

STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
 DF-46 (REV 08/17)

Fiscal Year 2018/19	Business Unit 0890	Department Secretary of State	Priority No. 1
Budget Request Name 0890-001-BCP-2018-GB		Program 0705 – ELECTIONS	Subprogram

Budget Request Description
 Voting System Replacement for Counties

Budget Request Summary

The Secretary of State (SOS) requests \$134.348 million in spending authority for Fiscal Year (FY) 2018/19 from the General Fund to cover the costs for the replacement of voting systems, including all tabulation equipment, accessible equipment, election management system software and hardware, electronic poll books and ballot on demand printers. This cost includes one-time purchase of all the necessary hardware, software, peripherals and one year's worth of software licenses. As this is a joint venture between the State and the counties, this funding assumes a 50/50 split between the state and the counties.

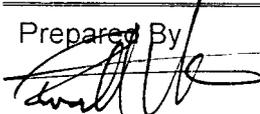
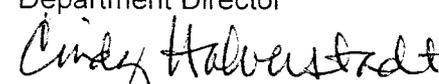
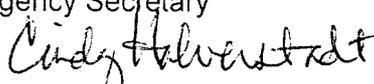
Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed
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Does this BCP contain information technology (IT) components? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	Department CIO	Date
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For IT requests, specify the project number, the most recent project approval document (FSR, SPR, S1BA, S2AA, S3SD, S4PRA), and the approval date.

Project No. Project Approval Document: Approval Date:

If proposal affects another department, does other department concur with proposal? Yes No
Attach comments of affected department, signed and dated by the department director or designee.

Prepared By  Russell Vaneekhoven, Budget Officer	Date January 4, 2018	Reviewed By  Kristin Dagsher, Fiscal Affairs Manager	Date January 4, 2018
Department Director  Cindy Halverstadt, Chief, Management Services Division	Date January 4, 2018	Agency Secretary <i>for</i>  Lizette Mata, Deputy Secretary of State, Operations	Date January 4, 2018

Department of Finance Use Only

Additional Review: Capital Outlay ITCU FSCU OSAE CALSTARS Dept. of Technology

PPBA	Original Signed by: John Fitzpatrick	Date submitted to the Legislature 01.10.18
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A. Budget Request Summary

The SOS requests \$134.348 million in spending authority for Fiscal Year (FY) 2018/19 from the General Fund to cover the costs for the replacement of voting systems, including all tabulation equipment, accessible equipment, election management system software and hardware, electronic poll books and ballot on demand printers. This cost includes one-time purchase of all the necessary hardware, software, peripherals and one year's worth of software licenses. As this is a joint venture between the State and the counties, this funding assumes 50/50 split between the state and the counties.

B. Background/History

The California Legislative Analyst's Office published a report in March 2017, "The 2017-18 Budget: Considering the State's Role in Elections." The report points out that antiquated voting equipment and systems are used in most California counties – parts are no longer available; they rely on operating systems that no longer receive security upgrades or other support from the manufacturers. Not only are these performance concerns, they are a serious security risk, both of which can lead to a catastrophic failure for jurisdictions and ultimately the State.

After the issues with Florida's election equipment in the Presidential Election of 2000, Congress passed the Help America Vote Act of 2002 (HAVA) and California voters passed Proposition 41 – the Voting Modernization Bond Act of 2002 (VMB). Both HAVA and VMB provided the SOS with funding to improve voting systems. Pursuant to HAVA, a "voting system" is any voting machine, voting device, or vote tabulating device that does not utilize pre-scored punch card ballots. Beginning in 2002, the SOS allocated multiple sources of funding to the 58 counties in California that conduct elections for the purpose of improving the voting systems. The different funding sources for counties to improve their voting systems are:

1. Voting Modernization Bond (VMB): Certified Voting Systems - State funding issued to counties as reimbursements in the amount of \$200 million.
2. HAVA Section 102: Replacement of Punch Card or Lever Voting Machines - Federal funding issued to counties as grants in the amount of \$57,322,707.
3. HAVA Section 301: General Election Technology - Federal funding issued to counties as reimbursements through established contracts in the amount of \$195 million.

