HB 955 - Election Law – Absentee Ballot Delivery a

Uploaded by: Antoine, Joanne

Position: FAV

February 16, 2021

Testimony on HB 955
Election Law – Absentee Ballot Delivery and Marking
Ways and Means

Position: Favorable

Common Cause Maryland supports HB 955 which would reduce the risks associated with the online delivery of mail-in ballots while preserving the right to request that method of delivery for voters needing it the most.

Maryland is unique in allowing any eligible voter to receive a mail-in ballot over electronically.
To request a ballot be delivered over the internet, voters may fill out a paper form with just their name, address, and birthdate. When using a computer to request a ballot, voters must use additional credentials such as last 4 digits of the social security number, driver's license number and driver's license date of issue.

This method of delivery provides critical access to voting to oversees and disabled voters. It also ensures those unable to receive their ballots by mail for numerous reasons are still able to participate in our elections. While maintaining this level of access and convenience of electoral participation by Marylanders remains a priority, the security of our elections is critical, and this legislation manages to balance both priorities.

HB 955 would restrict the electronic delivery of mail-in ballots, as most states do, to voters who need to receive their ballots this way: military and overseas voters, voters with disabilities that prevent them from marking a paper ballot independently and privately, and voters for whom there would be no other way to receive their ballots in time to submit them before the deadline.

Maryland has taken an important step in securing and maintaining the integrity of our elections. HB 955 build on those efforts as mail-in voting grows more popular throughout the state.

We urge a favorable report.

GMOM_HB955test_021621.pdf

Uploaded by: Cooper, Charlie

Position: FAV

**TESTIMONY BEFORE THE WAYS AND MEANS COMMITTEE
IN SUPPORT OF HOUSE BILL 955
ABSENTEE BALLOT REQUESTS, DELIVERY, AND MARKING**

February 16, 2021

Get Money Out (GMOM) is an all-volunteer organization that was established just over seven years ago. We now have more than 9,000 citizen supporters. We work in Maryland toward the goals that all citizens should have equal access to the ballot and an equal say in governance.

The integrity of elections must be of paramount concern to State government. Cynicism about government and elections is already rampant for a variety of reasons. In 2018 North Carolina suffered major absentee ballot fraud perpetrated by low-tech means, but this bill wisely protects against high-tech, high volume threats.

Maryland has a vulnerability in allowing any voter to request and mark an absentee ballot online. Hackers who have gathered information on hundreds of millions of people by breaking into Equifax, Marriott, or any other data aggregator have all the information they need to request your absentee ballot and mark it online. If a major actor in an election were to perpetrate such large-scale fraud, they could target a group of voters in a primary or general election in order to tip the election to a favored candidate or ballot issue. It would happen fast and without warning. You could lose your vote.

Under HB 955, in order to receive an absent ballot or mark a ballot over the Internet, a voter would have to be 1) a military service member assigned abroad or 2) a disabled or other voter who cannot vote except by Internet ballot. Restricting access to Internet ballots to a limited population should greatly reduce risk of automated attacks by bad actors using stolen identities.

We well understand the Committee's general reluctance to act when a vulnerability is theoretical and has not occurred in actual practice. However, in this case, the consequences of a large-scale occurrence would be quite severe – requiring a repeat election and further eroding public confidence in our democracy. We urge you to follow the advice of election security experts and to fill this gap before a disastrous incident occurs. Please issue a favorable report on House Bill 955.

Draffin Testimony HB0955 -2021-Feb-16.pdf

Uploaded by: Draffin, Cyril

Position: FAV

Cyril W. Draffin, Jr.
Maryland Cybersecurity Council Critical Infrastructure Subcommittee

Testimony in Support of

HB 0955, **"Election Law – Absentee Ballot Delivery and Marking"**
Sponsor: Delegate Alonzo T. Washington

House Ways and Means, February 16, 2021

Honorable Chair and members of the committee, thank you for the opportunity to present my testimony **in <u>support</u> of House Bill 955 pertaining to election law.**

My name is Cyril Draffin. I serve as a member of the Maryland Cybersecurity Council, and its critical infrastructure subcommittee, and was a Project Advisor to the Massachusetts Institute of Technology (MIT) with focus on cybersecurity.

Last year I testified that the Maryland absentee system could be subjected to major stresses if the number of absentee ballot skyrocketed. What I warned about occurred—there was a huge increase in absentee ballots.

I have four points:

1) Maryland's absentee ballot system is the least secure of any state in the United States.

Prior to 2020 when many processes were changed, my understanding is that 47 states did not allow delivery of absentee ballots by Internet other than for military voters, overseas voters, and voters with disabilities. Only 3 states (Alaska, Washington, Maryland) allow, but Alaska and Washington require witnesses or signature comparisons before ballots are counted. Risk is that social security or other personal data can be easily and cheaply purchased on the black market, and very difficult to determine if a submitted ballot came from a specific registered voter if printed via the internet, or to do an audit on a disputed ballot.

Maryland's election outcomes could be affected by flaws in current absentee ballot system that allows many people to request **and print** absentee ballots on-line with credentials that can be purchased on the black market.

2) Maryland election process can be overwhelmed if majority of voters stay switched to absentee ballots.

I hope after the November 2020 election, you have a greater appreciation for the burden on the local boards with current absentee system—**because each internet**

delivered ballot must be hand copied over for the voting machines to read. Every voter in Maryland is currently allowed to vote absentee. There is no ceiling on the number of voters who could use this system. Although only about 5% of voters have been voting absentee up until 2020, nothing precludes it from going up ten-fold to 50% or more (like in other states)—and in fact due to Coronavirus the number of absentee voters skyrocketed to almost exactly 50%. If absentee ballot usage stays very high, this could be a hardship for local election officials to meet deadlines and to counties who must pay.

