

To: Allison Hunn (Sen. Merkley),
Tommy Walker (Sen. Klobuchar),
Chuck Ackman (Sen. Klobuchar),
Ravi Doshi (Sen. Padilla),
Nicholas Xenakis (Sen. Feinstein)

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Thank you for meeting with us in April and May to discuss our suggestions for improving the election administration sections of S.1. We greatly appreciate that many of our suggestions were adopted directly or in other ways in the Manager's Amendment.

We understand that there is a possibility that S.1 may not be adopted this year. In case that is the reality, we offer the following suggested priorities for its election-administration related items that could be in a reconciliation bill, should that alternative become available:

1. Funds for replacing paperless voting systems (DREs or direct-recording electronic voting systems) with voting systems using hand marked paper ballots and ballot-marking devices (BMDs) for accessibility.
2. Funds to enable the separate testing and certification of election system components, to enable more competition and innovation.
3. Funds for post-election audits with requirements.
4. Funds to research and provide options for voters with disabilities to vote privately, independently, with the secrecy of their vote protected.
5. Funds for research on: absentee ballot drop boxes; voter authentication, including signature verification; eligibility auditing, voter registration auditing and ballot image analysis.

We are not experts on reconciliation. Some requirements suggested may not be able to be implemented in a reconciliation bill, but we assume at least voluntary grants could be included.

Details are attached.

* Affiliations for Identification purposes only

Luther Weeks, Moderator, State Audit Working Group, Connecticut

Paul Burke, VoteWell.net

Duncan Buell, Chair Emeritus — NCR Chair in Computer Science and Engineering
Dept. of Computer Science and E, University of South Carolina

Candice Hoke, Founding Co-Director, Center for Cybersecurity & Privacy Protection, Cleveland State University

Ronald L. Rivest, MIT Institute Professor

John L. McCarthy, Computer Scientist (retired), Lawrence Berkeley National Laboratory

Harvie Branscomb, Publisher, <http://electionquality.com>, Coloradans For Voting Integrity

Mark Halvorson, Citizens for Election Integrity Minnesota

Celeste Landry, MS in Operations Research, voting methods researcher

Neal McBurnett, Election integrity consultant, Colorado

Timothy White, Election Transparency advocate, WA

Details

1. Funds for replacing paperless voting systems (DREs or direct-recording electronic voting systems) with voting systems using hand marked paper ballots and ballot-marking devices (BMDs) for accessibility. New federally subsidized voting systems must protect vote secrecy.

Need: Some jurisdictions still use paperless voting systems and do not have the necessary evidence to check the validity of election outcomes.

Suggested Language:

(underlined text is new, removed text is crossed out, page numbers refer to page numbers in Manager's Amendment)

EAC shall provide \$50,000,000 in funds to replace, by December 2023, all voting systems used in federal elections that do not produce a voter-verifiable paper record of every cast ballot. All replacement voting systems must be able to use hand marked paper ballots, with ballot-marking devices (BMDs) for accessibility. In addition, all replacement voting systems, as well as the election procedures, shall be designed so that selections on a cast ballot cannot be associated with a voter. This restriction does not apply to the pattern of selections made or to any distinguishing marks made by the voter on the ballot.

2. Funds to enable the separate testing and certification of election system components, to enable more competition and innovation. These funds would support NIST/EAC's completion of the Voluntary Voting System Guidelines interoperability standards, development of voting system component testing & certification protocols, and implementation of voting system component testing. These grants would also support the development of the capability to test and certify election system extensions, like e-pollbook systems, as separate election system components.

Need: Voting system certification has been an expensive and lengthy process, creating enormous barriers-to-entry into the market, reducing competition among vendors and purchasing options for election officials. Voting systems are tested as a whole; in other words the EAC tests the ballot marking devices, scanners and election management systems as one integrated package, rather than by component. This prevents small companies from entering the market with only one component, like a ballot marking devices.

Also, election officials seeking a federally certified system currently can only replace a component of a voting system with a component from the same manufacturer that has been certified with that same voting system. (For those over a certain age - - imagine having a stereo system and only being able to replace the turntable with a turntable from the manufacturer that made the receiver and speakers.)