Both HAVA and VMB require the counties to pay for twenty five percent (25%) of the cost of all purchases under the respective funds through a 3:1 matching criteria.

Most California counties used their funding allocations to purchase new voting equipment prior to the 2006 election cycle. As described in the federal Voluntary Voting System Guidelines (VVSG), adopted by the federal Election Assistance Commission (EAC), the federal agency that is in charge of the implementation of HAVA, the voting equipment was intended to last ten years. However, in 2005, when the VVSG was adopted, no one could have anticipated the rate at which technology would change. To quote EAC Commissioner Matt Masterson "[t]he iPhone was still two years in the future when most counties obtained their voting devices." Further, most of the technology in use in California counties is technology from the late 1990s or early 2000s. For instance, there are California counties that still use zip drives, dot matrix printers, Windows Server 2000 or 2003, etc. to tabulate and report their election results. Therefore, the technology being utilized is outdated and the software and hardware is becoming aged. Much of the equipment described has reached its end-of-life and cannot be replaced because it is no longer manufactured. The age and lack of replacement parts decreases the reliability and security of the equipment.

In response to the problems that occurred in the November 6, 2012, Presidential Election, President Obama established the Presidential Commission on Election Administration (PCEA). Its mission was to identify best practices in election administration and to make recommendations to improve the voting experience. The PCEA, in its 2014 report to the President, asserted that there is an "impending crisis in voting technology...A large share of the nation's voting machines are now almost a decade old and starting to break down. With no federal appropriations on the horizon, election authorities are on their own to do more with less."

Analysis of Problem

In response to the PCEA report, House Democrats sent a letter to the United States Government Accountability Office:

Reports from individual states confirm that outdated voting equipment is a growing and widespread problem across the country. For example, during the 2014 election cycle, voters in Illinois reported inoperable voting machines, forcing them to use "old school paper forms." In Maryland, although state regulations mandate that each precinct provide at least one touchscreen machine for every 200 registered voters, "twenty of the state's 24 jurisdictions failed to meet this standard during the last presidential election." In 2012, there were numerous reports of "machines switching votes in Ohio." Similarly, a report by Verified Voting found:

'Texas and Georgia struggled the most with glitchy electronic voting machines on Election Day. ... Some machines simply wouldn't boot up, and others unexpectedly shut down. Faulty touch screens were another issue—some registered a vote for the wrong candidate, while others just went blank.'

In December 2014, the Governor of Virginia included funding for new voting machines for all precincts across Virginia after 49 localities reported voting equipment issues. Virginia uses equipment that is the same age as much of California's voting equipment. However, in February 2015 the portion of the budget that appropriated funds for voting equipment was rejected by the legislature. Shortly thereafter, in April 2015, the State of Virginia made national headlines when the Board of Elections decertified its voting equipment due to major security flaws with the technology. Edgardo Cortés, commissioner of the Virginia Department of Elections, said continuing to use the aging machines "creates an unacceptable risk to the integrity of the election process in the commonwealth." Ten of Virginia's counties were forced to borrow voting equipment to conduct their elections in 2015, putting their elections at jeopardy.

The method by which voters prefer to vote is also changing. In California, 57.79% of ballots cast in the 2016 General Election were voted by mail. This is a 39% increase over the 41.64% that cast ballots by mail in the 2008 General Election. This is significant in that the HAVA and VMB moneys that were spent on the voting equipment did not anticipate the volume of ballots that would be tabulated centrally. Additionally, as Baby Boomers age and the average voting age increases, there is more of a need for an accessible vote by mail solution. In September 2014, the State of Maryland was sued and then mandated by the court to implement an accessible vote by mail software solution for the 2014 General Election. California would prefer to assist all voters by providing an accessible means to vote by mail and not wait to be sued. However, in order to do so, the necessary resources must be available. Further, after the lawsuit, Maryland was required by statute to replace its entire voting system, not just the vote by mail software solution, with a new statewide system where the State paid for 50% and the counties funded the remaining 50%.