3) Regular voters can still get an absentee ballot by mail or in-person. And **qualified U.S. Uniformed Service Voters and overseas voters, and voters with a disability and any other voter who needs one in order to vote will be able to get an absentee ballot by internet.**

HB 955 still allows voting by absentee ballots to encourage registered voters to vote, and still allows special qualified people who need internet access to have it.

4) Maryland legislators may be perceived as unwilling to address election security if they do not make the changes incorporated in HB 955, especially if there is a hacking problem or an election challenge (if absentee ballots cannot be defended due to current procedural vulnerability).

Because of the need for improved election security and avoiding non-machine-readable ballots, I encourage a favorable report on House Bill 955, and the committee's continued attention to election cybersecurity.

Summary of current Maryland absentee ballot procedure:

1) *All registered voters can use a paper form or an online tool to choose to have ballot mailed to them or sent on-line.*
2) *For on-line ballots, a person (or autonomous system filling out the form electronically) provides some personal information (e.g. social security number) which hopefully is for a real voter validly requesting an on-line ballot; and that requester is then sent an email with instructions to download a ballot from a website.*
3) *Voters (or organizations with access to the email instructions) print their online delivered ballot and mail it back to Local Board of Elections.*
4) *Ballots are accepted without any signature comparison or other authentication.*
5) *Local board of elections take each online delivered ballot and manually transfer that information onto ballot stock (potentially introducing clerical errors) that can be read by the voting machines.*

[Note: Maryland's use of paper ballots is more secure than paperless voting machines of some other states, but we do not want Maryland's total vote undermined by an insecure absentee ballot system]

HB 955 written testimony lrg pdf.pdf

Uploaded by: garland, lynn

Position: FAV

HB955   Support
Absentee Ballot Requests, Delivery, and Marking
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Dear Chair Kaiser, Vice Chair Washington and Committee Members:

Maryland was one of the last states to finish counting its ballots in 2020, largely because of internet-delivered ballots. Maryland only finished on November 23, even though it was allowed to start processing its absentee ballots on October 1, the earliest date among the states. Unlike Maryland, almost all other states limit internet-delivery of blank absentee ballots to military, overseas voters and voters with disabilities.

Each internet-delivered ballot must be hand copied onto a traditional paper ballot to be scanned, resulting in delayed results, increased costs for counties and potential inaccuracies. In 2020, anticipating the large increase in absentee ballots and the enormous workload to hand copy the internet-delivered ones, the SBE discouraged voters from requesting internet-delivered ballots through voter outreach: "*Get Your Ballot Sent by Mail, Not Email, to Save Time and Money* ... Receiving your ballot by mail is free and more convenient than receiving it by email," said Linda Lamone, Administrator of the State Board of Elections. "To save time and money, request that your ballot be mailed. This will also make Maryland's vote counting process more efficient because local election judges will not have to hand copy ballots."[i] The voter outreach campaign reduced the percentage of absentee voters requesting internet delivery from 36% in 2018 to 10% in 2020. But there were still 163,907 internet ballot delivery requests in 2020 compared to 55,988 in 2018.[ii]

The large number of ballots that must be hand-copied in a very short time creates opportunities for error or tampering. If the remade ballot does not accurately reflect the voter's choices, the voter will never know, and Maryland's current audits will not detect this type of discrepancy. These voters never see the ballot that is cast for them.

Internet ballot delivery may decrease voter participation. Voters who receive their ballots online are about 12% less likely to return their ballots than those who receive traditional paper absentee ballots by mail, which come with a return envelope.[iii]

Large-scale absentee ballot fraud is far simpler to accomplish with ballots delivered over the internet than with paper ballots mailed to brick-and-mortar addresses. One smart hacker with resources could attack Maryland's online ballot delivery system on a large scale without detection.[iv] Limiting usage is key to reducing the attack surface.

The credentials needed to impersonate Maryland voters are on the internet. Top computer scientists have repeatedly warned that the wide availability of credentials (social security number, date of birth, driver's license number...) makes Maryland's system extremely vulnerable. The U.S. Senate Intelligence Committee Report on Foreign Interference indicates that the necessary credentials have already been

collected by Russia. Voters' email addresses have also been collected.[v] Bad actors can use voters' credentials to impersonate voters and:

- Register unregistered voters and then request and vote their absentee ballots.
- Intercept emails sent to voters who requested internet-delivered absentee ballots and vote their absentee ballots.
- Request absentee ballots for registered voters to be sent to fake email addresses. If those voters vote at a polling place, they would have to vote provisionally, creating chaos. If a fraudulent absentee ballot and provisional ballot were both received, the real voter could be disenfranchised.
- Spoof the board of elections and email incorrect links to voters.

Maryland's SBE cannot prevent, and may not even detect, an attack.
When Russian attackers probed Maryland's online voter registration and online ballot delivery system in 2016, the attack was not detected for weeks. In addition, for 13 months in 2017 the SBE did not receive 80,000 voters' change of addresses from the MVA because of a bug in the programming. The SBE detected the problem, only by chance, 3 days before the 2018 primary.

Risks of internet delivery outweigh benefits. HB955 reduces the impact of an attack and workload without reducing participation. This bill will allow online delivery of absentee ballots to voters who need them, while still allowing all voters the convenience of using the online tool to request absentee ballots that, in most cases, would be sent to them by mail.

