, including its 3% error rate, have led to extensive discussion. These issues are of concern to our committee and to county voters, many of whom are concerned.

A summary of recommendations will be readied by July 9 for your packet for the July 17 meeting of the Board of Supervisors.

Sincerely,


Kay Cenicerros, Chairman

Election Review Committee Report
to the
Riverside County Board of Supervisors
July 10, 2007

The Charge

In the wake of complaints about the conduct of the November 2006 elections, the chairman of the Riverside County Board of Supervisors appointed an Election Review Committee to study “problems arising from the recent election.”

Committee members are Lynn Bogh Baldi, board member and former president of the Beaumont Chamber of Commerce and of The Community Foundation; Kay Cenicerros, retired Riverside County Supervisor and retired dean of Mt. San Jacinto College; Marcia McQuern, former editor and publisher of The Press-Enterprise; Robert Gregory Taylor, retired Superior Court judge; James Ward, retired state appellate court justice; Mrs. Cenicerros was selected chairman of the committee.

Their charge was to “broadly review the election” including voting and counting efficiency; security; delays for voters at the polls; problems with voting machines; training and deployment of poll workers; timely mailing of absentee ballots; other factors impeding the count of absentee, paper and provisional ballots; the official posting of results at polling places; and appropriate election observer access.

Executive Summary

The committee concludes that while there were many problems and frustrations with the November 2006 election, Riverside County voters’ intentions were not compromised.

The Registrar of Voters already has addressed many of the security and transparency problems noted during the committee’s review.

The committee unanimously makes the following additional recommendations:

1. Move as quickly as possible to a hybrid voting system whereby able-bodied voters mark their preferences on paper ballots which are then counted by optical scanners. *See explanation below.*
2. Place a prominent sign at every voting site letting voters know they are entitled to cast a paper ballot if they would rather not use an electronic voting machine.
3. Do not provide extraordinary absentee ballot pickup measures for some voters or communities that are not provided for all.
4. Reduce as much as possible the time lag between removal of voting machines from the Registrar of Voters’ warehouse and their Election Day use. Secure voting machines delivered to voting locations behind locked doors until Election Day.
5. Better educate the public on the process for casting absentee ballots, particularly when they must be mailed back and on the permissibility of polling place delivery on Election Day.
6. Implement the Secretary of State’s requirements for an Election Observer Panel in a timely manner. Appointers should be encouraged to rotate members at least biennially to broadly acquaint the public with the election process.

7. Designate at least one private voting booth at every voting site for casting of paper ballots.
8. Severely restrict physical access to the tabulating room, as allowed by Election Code 15204.
9. Provide a more transparent and secure post-election one-percent manual count by making public the process for randomly selecting the precincts to be checked (including perhaps posting on the web), giving proper notice of the selection time and reducing as much as possible the length of time between the selection of precincts for the manual count and the start of the audit.
10. Install video cameras to record activity in all areas of the central tabulating room with displays of each camera's view in a public room.
11. Verify that election results are posted at every voting location.
12. Recruit Election Day workers aggressively and train them well ahead of elections. Public advertisements including in utility bills, fliers, and invitations at senior centers should be considered, as well as public recognition for workers' service.
13. Take advantage of the city clerks' willingness to help find polling places, recruit poll workers and even be trained to change voting machine paper.
14. Consider formal agreements between the county and each city on election services that the county will provide, including how the charges for such services are calculated.
15. Hold quarterly meetings between the Registrar of Voters and city clerks, including a post-mortem meeting after every election.
16. Provide a forum for public input on election issues hosted by the Registrar of Voters at least annually.
17. Consider hiring a consultant to review the Registrar of Voters security procedures.

The Committee's Process

Thirteen meetings of the Election Review Committee were held:

January 23– 9:00-10:40 a.m. An organizational meeting with three county staff members present as well as representatives of Save-R-Vote, League of Women Voters and others. Kay Cenicerros was elected chair and a schedule of future meetings was set. The committee requested that its next meeting include Registrar of Voters Barbara Dunmore.