Components within voting systems, (such as Ballot Marking Devices, Scanners, Election management systems) should be tested and certified separately. Such component testing will lower barriers to entry, increase competition among vendors, provide election officials with more choices, and speed the certification and recertification process.

Currently, there is no federal certification program for e-pollbooks and other extensions of the voting system, such as eligibility systems used to verify signatures, even though they are vital parts of US election

systems. Not all States are well-situated to evaluate the functionality, security, and usability of these systems on their own. The federal certification program should include these systems these systems, but they should not be considered part of the HAVA-defined “voting system.” They should be tested and certified separately. Including e-pollbooks and other voting system extensions as part of the “voting system” would continue to preclude successful market entry by smaller, innovative companies that just sell e-poll books or another voting system extension.

Suggested Revised Language for Deadline and Funding to Speed up EAC Component Testing

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3302(a)(4) creates HAVA 301(b)(2) any electronic poll book or other system to determine the eligibility of voters or ballot packets, including signature verification systems, used with respect to the election. All such components should be considered extensions of the voting system. The EAC will test and certify such extensions separately, not as part of a voting system (as originally defined by HAVA). Such extensions are to be tested and certified separately and can be selected for purchase by jurisdictions separately. By December 2022, the EAC shall separately test and certify components of voting systems (such as ballot marking devices, scanners and election management systems) as well as entire voting systems and shall require that components are interoperable.

NIST shall be granted \$500,000 to finish developing the necessary interoperability standards for voting systems and the EAC or NIST shall be granted \$500,000 to develop the test and certification protocols for components by 2022.

NIST/EAC shall be granted \$500,000 to develop certification standards and test protocols for e-pollbooks by 2022.

NIST/EAC shall be granted \$1,000,000 to develop certification standards and test protocols for eligibility systems by 2023.

3. Funds for post-election audits with requirements.

Need: Many states have no routine post-election audits or have audits with questionable methodology.

“People need to be sure that the official election outcomes match the will of the voters... Well-designed and properly performed post-election tabulation audits provide solid public evidence for the initial outcome when it is correct - and an opportunity to recover gracefully when it is not. Good tabulation audits create resilience against damage from human error, system flaws or malicious interference, and should be applied routinely to any voting system.” (See the Principles & Best Practices for Post-Election Audits:

<https://electionaudits.org/files/Audit%20Principles%20and%20Best%20Practices%202018.pdf>)

Requirements for grants should be strong enough to ensure effective post-election tabulation audits. The Manager’s Amendment included provisions to help ensure rigorous post-election tabulation audits, so we are basing our recommendations with that language as a starting point. Well-designed tabulation audits reliably identify and correct significant tabulation flaws, increasing public trust. The grants should also support audits that check the validity of the paper records on which the tabulation audit depends. Such audits include: registration list audits, eligibility audits, chain of custody audits, and ballot reconciliation audits.

The costs for implementing post-election tabulation audits can be divided into three categories:

1. First time planning/knowledge transfer and development of procedures. Post election tabulation audits can be implemented using various methods, including ballot comparison audits, ballot polling audits and batch comparison audits. The implementation of post-election tabulation audits for the first time in a state, will have one time costs related to the determination of the most appropriate methodology for that state given such factors as its voting equipment, voting rules and expected margins of victory for federal contests, as well as the development of the related procedures. A whole state would be eligible for such reimbursement when committed to implementing post-election audits for all federal contests in the state. Alternatively, when a state has not applied by a certain deadline, a group of electoral jurisdictions containing one or more whole congressional district(s) would be eligible for such reimbursement when committed to performing post-election audits for representative in such district(s).

2. Recurring planning, hiring, training and public education for each federal election cycle.

3. Conducting the post election tabulation audits and related audits for each primary, general and special federal election. Reimbursements for variable costs will vary by jurisdiction depending upon such factors as the voting equipment, the number of sheets in the ballot, and on the margin of victory of the federal contests.