The National Conference of State Legislatures (NCSL) published a report on the Election Technology Project: Connecting Legislators and Election Officials Around Elections Technology. The report states "[t]he next big issue in election administration in the U.S. will revolve around technology: Voting equipment, electronic poll books, election management systems, and other hardware and software designed to serve voters and election administrators." Over a span of thirteen months, NCSL visited eight states where it met with legislators, legislative staff, and elections officials. There were five objectives of the meetings, the first two being: 1) apply evidence-based decision making to the purchase of new voting technology and 2) consider funding options for the replacement of high-priced voting equipment. At the conclusion of the report on the eight states, NCSL held the "Policy and Election Technology Conference" in June 2015 to connect experts to policy makers as states move forward in designing and selecting new elections technology.

The California Association of Clerks and Election Officials' (CACEO), in its March 30, 2015, letter to Secretary Padilla lists its top priorities. In that list is the following recommendation: "as voting systems continue to age we feel that there should be funding from either the federal or state government to support new technology and replace aging systems." As stated by the PCEA "[w]ith no federal appropriations on the horizon, election authorities are on their own to do more with less." Therefore, it is up to the SOS, as the Chief Elections Official in the State of California, to work with our county

partners to provide them with the necessary resources to ensure that California elections are conducted accurately, efficiently, reliably, accessibly and securely, as required by California law.

C. State Level Considerations

The technology being utilized is outdated and the software and hardware is aging. The equipment has reached its end-of-life and cannot be replaced because it is no longer manufactured. Not only are these performance concerns, but they are a serious security risk, both of which can lead to a catastrophic failure for jurisdictions and ultimately the state.

The age and lack of replacement parts decreases the reliability of the equipment. If the voting systems are not replaced, the equipment in use will eventually break down to a state of non-repair, which will put the accuracy and reliability of California elections in jeopardy. If systems fail, there will be increased costs for the tabulation of votes due the personnel hours necessary to complete a hand-count. If all 58 counties were required to conduct a hand-count of all ballots in an election, it is estimated that the cost would exceed more than \$100 million per election in additional state-mandated costs, not to mention the additional time that it would take to determine and declare the winner in each contest.

California counties have to rely on other states and jurisdictions to supply it with parts for their voting equipment. As voting equipment gets older, the voting system manufacturers are no longer able to obtain parts. Therefore, as other states and jurisdictions scrap their old equipment for new, California counties are buying that old equipment for the sole purpose of using them for spare parts. Soon, there will be no more equipment and parts to purchase and those counties will have no way to maintain their existing equipment.

California has yet to have a catastrophic failure in an election. California watched the debacle in the 2000 Presidential Election in the State of Florida, the meltdown in the 2004 Presidential Election in Ohio, the recent 2015 Virginia voting system security dilemma, and many other problems with voting equipment that have been reported in the mainstream media. This is not the attention California wants. It is not good for the voters, election officials, or the Legislature.

D. Justification

Most California counties purchased their voting equipment prior to the 2006 election cycle. Per the VVSG, the equipment was only intended to last ten years. However, in 2005, when the VVSG was adopted, no one could have anticipated the rate at which technology would change. To put this in perspective, EAC Commissioner Matt Masterson stated at a public meeting that “[t]he iPhone was still two years in the future when most counties obtained their voting devices.” Further, most of the technology in use in California counties is technology from the late 1990s or early 2000s. For instance, there are counties that still use zip drives, dot matrix printers, Windows Server 2000 or 2003, etc. to tabulate and report the election results. Therefore, the technology being utilized is outdated and the software and hardware is becoming obsolete. Based on data from the November 2014 Election, 94.8% of the counties (53/58), which equates to 91.2% of California’s registered voters, are utilizing voting equipment that runs on software that is no longer supported and no longer receive security upgrades. Further, all 58 counties have equipment that has hardware components that have reached end-of-life, meaning they are no longer manufactured and therefore cannot be purchased commercially; the parts must be fabricated or purchased on a secondary market. Although most of the voting system vendors try to find replacement parts that are determined to be equivalent in fit, form, and function, many counties are left to find a solution on their own. All of this decreases the reliability and security of the equipment.