February 8– 9:00-11:00 p.m. A tour of the Registrar of Voters' facilities conducted by Registrar Dunmore with a limited number of public observers. The operation of electronic voting machines was demonstrated as was verification of signatures on absentee ballots. Ballot collection and counting processes were explained and staffing, equipment and security measures were discussed.

February 21- 6:30 to 9:00 p.m. The first of three formal public hearings. Several dozen people were present at Kay Cenicerros Community Center in Sun City. Eleven of them spoke, raising concerns about election procedures and problems. Some submitted written comments. These included the Perris City Clerk and her deputy who offered to work with the Registrar of Voters on solving problems. A member of the Save-R-Vote organization videotaped this and other public meetings of the committee and county staff took notes at these meetings, as well.

March 12- 6:30-9:00 p.m. The second public hearing in the Riverside Central Public Library. Fourteen members of the public spoke. Many of those in attendance also had appeared at the Sun City meeting and the many of the same concerns were expressed.

March 30- 9:00-11:30 a.m. The third formal public hearing at Palm Desert City Council Chambers. (Committee member Marcia McQuern was absent due to weather-related airline flight cancellations.) A large audience included city clerks, election volunteers, persons with disabilities and others. Guest speaker Harri Hursti spoke of the potential for hacking computers if given enough time. He noted that a Diebold system had been successfully hacked after many hours of effort. It was the only successful hacking of electronic voting machines known to Mr. Hursti, who said he had not examined nor had any experience with the Sequoia electronic voting system Riverside County uses.

April 17 – 6:30 p.m. Planning meeting to identify research needed.

April 20- 2:30-4:30 p.m. A second meeting with the Registrar of Voters to discuss the voting process in detail. Registrar Dunmore clarified electronic voting issues and safeguards on voting machines and also acceptable behaviors by members of the public near voting and counting processes. She described several

planned security improvements to deal with issues raised at committee hearings and in e-mails to the committee.

April 24- 9:00 a.m. The committee briefed the Riverside County Board of Supervisors on the committee's progress and noted that considerable work still needed to be done prior to submitting any recommendations.

May 2- 8:00-11:05 a.m. A two-hour presentation by Sequoia Voting Systems was followed by a one-hour discussion of the technology. Committee members also heard of pending changes in technology, changes in partial ownership of Sequoia and third party testing of the equipment.

May 18- 9:00-10:30: a.m. A public meeting at the County Administrative Building to hear reaction to the Sequoia presentation and additional issues. City clerks, a member of the League of Women Voters, and numerous representatives of the Save-R-Vote organization expressed their concerns about electronic voting. Most of the audience had been present at two or more previous hearings and most of the issues had been raised before.

May 19-10:00 a.m.-3:00 p.m. The Committee researched applicable law on elections and tentatively defined the issues that would be dealt with in the committee's report.

May 31, 2007 8:00.-10:20 a.m. – The Committee met with the Registrar of Voters and staff to clarify its understanding of several procedures.

June 23- 10 a.m.– 3 p.m. Committee members came to agreement on their recommendations and worked on writing their report to the Board of Supervisors.

In addition, committee members reviewed the Riverside County Registrar of Voters report on the election, citizen group reports, the Secretary of State's plans for a top-to-bottom study of electronic voting, news articles on voting, more than 200 emails from interested parties, national reports on voting integrity, relevant portions of the Election Code and a documentary on electronic voting.

Committee members (except for James Ward) also participated in a conference call with voting security expert David Jefferson, Ph D, chair of the Secretary of State's current review.

Individual members also reviewed additional county reports on elections and interviewed individual city clerks, the Alameda County Registrar of Voters and ordinary county voters.

See Appendix for detail on electronic voting research

The Problems

Delays to vote

There were long lines at some voting places, resulting in some potential voters leaving before voting and others voting well past 8 p.m.

This was caused by:

- A. People taking longer to vote because of an unusually long ballot,
- B. Miscalculation of how many voters would show up at polling places which were equipped with either five or 10 voting machines,
- C. Machines malfunctioning and machines running out of paper with no one on site to install a new roll. Voters had to wait until a "ranger" could arrive with a new paper roll and install it.

The committee notes that the Registrar of Voters plans to have technicians trained to change paper at each polling place in future elections

Delays in election results

Results of some races were not known for weeks.