Costs for a 2-year cycle including primary and general elections, based on the 2020 general election, we estimate would have been \$37 million up-front costs for all methods, and variable amounts for each approach, resulting in total cost of \$80 million (including up-front, and \$11 million for eligibility audits) per 2-year cycle. Calculations are at:

<https://docs.google.com/spreadsheets/d/13ybK39AcOtRnD8f62OH9BPsuDAWBOxDeez8gE0V07mY/edit#gid=0>

Suggested language based on Managers' Amendment:

(underlined text is new, removed text is crossed out, page numbers refer to page numbers in Manager's Amendment)

p.464 3011 creates HAVA 303C(a)Definitions (1) POST-ELECTION TABULATION AUDIT.— Except as provided in subsection (c)(1)(B), the term 'post-election tabulation audit' means, with respect to any election contest, a post-election process that—

(A) has a probability of at least ~~90~~95 percent of correcting the reported outcome if the reported outcome is not the correct outcome;

(B) will not change the outcome if the reported outcome is the correct outcome; and

(C) involves a manual adjudication of voter intent from ~~some or all~~ or a representative sample of the all of the paper ballots validly cast in the election contest.

“(2) REPORTED OUTCOME; CORRECT OUTCOME; 22 OUTCOME.— 23 “(A) REPORTED OUTCOME.—The term ‘reported outcome’ means the outcome of an election contest which is determined according to the canvass and which will become the official, 465 MCG21538 VK1 S.L.C. certified outcome unless it is revised by an audit, recount, or other legal process. “(B) CORRECT OUTCOME.—The term ‘correct outcome’ means the outcome that would be determined by a manual adjudication of voter intent for all votes validly cast in the election contest. “(C) OUTCOME.—The term ‘outcome’ means the winner or set of winners of an election contest.

(3) MANUAL ADJUDICATION OF VOTER INTENT.—The term ‘manual adjudication of voter intent’ means direct inspection and determination by humans, without assistance from electronic or

mechanical tabulation devices, of the ballot choices marked by voters on each voter-verifiable paper record. (Machines can be used for addition.)

(4) BALLOT MANIFEST.—The term ‘ballot manifest’ means a record maintained by each jurisdiction that—

- (A) is created without reliance on any part of the voting system used to tabulate votes;
- (B) functions as a sampling frame for conducting a post-election audit; and
- (C) accounts for all ballots validly cast regardless of how they are ~~were~~ tabulated and includes a precise description of the manner in which the ballots are physically stored, including the total number of physical groups of ballots, the numbering system for each group, a unique label for each group, and the number of ballots in each such group.

p.466 303C(b)(1)

(A)(i) IN GENERAL.—Each State and jurisdiction, according to Congressional District, shall be eligible to receive grants for planning and administering post-election audits of the results of all election contests for Federal office held in the State in accordance with the requirements of paragraph (2). These may include tabulation, eligibility, registration, ballot reconciliation and chain of custody audits.

Grants will be offered to plan, set-up audits both at the state and Congressional District levels. Grants will also be offered to implement audits with reimbursements amounts based on factors such as the margin of victory of the federal contest audited. Jurisdictions will have to demonstrate the work was done, but not their actual costs, which are hard to track. Payments will be established by EAC regulations.

(ii) EXCEPTION.—Clause (i) shall not apply to any election contest for which the State or jurisdiction conducts a full recount through a manual adjudication of voter intent.

“(B) FULL MANUAL TABULATION.—If a post-election audit conducted under subparagraph (A) corrects the reported outcome of an election contest, the State or jurisdiction shall use the results of the manual adjudication of voter intent conducted as part of the post-election tabulation audit as the official results of the election contest.

(C) GRANTS WHERE AMOUNT DOES NOT VARY BY SAMPLE SIZE OR MARGIN.

1. Each state will receive \$300,000 for knowledge transfer and procedure development. If a state does not apply by the deadline established by the EAC, a group of election jurisdictions containing at least one Congressional District(s) may apply. In the case of more than one grant to groups in a state, the \$300,000 will be divided among them. The written procedures will be sent to the EAC by a deadline set by the EAC. If the EAC finds applicants do not comply with audit rules enumerated below and other federal law, the EAC must inform the grantee within 60 days of receipt. The procedures must be corrected prior to the EAC’s authorization of payment.
2. For each Congressional District, the jurisdiction(s) containing it will share \$50,000 for planning, training, public education before its first audit funded under this program. The amount will also cover reporting to the EAC on the results of the audit.
3. For each Congressional District, the jurisdiction(s) containing it will share \$10,000 for planning, re-training, public education and reporting to the EAC, in each 2-year cycle when they conduct audits after the first cycle.