Please safeguard Maryland's elections and support HB955.

Lynn Garland
Independent Advisor on Voting Systems Security and Accuracy
Bethesda, Maryland

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[i] SBE Voter Outreach, September, 2020, "Get Your Ballot Sent by Mail, Not Email, to Save Time and Money"

[ii] https://elections.maryland.gov/press_room/2020_stats/Mail-in%20Ballot%20Request%20Counts%20with%20Chart.pdf

[iii] STATEWIDE RETURN RATE OF ABSENTEE BALLOTS IN MARYLAND

	Ballots sent by mail	Ballots sent electronically	Difference
2016 primary	76.45 %	62.55%	13.90%
2016 general	82.03%	70.98%	11.05%
2018 primary	72.92%	58.71%	14.21%
2018 general	81.29%	69.55%	11.74%

No data is yet published for 2020. The 2016 and 2018 figures are from a Jan 3, 2019 email from Erin Peronne. Throughout the states, "*Contrary to expectations of many in the election community, the preliminary data indicate that in most states (11 of the 16 respondents) electronic ballots had lower return rates.*"
(https://www.overseasvotefoundation.org/files/OVF_research_newsletter_2013_summer_corrected.pdf page 3)

[iv] NIST IR 7711, Sept 2011, "*Security Best Practices for the Electronic Transmission of Election Materials for UOCAVA Voters*": "*In most cases, any mechanism used to remotely authenticate voters will serve as a secondary method to authenticate returned ballots, with voter signatures generally providing the primary mechanism to authenticate returned ballot*s."

[v] Excerpts from an alleged leaked NSA document indicate that the hackers might have been exploring vulnerabilities associated with online delivery of absentee ballots. The top of the leaked document says:

"*Russia/Cybersecurity: Main Intelligence Directorate Cyber Actors...Research Absentee Ballot email addresses.*"

LWVMD testimony - HB 955 - Election Law – Absentee

Uploaded by: Millenson, Janet

Position: FAV

TESTIMONY TO THE HOUSE WAYS AND MEANS COMMITTEE

HB 955 – Election Law – Absentee Ballot Delivery and Marking

POSITION: Support

BY: Lois Hybl and Richard Willson – Co-Presidents

DATE: February 16, 2021

The League of Women Voters of Maryland believes our election system should be accessible, fair, secure, and fiscally responsible. HB 955 can help achieve those goals. By ensuring that electronic delivery of ballots is available to people who need it — UOCAVA voters, the disabled, and others — accessibility and fairness are preserved. Reserving this option for those groups will mean fewer concerns about ballot security and processing expenses.

Internet-delivered ballots need to be manually duplicated at the local Board of Elections on SBE-approved, scannable ballots by bipartisan teams of canvass workers. This extra step is time-consuming and potentially compromises accuracy and security. Normally, though, there are relatively few ballots in this category. In the 2016 Presidential General Election, approximately 87,000 ballots statewide were sent out via the internet; for the 2018 Gubernatorial General Election the number was around 56,000. For the 2020 Presidential General Election, however, there were close to 164,000 requests for internet-delivered ballots — a huge increase.

In the 2020 elections, many voters worried about receiving their ballot on time via the postal service and chose electronic delivery instead, without realizing the implications. Unrestricted availability of internet-delivered ballots placed an enormous processing burden on the local Boards of Elections and slowed the completion of the canvass. The tremendous increase in volume necessitated the hiring of extra canvassers. In addition, social distancing guidelines meant these canvassers couldn't work side by side to duplicate and double-check the voter-printed ballots, so additional workspace in secure facilities had to be arranged.

Every voter who truly requires electronic delivery of ballots should be able to get it, and this option should be as secure, private, and accessible as possible. Other voters should use the traditional options of voting in person or requesting a ballot by mail. This will avoid overloading the Boards of Elections, slowing down the canvass, and incurring extra expenses.

The League of Women Voters of Maryland, with 1,500 members across the state, urges a favorable report on HB 955.

PV HB-0955 testimony 2021 Final.pdf

Uploaded by: Vora, Poorvi

Position: FAV

House Bill 0955
Election Law – Absentee Ballot Delivery and Marking
SUPPORT
Ways and Means
February 16, 2021

Poorvi L. Vora
Professor of Computer Science, The George Washington University

Maryland's approach to internet ballot delivery is unintentionally, yet fundamentally, flawed and among the most insecure in the nation. The change implemented in HB 0955—restriction of the use of online ballot delivery—is urgently needed. In the absence of this restriction, Maryland opens itself to a variety of disruptions as the number of voters using online ballot delivery increases. Some of these disruptions could create far greater chaos than was witnessed last year in the Iowa caucuses[1]. Maryland should make every effort to limit the use of online ballot delivery to those voters needing it.

Computer scientists have written to the Maryland State Board of Elections regarding internet ballot delivery since 2012; I have personally written and testified four times[2]. The SBE's overconfidence and disregard of our recommendations only increases its attractiveness as a target. It is very easy for a bad actor to obtain thousands of voting credentials and request and complete thousands of online ballots from anywhere in the world. It is then trivial to have these ballots mailed in from within the US, and the State would not be able to distinguish fraudulent ballots from those completed by real absentee voters. If voters were to arrive to vote on Election Day and were told absentee ballots were requested on their behalf, there would be significant disruption. The incentive for bad actors to exploit this vulnerability, and the extent of the disruption, will increase with the number of voters using online ballot delivery.