This was caused primarily by late receipt of a high volume of absentee ballots, including some hand carried to polling places by voters. Contributing to this late surge in absentee ballots, besides procrastinating absentee voters, were:

- A. Late turn-in-your-absentee-ballot campaigns by the two major political parties,
- B. Delivery directly to nearby polling places by postal workers in some areas of absentee ballots picked up Election Day from mailboxes. These ballots otherwise would have gone uncounted because they would have arrived at the registrar's office after Election Day.

Also contributing to the delay in results were:

- A. An antiquated absentee vote counting system requiring a four- to six-hour cessation of all processes to generate an update,
- B. A holiday three days after Election Day meant that the Post Office was overwhelmed by its own mail backlog so could not take the time it usually does to sort paper ballots by precinct to prepare for counting the ones left at polling places,
- C. Voters avoiding polling place lines by using paper ballots that had to be counted like absentee ballots.

The committee notes that the Registrar is planning to upgrade the absentee voting systems.

Security lapses

Voting machines were left unsecured at polling sites for days before and after the November election. Security seals on red transport bags were broken to check for voting cartridges otherwise invisible. There was no video surveillance of the Registrar of Voters' warehouse where voting machines are stored. Required chain-of-custody signatures were sometimes missing. Collection points were sited in sometimes dark parking lots. There was a long lag between the selection of precincts for the 1 percent manual recount and the actual counting.

The committee notes that the Registrar is working on plans to seal and lock up voting machines at polling places and provide new transparent transport bags with better seals. Warehouse video surveillance is being put in place. The committee urges the ROV to use collection points in lighted buildings.

Lack of transparency

Observers at election headquarters could not see all the terminals processing votes. The Election Review Committee does not consider the inability of the public to read everything on the computer screens in the tabulating room a lack of transparency and inappropriate.

There was no public explanation of how precincts were randomly selected. The committee encourages public education of the process of precinct selection while assuring a reasonable geographic distribution. would be counted manually for the post election audit.

Irregularities

Some voters were pressured to vote electronically, rather than be given a requested paper ballot. Also, some polling places ran out of paper ballots. Users of paper ballots did not always have a private place to mark their ballots. It was reported that some polling places were difficult for the disabled to access. Results were not posted at some polling places, particularly schools whose officials were worried about the security of their students with strangers coming on campus to check voting results.

The committee notes that the Registrar is moving away from schools as polling places. The committee encourages early establishment of appropriate polling locations.

Communication with City Clerks

City clerks have been frustrated with late information about election procedures, with their treatment by Registrar of Voters staffs, with their lack of involvement in selecting polling places, with their inability to obtain frequent updates on their elections and with confusion about what services the county would provide at what cost. City clerks have volunteered to assist on Election Day.

The committee notes that the Registrar has begun a newsletter with election information for city clerks and has been meeting with them to discuss issues.

Difficulty in recruiting election workers

The influx of new residents who commute long distances has made it difficult to recruit Election Day workers, more of whom are needed because of the county's growth. Fewer volunteers are willing to work eight or more hours on Election Day.

The committee notes that the Registrar now is allowing two people to split a shift in order to attract willing volunteers who cannot work full election day shifts.

Aggressive observers

Calling themselves part of a voting integrity movement, some citizens believe they have the right to move freely around voting machines and counting equipment and to closely monitor every action of county election workers. A few refused instructions to leave secure areas and not interfere with election workers.

Distrust of electronic voting machines

Some strongly believe that electronic voting machines are vulnerable to hacking and therefore should be abandoned. Some also believe no computers should be used in counting because their inner workings cannot be observed. Some are so passionate on these subjects, that they have made false statements to the Election Review Committee, have harassed Registrar of Voters Office personnel, and wasted both the committee's and the Board of Supervisors time with repetitive presentations.

Riverside County's Electronic Voting System

Introduction

This section of the report reviews the county's current electronic voting system as well as an alternative system. The alternative system consists of three components: (1) paper ballots counted by precinct-based optical scanners; (2) centrally located high-speed scanner(s) for counting absentee ballots and any ballots that haven't been counted at polling locations; and (3) touch-screen units at polling locations to provide access for disabled voters in compliance with the Help America Vote Act (HAVA). This alternative is called a hybrid system, similar to that used by Alameda County. As is further set forth below, the committee recommends transitioning to the hybrid system as soon as practical.