(D) GRANTS WHERE AMOUNT VARIES BY MARGIN.-- For each federal contest

completely audited according to the procedures approved by the EAC, the jurisdiction(s) that conducted the audit will receive payments based on the margin of victory of those contests (such as contests for Representative, Senator or President.) The EAC will establish payments based on the margins of victory in the audited federal contests. For instance, amounts could be based on margins below, between, or above 2% and 10%. The payments will be allocated based on the portion of ballots audited in each jurisdiction.

(E) AUTHORIZATION OF APPROPRIATIONS.—

(1) AUTHORIZATION.—There are authorized to be appropriated to carry out this section—

(i) \$80,000,000 for fiscal year 2022; and

(ii) such sums as may be necessary for each succeeding fiscal year.

(2) CONTINUING AVAILABILITY OF FUNDS.—Any amounts appropriated pursuant to the authority of this subsection shall remain available without fiscal year limitation until expended.

p.467 303C(b)

“(b) REQUIREMENTS.—

(1) IN GENERAL.— “(A) AUDITS.— “

(i) IN GENERAL.—In addition to any other post election audits, each ~~Each~~ State and jurisdiction shall administer post-election tabulation audits of the results of all election contests for Federal office held in the State in accordance with the requirements of paragraph (2). “

(ii) EXCEPTION.—Clause (i) shall not apply to any election contest for which the State or jurisdiction conducts a full recount through a manual adjudication of voter intent. “(B) FULL MANUAL TABULATION.—If a post-election audit conducted under subparagraph (A) corrects the reported outcome of an 467 MCG21538 VK1 S.L.C. election contest, the State or jurisdiction shall use the results of the manual adjudication of voter intent conducted as part of the post-election audit as the official results of the election contest.

(2) AUDIT REQUIREMENTS.—(A) RULES AND PROCEDURES.—(i) IN GENERAL.—Not later than 18 months after receiving notice of a grant approval ~~6 years after the date of the enactment of this section,~~ the chief election official of the State shall establish rules and procedures for conducting post-election audits. If a state does not apply by the deadline established by the EAC, groups of election jurisdictions containing at least one Congressional Districts may apply and develop rules and procedures.

(ii) MATTERS INCLUDED.—The rules and procedures established under clause (i) shall include the following:

(I) Rules and procedures for ensuring the security of ballots and documenting that prescribed procedures are followed, including chain-of-custody audits to evaluate the security, authenticity and accuracy of ballot management.

(II) Rules and procedures for ensuring the accuracy of ballot manifests produced by jurisdictions, including ballot reconciliation audits that reconcile numbers of voters, ballot sheets and contest tallies, by ballot style if applicable.

(III) Rules and procedures for governing the format of ballot manifests and other data involved in post-election audits.

(IV) Methods to ensure that any cast vote records or subtotals used in a postelection audit are those used by the voting system to tally the results of the election contest sent to the chief State election official and made public before random sample selection.

(V) Rules and procedures for the random selection of ballots, or groups of ballots, to be inspected manually during each audit. The sample of paper ballots shall be drawn from and represent all ballots lawfully cast in the election. (Late arriving or missing ballots can be assumed to be for the apparent loser for the purposes of conservatively conducting the audit.)

(VI) Rules and procedures for the calculations and other methods to be used in the audit and to determine whether and when the audit of each election contest is complete.

(VII) Rules and procedures for testing any software used to conduct post-election audits.

(VIII) Rules and procedures to ensure the audit is transparent by requiring that each step is verifiable and observable by the public without interfering with the process.

(IX) Rules and procedures ensuring the public can independently replicate results. The initial election results/subtotals, detailed by precinct or batch, must be published prior to the start of the post-election audit and its random draw. Also, subtotals, CVRs, electronic information to authenticate true copies, and all data necessary to replicate the audit are available to the public.