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[1] Reid J. Epstein, Sydney Ember, Trip Gabriel and Mike Baker, "How the Iowa Caucuses Became an Epic Fiasco for Democrats", New York Times, Published Feb. 9, 2020. Updated Feb. 11, 2020. https://www.nytimes.com/2020/02/09/us/politics/iowa-democratic-caucuses.html as accessed on February 11, 2021.

[2] I wrote a letter, with others, to the SBE and several legislators on 15 January 2018 and another letter earlier to the SBE on 12 September 2016. I testified in person at the hearings for HB 0859, HB 706 and HB 1658 on 18 February 2020, 26 February 2019 and 27 February 2018 respectively, and earlier at a State Board meeting on 14 September 2016. Other computer scientists have sent letters earlier.

A simple measure would greatly reduce Maryland's vulnerability and HB 0955 implements it by restricting the use of online ballot delivery. All other voters could still request their ballots using the online ballot request tool. Reducing the number of electronically-delivered ballots would reduce both the incentive for bad actors and the likelihood of significant chaos through fake absentee ballots.

Security technology alone cannot adequately address the possible acceptance of fraudulent ballots made easy by the use of intermediating computers, weak authentication, stolen credentials, emailed ballot links and insecure computers used by voters. As more voters use the online ballot delivery system, the State becomes a more attractive target. Further, in spite of a best practice requirement that signatures be used as the primary authentication mechanism for voted absentee ballots (see NIST IR 7711[3]), Maryland does not compare voter signatures for returned voted ballots. Electronically-delivered ballots are delivered as internet links to email accounts; it is comparatively easy to set up fake email addresses in bulk. Hence, unlike ballots obtained at brick-and-mortar addresses or voted in person, electronically-delivered ballots may be obtained and cast in large numbers by bad actors. The bad actor may be a nation state, or any domestic or international group or individual.

Maryland's legislators have the charge to greatly reduce the possibility of disruption of Maryland's elections by passing this Bill. I understand and applaud the desire to improve voter services, but all voters suffer when elections are interfered with. **I urge you to pass this Bill.**

Respectfully,

Prof. Poorvi L. Vora

Professor of Computer Science
The George Washington University, DC
Note: affiliations are included for identification only

Poorvi L. Vora is Professor of Computer Science at The George Washington University. Her research focus has been on end-to-end independently verifiable (E2E) voting systems and statistical election audits. She has worked with the National Institute of Standards and Technology (NIST) on definitions of desired properties of E2E systems, and on information--theoretic models and measures of voting system security properties. She obtained her Ph.D. from North Carolina State University.

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[3]"In most cases, any mechanism used to remotely authenticate voters will serve as a secondary method to authenticate returned ballots, with voter signatures generally providing the primary mechanism to authenticate returned ballots." NIST IR 7711, Sept 2011, "Security Best Practices for the Electronic Transmission of Election Materials for UOCAVA Voters".

APPENDIX A: Disrupting an Election Using Online Ballot Delivery

A bad actor can easily obtain access to voter registration lists, voting records and the personal information required to register voters and/or request online absentee ballots. Thousands of online ballots can be obtained in one of many ways (some are listed below). The bad actor, using registered voters' credentials, downloads the online ballots, completes them through computerized ballot marking and prints them. All of this can be easily automated by software written for the purpose. The completed fake ballots would be mailed by humans. If, as a consequence, Maryland's counties received multiple ballots for many voters, they would have no way of distinguishing legitimate absentee ballots from fake ones, because *Maryland does not compare signatures for absentee ballots.*

Fraudulent Means of Access to Online Ballots

1. **Use credentials to impersonate <u>registered voters who vote regularly</u> and create chaos on Election Day**

Using the credentials for voters who vote regularly, the bad actor creates many thousands of fake email addresses, and then makes thousands of fake online absentee ballot requests to be sent to fake email addresses. All of this can be automated through software written for this purpose, and need not be done manually. Most of these voters will show up to vote on Election Day and will need to complete provisional ballots, which will create a great deal of chaos and distrust at the polls. By Maryland election law[4], if an absentee ballot has been received for this voter, both ballots will be rejected. If a voter does not show up to vote, neither they nor the State will know that a fraudulent vote was cast on their behalf.

2. **Use credentials to impersonate <u>registered voters</u> who vote infrequently and attempt to change the election outcome of a primary election**

Using the voter registration list and the credentials of voters who do not vote often in primaries, the bad actor would request internet delivered ballots by impersonating these voters and then complete and mail voted ballots. This could change the outcome of the primary. Some voters may show up to vote and would cast provisional ballots, but most will not and will not know a vote was cast on their behalf.

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[4] COMAR: 33.11.05.04
.04 Ballot Rejection — Multiple Ballots from the Same Individual.
C. If an absentee ballot and provisional ballot are received from the same individual, the local board shall reject both ballots.

3. Send incorrect links to voters

Voters who have requested an internet delivered ballot in the past can be sent incorrect links by the bad actor, spoofing the local election board. Voters might follow instructions on what they believe to be a state website. They would then download their ballot from the fake website and mail it to the given address. Even if the given address were correct, their ballot would not be counted because they had never officially requested a ballot. Yet they would believe they had voted. There have been reports[5] that Russian actors explored the possibility of spoofing state election email accounts in 2016, though any such accounts were probably not used in 2016.

Impact on the voters who are impersonated by the software

a. Real voters showing up at the polls on Election Day will need to cast provisional ballots.
b. Voters who did not request absentee ballots and did not vote won't know that a vote was cast on their behalf.
c. Voters who did request and cast absentee ballots could have their vote replaced if the fake ballot is received after theirs. They too would not know their vote was replaced. If there were many instances of multiple ballots being received for a single voter, the state would investigate, however this would not be easy to resolve without contacting each voter and causing chaos and distrust.