As observed later in this report, two important factors may serve to significantly minimize the financial impact such a transition will have on the county: (1) The county is already preparing to replace its out-dated absentee ballot system—including central scanners; and (2) the county already owns the touch-screen units that would be used in the hybrid system. Thus two of the three components of the hybrid system will soon be in place, minimizing the additional capital outlay necessary to transition to a hybrid system.

The Current System

The county uses both a paper-ballot system for absentee voters, and electronic touch-screen units for voters who cast their votes at polling locations. Close to 41% of voters vote by absentee ballot in Riverside County. It is understood the county is in the process of considering a new absentee ballot system.

The electronic touch-screen voting system used by Riverside County is manufactured and distributed by Sequoia Voting Systems. This system utilizes the AVC EDGE Direct Record Electronic (DRE) voting unit with a Voter Verified Paper Audit Trail (VVPAT). This system is often called a "DRE with VVPAT." However, this report will refer to this system simply as a "touch-screen" system and sometimes, as a "touch-screen with paper trail." Riverside County has 3,700 such units. The system also includes a centrally based computer running proprietary software developed by Sequoia. The software is used to program the touch-screen units with the ballot definitions for each election and to tally the results of all votes cast at each election.

The original touch-screen system was acquired in 2000. Riverside County was the first county in California to acquire an electronic voting system. The original touch-screen units did not have a paper trail feature. The second iteration of the system added the paper trail feature.

The Expected Benefits

The original system was approved after extensive review, study and recommendation by a task force appointed in 1999 for this purpose. Hearings were noticed and held. So far as this committee is aware, there were no objections voiced to the Board of Supervisors. The decision to acquire the touch-screen system was based on the best information then available and was both justified and well considered. The touch-screen system was presented as having many advantages over the old paper ballot system. It was expected to provide such benefits as faster processing of votes, increased ease of voting and administration, accessibility for disabled voters, cost savings of \$500,000-\$600,000 a year, enhanced accuracy and auditability of ballot tabulation, greater public confidence, reliability, protection against over-votes and unintentional under-votes, ensuring clear voter intent and reduction of the perception of fraud due to enhanced security with electronic programming. *See: An Examination of Electronic Voting Technology for Riverside County, submitted by the Electronic Voting Technology Task Force (June 8, 1999).*

Some of these benefits were realized: Faster counting of votes, access for disabled voters, protection against under-voting and over-voting and clarification of voter intent by avoiding ambiguously marked ballots.

However, many of the remaining benefits failed to materialize. While the system itself counted votes faster than the older system, but that was of little help in the November 2006 election, which saw long delays at polling locations due, in part, to technical malfunctions and running out of paper. Additionally, there were further delays in counting absentee ballots.

The Experience

Experience shows the current system has failed to meet expectations in some key areas:

(1) Reliability: The promise was increased reliability. However, in November, 2006, malfunctions of touch-screen resulted in a number of units being taken out of service. The malfunctions include, among others: (1) activator cards getting stuck in the machines; (2) improperly programmed activator cards that did not work; (3) printers running out of paper; and (4) paper jams in the printers. These problems significantly contributed to the delays in November 2006.

(2) Voter Confidence: Instead of the promised increase in voter confidence, just the opposite occurred. The lack of transparency, the reports of errors in other touch-screen machines across the nation, and opinions by experts in the field of election security, have raised serious questions about the security of touch-screen systems.

The committee has found no evidence of any errors or defects in the Riverside touch-screen system. Voters

can rest assured that, to date, our system appears to have accurately recorded and tallied all votes. However, the lack of voter confidence cannot be ignored. Such lack of trust is in large part due to the system's inherent lack of transparency. That is to say, voters cannot meaningfully observe much of the process. Votes are cast and counted in the digital realm. Voters cannot see the digital information. This is the "black box" phenomenon. Further, the source code that operates the units and the central computer is considered a trade secret by the county's vendor and by all other touch-screen vendors. This creates a perceived cloak of secrecy that further serves to breed distrust among some people. All of this results in reduced confidence in the voting system.