(X) Rules and procedures for ensuring a separation of responsibilities: Neither the policy and regulation setting for the audit, nor the authority to judge whether an audit has satisfied those regulations, shall be solely in the hands of any entity directly involved with the tabulation of the ballots or the examination of ballots during the audit.

p.469 303C(b)(3) EFFECTIVE DATE; WAIVER.—

“(A) IN GENERAL.—Except as provided in subparagraphs (B) and (C), each State and jurisdiction shall be required to comply with the requirements of this subsection for the first regularly scheduled election for Federal office occurring in 2030 ~~2032~~ and for each subsequent election for Federal office.

(B) WAIVER.—Except as provided in subparagraph (C), if a State certifies to the Election Assistance Commission ~~not later than the first regularly scheduled election for Federal office occurring in 2032~~, that the State will not meet ~~a specific the~~ deadline described in subparagraph (A) because it would be impracticable to do so and includes in the certification the reasons for the failure to meet such deadline, then the Election Assistance Commission may grant the State a waiver to delay, but only for the two years after each specific deadline.

~~(C) ADDITIONAL WAIVER PERIOD.—If a State certifies to the Election Assistance Commission not later than the first regularly scheduled election for Federal office occurring in 2034, that the State will not meet the deadline described in subparagraph (B) because it would be impracticable to do so and includes in the certification the reasons for the failure to meet such deadline, subparagraph (B) of this subsection and subsection (c)(2)(A) shall apply to the State as if the reference in such subsections to ‘2034’ were a reference to ‘2036’.~~

p. 471 303C(c) PHASED IMPLEMENTATION.—(1) POST-ELECTION AUDITS.—

(A) IN GENERAL.—By 2024, for the regularly scheduled elections for Federal office, ~~occurring in 2024 and 2026~~, each State shall administer a post-election tabulation audit of the election result every state must audit of the ~~for~~ at least one federal contest. By 2028, every state must audit the result of at least one contested statewide election contest for Federal office held in the State, or if no such statewide contest is on the ballot, one election contest for Federal office chosen at random. By 2030, every state must audit all federal contests. Waivers, limited for two years for each of these specific deadlines, will be available through the Election Assistance Commission as specified in the paragraphs above.

(B) POST-ELECTION TABULATION AUDIT DEFINED.— In this subsection, the term ‘post-election tabulation audit’ means a post-election process that involves a manual adjudication of voter intent from a representative sample of all ballots validly cast in the election contest.

4. Funds to research and provide options for voters with disabilities to vote privately, independently, with the secrecy of their vote protected. The scope of these funds include: research to measure the need for remote accessible voting; the acquisition and implementation of systems that take voting system components and ballots to voters and research the design of other remote voting systems that meet certain requirements.

Need: Despite significant progress since HAVA, many citizens with disabilities are still unable to vote independently with the assurance that their vote choices will be secret from others, including from election officials. Some voting methods currently offered for accessibility, such as internet voting, are not secure and do not protect the secrecy of the vote.

Many persons with disabilities can vote privately and secretly with the aid of voting systems brought to them. These may include a ballot marking device, a printer or paper ballot, and a secure ballot container, brought to the voter's location. These systems will help voters with a full range of disabilities (including impairments involving vision, hearing, mobility, or dexterity). Jurisdictions would be much more likely to provide these if offered grants to bring them to voters.

Suggested Text:

Grants will be available to research the numbers of voters with disabilities who are print-disabled and UOCAVA voters who may need alternatives, such as taking voting systems to others or internet return instead of paper return.

Grant recipients will consult with representatives of people with disabilities, merchant mariners, civilians abroad, the armed forces, State Department, USPS and private delivery services. The project will cover:

- a) People who cannot return a paper ballot because they cannot vote independently in a nearby polling place and have no paper mail or private delivery service available in the month before an election.
- b) People with a print disability or who are unable to use private delivery services to return a ballot independently and privately.
- c) People who cannot vote by any currently permitted method.
- d) Identification of the fractions of people in (a) - (b) who could not return their votes by internet (including fax or email) for whatever reason including lack of access to the necessary equipment or insufficient technical skills.
- e) Costs for election officials to bring HAVA-compliant equipment to US residents in (c) as an alternative to internet return
- f) Clear list of categories of people with different needs for internet return or a ballot marking or ballot verifying device
- g) Research on methods for allowing or restricting internet return based on categories identified.
- h) Recommendations for actions by the Defense and State Departments to improve access to voting on paper.