The State cannot do much if fraud is suspected.

a. The State cannot distinguish between legitimate returned absentee ballots and fake ones.

b. The State cannot reassure real voters who voted with an absentee ballot obtained online that a fake ballot was not received after their legitimate ballot and counted instead. If two ballots were received, ostensibly from the same voter, the State may not be able to tell which one was genuine, especially without an intensive investigation.
c. The State will find it hard to reassure those voters who did not vote that a vote was not cast on their behalf. There will be considerable difficulty if a voter claims they did not cast a vote, but the State has a vote ostensibly completed by the voter, which is counted.

d. Moreover, a bad actor can create long lines and chaos at the polls merely by fraudulently requesting an online ballot, without having to vote and return those ballots. At the polls, the e-poll books will record that an absentee ballot has been requested and sent; and that annotation alone will require that the voter vote a provisional ballot.

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[5] https://www.documentcloud.org/documents/3766950-NSA-Report-on-Russia-Spearphishing.html#document/p1 pg. 4

APPENDIX B: The Context

Foreign actors, thought to be Russians, attempted to breach online voter registration databases throughout the US in 2016, and the FBI found that they were successful in doing so in at least one state. Additionally, thousands of fake social media accounts were created and successfully created and operated. While the state of Maryland detected attempts to breach its online voter registration database, officials have testified that they believe the attempts were not successful. But it is not possible to categorically state that a security breach did not occur, because it is relatively easy for competent attackers to hide their trail. Large organizations with considerable resources have been subject to data breaches. (Examples include Equifax, the US Government's Office of Personnel Management, Adobe, Sony, Capital One, Yahoo, Target, Marriott, the University of Maryland, Anthem Health Insurance). It typically takes many months for an organization that does not immediately detect a breach to become aware of it. There are likely many organizations that are successfully breached but never detect the breach.

Any online voter registration database, including Maryland's, can be breached, and it is likely to be a while before the breach is discovered, if ever. Additionally, some attacks do not require the hacking of Maryland's election technology. For example, as with social media accounts, the creation of fake email accounts in bulk is very easy.

The Ease of Obtaining Credentials

The personal information required to request and download an absentee ballot in Maryland (such as driver's license number or birth date) is no longer sufficiently confidential for voter authentication.

- All the information is easily available on the "dark" market—consider the description, in the Mueller indictment of 16 February, of Russians using the social security numbers of real US citizens in order to open bank accounts[6].
- It is also shared legitimately and widely among law enforcement agencies, universities, doctors' offices and hospitals, and hence could be leaked (or may already have been) through data breaches of these entities.

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[6]"In or around 2016, Defendants and their co-conspirators also used, possessed, and transferred, without lawful authority, the social security numbers and dates of birth of real U.S. persons without those persons' knowledge or consent. Using these means of identification, Defendants and their co-conspirators opened accounts at PayPal, a digital payment service provider; created false means of identification, including fake driver's licenses; and posted on ORGANIZATION-controlled social media accounts using the identities of these U.S. victims. Defendants and their co-conspirators also obtained, and attempted to obtain, false identification documents to use as proof of identity in connection with maintaining accounts and purchasing advertisements on social media sites", page 16, para 41, *ibid*.

- Additionally, the recent hacks of credit agency Equifax and the federal Office of Personnel Management (OPM) revealed considerably more "secure" information on a huge number of US voters and are believed to have been carried out by a state actor. Because this information is not yet on the "dark" market for personal gain, it is suspected to have been obtained for some other purpose appropriate for a state actor.
- Finally, ByteGrid servers stored the credentials of all Maryland voters, and an interested ByteGrid insider could have obtained access to all the credentials without leaving a trail.

In fact, reliance on personal data alone to authenticate a voter is never sufficient for any high security activity like voting, and changing the type of data required will not solve this problem.

The Ease of Obtaining and Completing Ballots in Bulk

It is not hard to automate access, download and completion of online ballots. The Mueller indictments describe how Russian trolls from a single company opened and ran hundreds of email and social media accounts[7], pretending to be US citizens. The company's annual expenditure was in the millions of dollars[8].

- "Tests" to differentiate humans from software are not very effective—consider that the Russians are believed to have created many thousands of fake social media accounts that are operated by software, behave like human participants, and exist solely for the purpose of interfering in the US election.
- It is also easy to make fake ballot requests appear to come from different IP addresses, spaced out over time, with an extremely large number being made close to deadlines, making it harder to detect them or respond effectively.
- The Mueller indictment describes how Virtual Private Networks (VPNs) and computer infrastructure in the US[9] were used to disguise the computers and the location of those opening and using the accounts.

The Ease of Casting Illegitimate Ballots in Bulk with Online Ballot Delivery

Bulk impersonation attacks have not been detected in Maryland in the past. However, a determined actor could easily obtain bulk access to virtual ballots delivered online.

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[7] "Defendants and their co-conspirators also registered and controlled hundreds of web-based email accounts hosted by U.S. email providers under false names so as to appear to be U.S. persons and groups", pg. 16, para 40, *ibid*.

[8] "The ORGANIZATION [Internet Research Agency] employed hundreds of individuals for its online operations, ranging from creators of fictitious personas to technical and administrative support. The ORGANIZATION's annual budget totaled the equivalent of millions of U.S. dollars", page 5, para 10(a), *ibid*.

[9] "Defendants also procured and used computer infrastructure, based partly in the United States, to hide the Russian origin of their activities and to avoid detection by U.S. regulators and law enforcement", page 3, para 5, *ibid*.