Los Angeles County is the largest voting jurisdiction in the nation with 4.8 million voters. However, the voters currently mark their ballot choices with ink on retrofitted punch-card ballots that date to 1968 (similar to Scantron test forms), which are then tabulated on IBM card-counting machines that use an obsolete programming language. Los Angeles County is looking into a method of voting that would include tablet computers, with paper backup. The anticipated system would potentially provide the ability for voters to mark sample ballots on their own mobile devices and then print them at the polling place, similar to technology airlines use to scan boarding passes on smartphones. Dean Logan, Los Angeles County Registrar of Voters, stated “[w]e know we’re getting to the end of the lifespan of what

Analysis of Problem

we've got now...We want to have a system that uses today's technology and has the ability to adapt to future technological development." This technology is estimated to cost Los Angeles County \$42 million.

Orange County, California, the fifth largest voting jurisdiction in the nation, has experienced a rising failure rate in the county's voting system, which runs on Windows 2000 software and hardware that is over ten years old. The county solved the issues by replacing cable connections with military-grade hardware on the county's 11,000 electronic voting machines. The county has also bought extra voting machines for the sole purpose of utilizing them for parts. Neal Kelley, Registrar of Voters in Orange County was quoted stating "[b]y doing that, we can probably extend our life cycle to 2018." Replacing Orange County's system is estimated to cost \$20 million.

The purchase of extra equipment for the sole purpose of utilizing them for spare parts is becoming a regular occurrence. Many of the parts can no longer be obtained on the open market. Further, because the equipment is so old, the voting system manufacturers are not willing to take the time and spend the money it takes to research, develop and manufacture new parts. For example, the Dominion/Sequoia Optech 400-C is no longer being manufactured. This equipment is being used in fourteen California counties; in eight of those counties it is the only voting device that tabulates votes. The votes that were cast on this equipment equates to 16.1% of all voters that voted in the 2014 General Election. As these fourteen counties have equipment breakdown, they have to obtain equipment and parts from other states that have scrapped their equipment to purchase new equipment. Soon, there will be no more equipment and parts to purchase and those counties will have no way to maintain their existing equipment.

Issues with the voting systems in California during elections are becoming more apparent. In Kern County in the 2012 General Election there were 19 voting system incidents reported. In the 2014 General Election, where fewer voters turned out and therefore the equipment was used less, there were a total of 38 voting system incidents reported. Here in Sacramento County the incidents reported were 39 and 95 for the 2012 and 2014 General Elections, respectively. Included in the reports are items such as the ballot is not being marked properly by the ballot marking device (voting equipment), ballots are jamming in the voting equipment, printer jams, and equipment unexpectedly rebooting or powering off completely. The reports by the two counties are not anomalies. The number of reports from election to election in almost all California counties is increasing. Each time one of these machines has to be taken out of service, each of the votes cast on the machine prior to the failure must be hand counted. This is increasing the time it takes to report results and significantly increasing costs. With new equipment and technology, these extra costs could be drastically reduced, if not omitted completely.

Prior to having a Florida 2000 debacle, an Ohio 2004 meltdown, a Virginia 2015 dilemma, or a severe security breach, California needs to receive funding to update its 2006 hardware running 1990s software to allow all people to utilize election technology that is accurate, reliable, efficient, accessible, usable and secure. In order to accomplish this, the SOS and the 58 California counties need the resources to purchase and deploy such technology. It is also understood that this is a joint venture between the State and the counties, and therefore, both need to provide their portion of the funding in the upgrade.