(3) Costs Savings: Evidence presented to the committee would indicate an increase, not a decrease, in costs per voter since acquisition of the touch-screen system.

(4) Auditability: The state-mandated post-election audit (known as the Canvass or the "1 per cent manual tally") is performed using the paper record. The reason for adding the paper trail component was that the touch-screen system without a paper trail was essentially not auditable (contrary to what was earlier represented). Because the paper record consists of a roll of paper (similar to a cash register tape) such audits are more cumbersome and time consuming than those performed with traditional paper ballots. The Registrar of Voters has stated that new procedures have been developed to address this, but it appears to the committee that, at best, this is not much of an improvement to the system.

(6) Continued Use of Paper Ballots: Despite the touch-screen system, more than 40 per cent of Riverside County voters vote on paper by absentee ballot. This means that Riverside County has, and will likely continue to have, a "paper ballot" system in any event. Does it make sense to maintain a separate electronic voting system for only about half of the voters, in light of the above concerns? Because of optical scanners, a paper ballot-based system now offers all the speed and efficiency of a touch-screen system, with less exposure to security problems and mechanical malfunctions.

The Hybrid System

The proposed alternative to the touch-screen system is a paper ballot-based system using optical scanners for counting votes. Other counties are moving to similar systems. Alameda County is one such county. Even these systems, however, may use touch-screens at all polling locations to provide access for disabled voters in compliance with the Help America Vote. This is known as a hybrid system.

The committee recommends moving to the hybrid system for the following reasons:

(1) Less Hardware Dependent

If an optical scanner breaks down, it will not cause a delay in the voting. Voters simply continue to vote and deposit their ballots in the ballot box. Ballots can always be scanned back at the Registrar of Voters' offices on the same optical scanner used to count

absentee ballots. Consequently, the ballot-based system is more robust and less dependent on technology than the touch-screen system. As the Registrar of Voters for Alameda County put it, the hybrid system is “low-tech” on the front end and “high-tech” on the back-end.

(2) Less Software Dependent

The concept of software independence is a recent principle that has evolved in the election security field. It means that despite a bug or virus in the software, one can still hold a secure election. This requires an effective post-election audit procedure to detect the software problem. If a problem is found, the County can hold a recount of the paper record. Thus, the election is determined on the paper record, independent of the software.

Unlike a touch-screen’s paper trail, a paper ballot is not subject to being tainted by bad software. Paper ballots make it easier to perform audits and, if necessary, full recounts. Further, a recount can be held by counting the paper ballot by hand or by machine.

(3) Reliability

The simplicity of paper ballots offers a reliability not found in touch-screen systems. One never has to change the paper. One doesn’t have to worry about a printer running out of ink. We expect paper jams to be less of concern, but if they do occur, they won’t delay the voting. There is no need for extra printers in the event of malfunction.

(4) Security

The architecture of the paper ballot-based system inherently provides an increased level of security. Simply put, the ballot is paper. Once it’s marked, the ballot cannot be changed. Unlike electronic data, it cannot be manipulated invisibly.

Is the system perfect? Probably not. A voter could make a stray mark. Or someone within the office of the Registrar of Voters might place a mark on the ballot to cause an “over-vote” so as to disqualify it. There are trade-offs with any system. However, unlike the touch-screen’s paper trail, a paper ballot is not subject to mechanical malfunction, software error or computer manipulation.

(5) Public Confidence

As one expert put it, a paper ballot is “macroscopic.” The voter can see it. The voter doesn’t need a machine to read it. This provides true transparency. The voter knows the vote he/she marked is the vote that was cast and is the vote that will be used in an audit or recount. This promotes public confidence.

(6) Accessible to Disabled Voters

The hybrid system would also utilize touch-screen units to provide access to disabled voters. What about the risks of touch-screens as mentioned above? Fewer units serving fewer voters will likely diminish interest in such units as a potential target for software attack. Further, any paper audit or re-count will be less difficult to handle because fewer votes are involved.