Information on who votes regularly and who does not is also easily available; to create chaos on Election Day, an adversary would focus attention on those who do vote often. To prevent fraudulently-obtained ballots from being cast, and in order to ensure that a voted ballot received by the election authority was indeed sent by the voter, the State should check signatures, which it does not. There is no way of determining whether a received, voted absentee ballot was indeed cast by the voter.

Potential Impact

If many voters show up to vote on Election Day but have absentee ballots cast in their names, it will take a while to determine what the correct election outcome is. Voters not paying much attention to their mail might find out on Election Day that the State received a change of address on their behalf and believes they live elsewhere; hence they are not eligible to vote in the jurisdiction they live in. If provisional ballots are cast, these will not be tallied toward the outcome announced on the evening of Election Day. Additionally, election officials would then be hard pressed to explain why they ignored several letters from computer scientists urging them to address the core problem. This could easily surpass the problem faced by the Democratic Party in Iowa.

HB955 Del. Washington - Support.pdf

Uploaded by: Washington, Alonzo

Position: FAV

ALONZO T. WASHINGTON
Legislative District 22
Prince George's County

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Vice Chair
Ways and Means Committee

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THE MARYLAND HOUSE OF DELEGATES
ANNAPOLIS, MARYLAND 21401

Testimony in Support of HB955 – Election Law - Absentee Ballot Requests, Delivery and Marking

HB955 represents an attempt to mitigate the security vulnerabilities within Maryland's absentee voting system.

The legislation restricts online absentee ballot delivery to only uniformed voters, overseas voters, voters with disabilities, or any other voters who would be unable to vote if they could not receive an absentee ballot electronically.

Ballots delivered online:

- Create huge security vulnerabilities in our elections;
- Are much more difficult and expensive for election officials to process; and
- Are far less likely to be voted on and returned than absentee ballots sent by mail (30% of voters who requested an online ballot in November 2018 did not use them).

Additionally, many voters who have their ballots delivered online don't realize that someone at their local board of elections will have to hand-copy their votes onto a real ballot to be counted, and the voter will never see that ballot. In that process, the secrecy of their ballot may be compromised.

HB955 will reduce these risks associated with the online delivery of absentee ballots and preserve the secrecy of a voter's ballot. It also will ensure that anyone who needs to receive their absentee ballot online will still be able to do so.

I respectfully ask for a favorable report on HB955.

HB955-2021SAVEourVotesTestimony.pdf

Uploaded by: Wilson, Rebecca

Position: FAV

SAVEourVotes
SECURE•ACCESSIBLE•VERIFIABLE ELECTIONS FOR MARYLAND

HB 955: Election Law – Absentee Ballot Delivery and Marking
Ways & Means Committee, February 16, 2021
Position: FAVOR

This bill seeks to reserve the delivery of absentee ballots via the internet for voters who need to receive their ballots that way. Federal law mandates the availability of electronic delivery for military and overseas voters, and a federal court ruling in Maryland requires it for voters with disabilities. This bill reserves the online delivery of ballots for those categories of voters and for any other absentee voters for whom it would not be feasible to receive their ballots by mail.

Ballots delivered over the internet:

- **Require far more processing when they are received** by the elections office. Because voter-printed ballots cannot be tabulated by the ballot-scanners, each ballot must be hand-transcribed onto a scannable blank ballot for counting.

- **Compromise the privacy of voters**. Because the voter's oath is inside the envelope contsining the ballot, the envelope has to be opened before the ballot can be accepted for counting, thus exposing the voter's votes with their identity.

- **Are not verifiable by the voter.** Since the voter never sees the transcribed ballot counted as theirs, transcription errors or fraud would not be detected by the voter or by Maryland's automated audits.

- **Are more vulnerable to fraud and error** than ballots mailed to voters.

- **Are less likely to be returned voted** — on average about 12% lower for internet-delivered ballots in Maryland compared with ballots mailed to voters.

- **Demonstrate no increase in turnout or convenience for most voters.** In fact, the lower return rate would seem to indicate the opposite.

- **Could jeopardize the timely certification of an election.** In 2016 and 2018, almost 40% of absentee ballots were delivered via the internet. Transcribing the huge quantity of mail-in ballots in 2020 would have been an insurmountable task if the SBE and many others had not launched a public education campaign urging voters to receive their ballots by mail, which reduced the volume to about 10%.

Some voters would not be able to vote unless they can receive their ballots electronically, and this option should be reserved solely for them. Most other voters would be better off receiving their ballots by mail, as the 2020 elections demonstrated. We urge you to return a favorable report on HB955 to make our elections safer and more efficient.

Rebecca Wilson, Co-Director
SAVE our Votes: Secure, Accessible, Verifiable Elections for Maryland
rebecca@SAVEourVotes.org   202.601.8182 cell

Pages 3 & 4 show the differences in how absentee ballots are delivered, returned, adjudicated, processed, and counted depending on how they are sent to the voter. The left side of the page shows a ballot delivered to the voter by mail and the right side shows a ballot delivered via the internet. The labor-intensive processing required for internet-delivered ballots places a huge burden on local election officials and could jeopardize timely election certification if the quantity of ballots is substantial.

A traditional absentee ballot mailed to the voter is sent with a pre-addressed return envelope that has a bar code with the voter ID number and a place for the voter to sign and date the oath. When the elections office receives the voted ballot, they use a barcode scanner to enter the receipt of the ballot into the voter's record. When these absentee ballots are canvassed, once the envelope has been accepted, it is opened and separated from the ballot, which is put into a batch to be counted by the scanner.