E. Outcomes and Accountability

This proposal is not intended to address existing state workload or improve state business workflow.

Projected Outcomes

Workload Measure	CY	BY	BY+1	BY+2	BY+3	BY+4
e.g., Applications Received, Applications Processed, Call Volume, etc.	N/A	N/A	N/A	N/A	N/A	N/A

F. Analysis of All Feasible Alternatives

Alternative 1: Approve \$134.348 million in spending authority for FY 18/19 to fund voting technology replacement for counties to ensure that California elections are conducted accurately, efficiently, reliably, accessibly and securely, as required by California law.

Pros: It is anticipated that most California jurisdictions will move to a vote center model. It is estimated that the cost to replace voting systems under a hybrid model where large jurisdictions move to a vote center model, but small jurisdictions (>50 precincts) remain in a polling place model will cost \$134.348 million dollars. The cost assumes a 50/50 split between the state and the counties.

Cons: A General Fund outlay of \$134.348 million in spending, which is a large hit to the General Fund budget, however, is essential to ensuring the accuracy, security and reliability of our elections.

Alternative 2: Do Nothing.

Pros: Saves the state money for now.

Cons:

- If the state does not provide some sort of funding to replace the antiquated equipment being used in current elections, the likelihood of a serious failure or security breach becomes imminent. It is not a matter of if these systems will fail; eventually there will be a catastrophic failure.
- In the long run, delaying replacement will increase the cost to State.

G. Implementation Plan

The SOS would allocate the funds based on registered voters and county size. Then, the SOS would award a contract to each of the 58 counties in the amount of the respective allocation. Upon the approval/adoption of the SOS/County contract, each county will be able to contract for the purchase or lease of allowable voting technologies and seek reimbursement for the cost. The SOS requests that reimbursement be allowed for counties that have made qualifying purchases of voting technologies in fiscal years prior to FY 18-19. SOS personnel will be responsible for verifying that the purchase or lease of voting equipment by the county seeking reimbursement meets the criteria set forth in the contract and will, thereafter reimburse the county for the allowable amount.

Since 2003, the SOS has successfully administered such a process. Through HAVA, the federal government provided the State of California with over \$381 million, plus many additional grants, with which \$195 million was issued to counties as reimbursements through established contracts. After two federal audits and one state audit, the SOS has shown that it has the ability to facilitate an accurate accounting through the method prescribed above. Similarly, the SOS has experience with this process from the implementation of California Proposition 41 – Voting Modernization Bond Act of 2002 (VMB) funds in the amount of \$200 million.

H. Supplemental Information

None

I. Recommendation

Approve Alternative 1. This alternative allows California elections to be conducted accurately, efficiently, reliably, accessibly, and securely.

BCP Fiscal Detail Sheet

BCP Title: Voting Systems Replacement for Counties

BR Name: 0890-001-BCP-2018-GB

Budget Request Summary

	FY18					
	CY	BY	BY+1	BY+2	BY+3	BY+4
Operating Expenses and Equipment						
54XX - Special Items of Expense	0	134,348	0	0	0	0
Total Operating Expenses and Equipment	\$0	\$134,348	\$0	\$0	\$0	\$0
Total Budget Request	\$0	\$134,348	\$0	\$0	\$0	\$0

Fund Summary

Fund Source - Local Assistance						
0001 - General Fund	0	134,348	0	0	0	0
Total Local Assistance Expenditures	\$0	\$134,348	\$0	\$0	\$0	\$0
Total All Funds	\$0	\$134,348	\$0	\$0	\$0	\$0

Program Summary

Program Funding						
0705 - Elections	0	134,348	0	0	0	0
Total All Programs	\$0	\$134,348	\$0	\$0	\$0	\$0