(7) Accuracy

Voter intent is clear. The voter votes by simply drawing a line with a pen. Of course, any new system will likely require both poll worker and voter education. However, it appears that voters mastered the new system rapidly in Alameda County. The committee is advised that Alameda received its new equipment only two months prior to the November election and was able to run a successful election. This is likely due to the fact that the system involves a simple and understandable technology.

(8) Protection Against Under-Vote and Over-Vote

Under-vote and over-vote protection is available on optical scanners. It is also available on touch-screen units. This feature can also be overridden.

Recommendation

The Secretary of State is conducting a "top-to-bottom" review of all electronic voting systems used in California. Following that testing, the Secretary of State is expected to decide on system certifications and/or what additional conditions may be imposed for such certifications. Our recommendation is subject to the Secretary of State's decision, which may, or may not, affect the options available to Riverside County.

The committee recommends that the Board of Supervisors approve a transition away from the current voting system as soon as practical and move to a hybrid voting system consisting of: (1) paper ballots counted by precinct-based optical scanners for ballots cast at the polling locations; (2) centrally located high-speed scanner(s) for counting absentee ballots and any ballots that haven't been counted at polling locations; and (3) adequate touch-screen unit(s) at each polling location to provide access for disabled voters in compliance with federal law.

Committee members have done their best as lay people to digest a volume of information in a complex technical area. The committee members do not hold themselves out as experts. Clearly, no voting system is perfect. All systems have vulnerabilities. However, it appears to the committee that the trade-offs between the two systems discussed above strongly favor moving to a hybrid system. Still, the committee encourages the Board to consider making further inquiries of other sources, including, but not limited to, Alameda County and other jurisdictions, to satisfy itself as to the merits of this recommendation.

Finally the committee observes two factors that potentially make this a propitious time for the Board to consider a change to a hybrid system: (1) The committee understands the county is already exploring the purchase of an updated system to process absentee ballots (representing approximately 40% of all votes cast in any given election); (2) The county already has the touch-screen units that would be utilized for disabled voters in such a hybrid system. Thus, it appears that the County will soon have two of the three components of a hybrid system. The third component is the precinct-based optical scanners. These factors should minimize the additional capital outlay necessary to transition to a hybrid system.

Appendices

The committee received input from various speakers at public hearings on the security and transparency of the county's electronic voting system. It heard from representatives of the voting integrity community (including representatives from Save R Vote); Harri Hursti, computer expert; the Registrar of Voters; representatives of Sequoia Voting Systems; city clerks; and many members of the public. It also consulted with Dr. David Jefferson, a computer scientist with the Lawrence Livermore Nuclear Laboratory who is recognized as one of the premiere authorities on security issues relating to electronic voting systems. Also interviewed was Mr. Dave Macdonald, the Registrar of Voters for Alameda County. In addition it received and reviewed written materials and reports, including, but not limited to the following:

1. The Machinery of Democracy: Voting System Security, Accessibility, Usability, and Cost (2006) by The Brennan Center for Justice, Voting Technology Assessment Project, of the NYU School of Law
2. Requiring Software Independence in VVSG 2007: STS Recommendation for the TGDC (November 2006), being a Draft Report by the Security Transparency Committee of the Technical Guidelines Development Committee of the National Institute of Standards and Technology (NIST), together with NIST's 2007 clarification of said Draft Report
3. Written Testimony of David Wagner, Ph.D, Before the Committee on House Administration, Elections Subcommittee, U.S. House of Representative (March 15, 2007)
3. Report to the Riverside County Board of Supervisors on the November 7, 2006 General Election (December 5, 2006) by Save R Vote
5. 2006 Consolidated General Election Review Report (January 12, 2007) by Riverside County Registrar of Voters
6. Sequoia Voting Systems Vulnerability Assessment and Practical Countermeasures Development for Alameda County (October 4, 2006) by Pacific Design Engineering
7. How Our Votes Are Counted—Observations of Election Processes in Alameda County In 2005 (October 9, 2006) by League of Women Voters
8. Numerous other articles and reports
9. In excess of 200 emails from citizens; numerous personal contacts and communications; and review of additional written materials from speakers presenting at the committee's public hearings

See Appendix B for a list of persons interviewed and materials reviewed.