Delivery and processing of a ballot sent via the internet is much more complex:

1) The SBE sends the voter an email saying that their ballot is ready. This email may go to the voter's spam folder or may not be noticed by the voter. Worse still, it could be sent to a fraudulent email address without the voter knowing it was ever requested.

2) The email contains a link to a web site where the voter downloads the ballot. It would be possible for the voter to receive a "spear-phishing" email sending them to a site that looks real but is actually a "spoof" site where their credentials could be stolen.

3) To log in, the voter enters their first and last name, birth date, and zip code. This information is widely available on the internet, so a criminal could easily access a voter's ballot.

4) The voter may mark their ballot online (which is vulnerable to hacking and privacy violations beyond the scope of this bill) or may download it and mark it by hand. Either way, the voter needs to print the ballot and return it. The online ballot has more pages than the scannable ballot because the pages are smaller. Additional pages contain instructions and the oath the voter needs to sign for the ballot to be accepted. The voter mails all these pages in an envelope which they supply and address themselves. Election officials cannot adjudicate the ballot using the information on the outside of the envelope.

5) The oath is inside the envelope, so the votes on the ballot are exposed to election workers when the oath is checked for a signature and date.

6) The voter-printed ballot cannot be counted by the scanner. It must first be hand-transcribed onto a ballot the scanner can read. The voter's identity is known while the ballot is transcribed, violating the privacy of the voter. The transcribed ballots are counted by the scanners, so Maryland's automated audit would not detect transcription errors or fraud.

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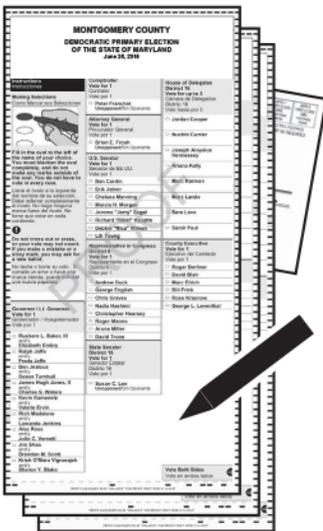# DELIVERING AN ABSENTEE BALLOT
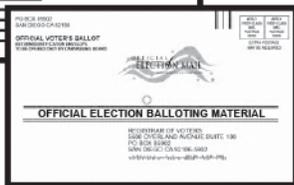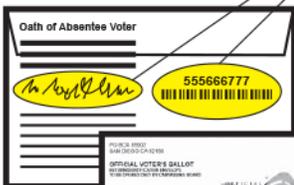
BOARD OF ELECTIONS

BY MAIL
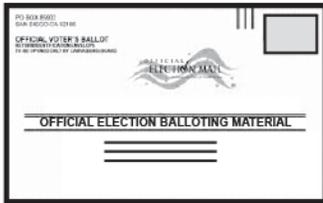
Voter's ballot is mailed to postal address specified by the voter.

A pre-addressed return envelope is sent with the ballot.

Voter marks the ballot by hand.

Voter returns ballot to LBE in the envelope provided, which has the absentee voter ID# with a matching barcode and an oath that be signed and dated.

NOTE:
All forms must be signed but **signatures are not matched to signatures on record.**

BY INTERNET

Voter receives **an email** with a link to the ballot.

To access the ballot, voter must enter **first and last name, birth date,** and **zip code**.

Voter may **mark the ballot online** and print it, or may print the ballot and mark it by hand.

The ballot documents, printed on letter-size paper, include an oath that must be signed and dated.
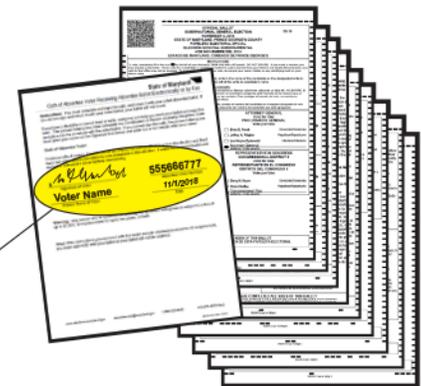
Voter returns the ballot and signed oath to LBE in an envelope supplied by the voter.
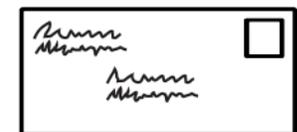
LOCAL BOARD OF ELECTIONS

Text in bold red indicates areas of vulnerability.

COUNTING AN ABSENTEE BALLOT
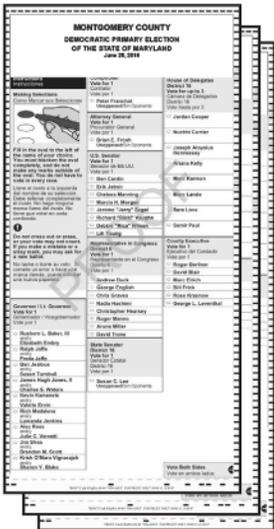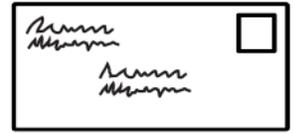
LOCAL BOARD OF ELECTIONS
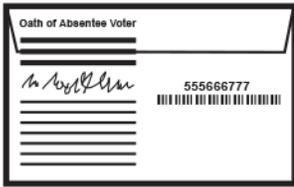
DELIVERED TO THE VOTER BY MAIL

The LBE stamps the arrival time on the envelope, checks that the oath is signed and dated, and uses a barcode reader to enter the receipt of the ballot into the voter's record for ballot tracking.

If the ballot is accepted, it is scanned and counted during the absentee ballot canvass.