Suggested language based on Managers' Amendment:

(underlined text is new, removed text is crossed out, page numbers refer to page numbers in Manager's Amendment)

The Commission, in coordination with the Access Board and the Cybersecurity and Infrastructure Security Agency, shall make grants to not fewer than 7 ~~3~~ eligible entities:

(1) To study, test and develop accessible, vote-secrecy-preserving, and secure remote voting systems and voting, verification (including adding recognition of mark-sense targets to optical character recognition apps used by voters with visual impairments), ~~and~~ casting devices, ~~and~~ methods and guidelines for best practices, in order to enhance the accessibility of voting and verification for individuals with disabilities, including efficient transport of HAVA-compliant equipment and ballot boxes to voters. Any proposed method for electronic return of votes must meet the criteria in (A)

(2) To independently study and test existing and proposed remote voting systems, including systems that involve taking the equipment and ballots to the voter, in order to identify strengths, flaws, limitations, and weaknesses in transparency and security. Testing must incorporate criteria as follows:

(A) Criteria for testing and development:

- a) The system is secure from hacking, malware and man-in-the-middle attacks, including on the client, on the server, and in between.
- b) The system includes effective voter authentication.
- c) The system protects vote secrecy. The voting system, as well as the election procedures, shall be designed so that selections on a cast ballot cannot be associated with a voter. This requirement does not apply to the pattern of selections made or to any distinguishing marks made by the voter on the ballot.
- d) The system complies with Software Independence as defined in VVSG 2.0: “a previously undetected change or fault in software cannot cause an undetectable change or error in election outcome.”
- e) Each voter can verify their vote selections were correctly received by the election office.
- f) The design of the system and methods of verification are publicly disclosed, including source code or other implementation of any tools required for verification, such that anyone can actually conduct verifications.

(3 To develop, test and publicize models and best practices to make pre-election and post-election information more accessible, such as more accessible websites, sending voters links to a sample ballot, a remote accessible ballot, and, after the election, accessible election results for the contests appearing on the ballot.

Suggested language:

Any grants for procurement of such accessible absentee voting may only fund federally certified equipment or systems individually approved by the EAC/CISA to meet these criteria:

- a) The system meets the accessibility requirements of VVSG 2.0
- b) The system is secure from hacking, malware and man-in-the-middle attacks, including on the client, on the server and in between
- c) The system complies with Software Independence as defined in VVSG 2.0: “a previously undetected change or fault in software cannot cause an undetectable change or error in election outcome.”
- d) The system protects vote secrecy. The voting system, as well as the election procedures, shall be designed so that selections on a cast ballot cannot be associated with a voter. This requirement does not apply to the pattern of selections made or to any distinguishing marks made by the voter on the ballot.

5. Funds for research on: absentee ballot drop boxes; voter authentication, including signature verification; eligibility auditing, voter registration auditing and ballot image analysis

Need: Relatively new widespread use of ballot drop boxes and computerized management of signature verification raise concerns about ballot security, accountability for correct remote casting of ballots and the integrity of subsequent signature verification. Ballot image analysis can be valuable for quality improvement and chain-of-custody analysis, and should be researched further.

Suggested language:

Grants shall be available to jurisdictions, organizations, and universities to study drop boxes, including their current vulnerabilities and possible mitigations, such as smart boxes capable of resisting and detecting tampering, and of tracking and reporting when properly configured ballot packets are deposited.

Grants shall be available for jurisdictions, organizations and universities to study remote voter authentication, including signature verification, especially when performed by uncertified and largely unregulated software and hardware that may be susceptible to intrusion and error.

Grants will be available to research and implement eligibility audits where a random sample of accepted, challenged and rejected voters, ballot envelopes and affidavits are analyzed.

Grants will be available for researching and implementing voter registration audits where random samples of voters registered as of this election, of voters removed from voter rolls since the last federal election, and of provisional ballots are analyzed and accuracy rates are published.

Grants shall be available for jurisdictions, organizations and universities to determine how images generated by voting machines should be preserved, authenticated, and made public, and the ways that ballot image analysis can support evidence-based elections, detect issues for correction, and complement Risk Limiting Audits.