DELIVERED TO THE VOTER BY INTERNET

The LBE stamps the arrival time on the envelope. Because the oath and other information needed to accept the ballot are inside the envelope, **these ballots are more difficult to track and process.**

During canvassing, **the oath, which includes the voter's printed name and other info, must be retrieved from the envelope containing the ballot**. LBE checks that the oath is signed and dated before accepting the ballot.

Ballots printed by the voter cannot be read by the ballot scanner. They must first be **hand-transcribed onto an official ballot** that the scanner can read.

The transcribed ballot is scanned and counted, often after the other absentee ballots are canvassed.

Text in bold red indicates areas of vulnerability.

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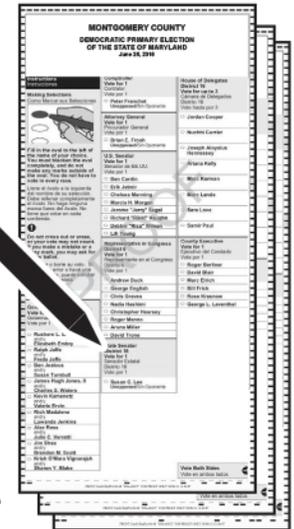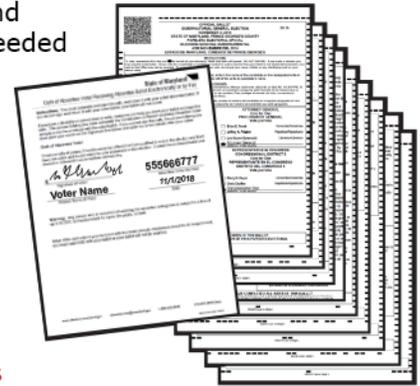
Election workers transcribing absentee ballots that voters received online, printed, and mailed in.

RIGHT: The first thing election workers must check is that the oath inside the envelope with the ballot has been signed. The page in the election worker's left hand is the oath page. In his right hand is the ballot, so the voter's identity is known during the transcription of the ballot
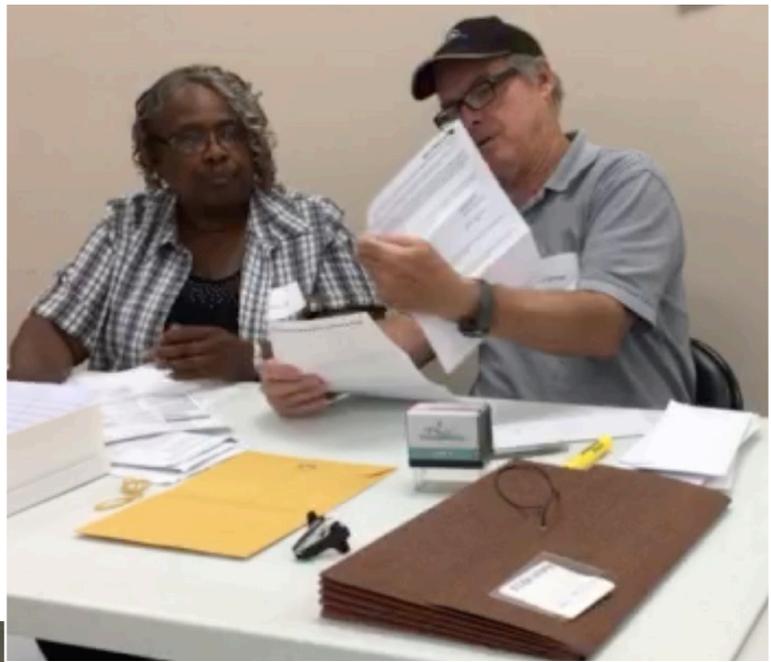
BELOW: Public observers are usually too far away to verify that ballots are being transcibed accurately.

HB955 Absentee Delivery and Marking.pdf

Uploaded by: Berry, Katherine

Position: INFO

February 11, 2021

Delegate Anne Kaiser, Chair
Maryland House Ways and Means Committee
Room 131, House Office Building
Annapolis, MD 21401-1991

RE: HB955 – Information

Delegate Kaiser and Committee Members:

My name is Katherine Berry. I am the Election Director in Carroll County and the co-chair of the Maryland Association of Election Officials (MAEO) Legislative Committee. MAEO represents the local boards of elections throughout the State of Maryland. I am writing today representing myself and MAEO with information regarding HB955 – Election Law – Absentee Delivery and Marking.

This bill would eliminate the ability for any voter to request that a ballot be web delivered. Voters would be able to request their ballot by mail or in person.

Management of web delivered ballots at the local board level can be cumbersome to manage during the canvass of the ballots. Additional bipartisan teams are required to duplicate the web ballots that are printed on regular paper to ballot paper so that the vote can be tabulated. Since its implementation several election cycles ago, web delivery has become increasingly popular with the voters because it is convenient among other things. In addition to these added local board of elections tasks, this process is quite costly and time consuming.

Most of the MAEO membership agrees that providing access to the ballot continues to be imperative because we recognize there are various circumstances that require voters to get their ballot in a certain way. However, most of the MAEO membership also agrees that there is a fiscal burden on the county government and limited amounts of time to perform all required tasks before the election can be certified. We expect that absentee voting will become more popular since most voters successfully cast their by-mail ballot in 2020, so it is imperative that all stakeholders recognize and create a balance of easy voter access and cost effectiveness of this part of the vote-by-mail process.

Thank you for your time. If you have any questions, please contact me at (410)386-2958 or Katherine.berry@maryland.gov.