

# States Need to Check the Paper Ballots!

## Voting Machines Can be Hacked through Updates

In each election, voting machines get updates by **thumb drives** or **cartridges**. Updates have candidates' names and any security patches. Sadly, updates can be hacked at the **manufacturer, distributor or election office**. The well-known hacking at companies and even the CIA and NSA, shows that small offices cannot prevent it.

The government won't tell us when hackers get in. They didn't tell us with Florida voter registrations. Often they don't know. But they did say there are 2 types of companies: those which have been hacked and those which don't know they've been hacked. That was Chinese hackers, not even counting Americans and Russians.

Republicans think American hackers are more likely than foreign ones. Democrats think the opposite. Either Americans or foreigners can throw out current officials and put in puppets to steal money or create chaos.

## Does Your State *Check Paper Ballots, to Catch Hacks?*

There is a way to notice and recover from inevitable computer hacking: **use** paper ballots **and check them**. When results really matter or surprise you, ask "How were they checked?"

Deep colors show when one party has the Governor and both houses of the state legislature. Light colors show when it has 2 out of 3. That is the party which can make improvements. Notes are below the table.

Only 4 states <b>hand-count all</b> contests to check totals in a sample of places	UT ▲	WV e	AK e	CA ▲ e																
14 states <b>hand-count 1-6</b> contests per election to check totals in a sample of places	AZ ▲	FL ▲	IA ▲	OH ▲	MO ▲	MT ★	NC ★	WI ★ e	MA ▲	MN ▲	DC ▲	HI e	NM ★	OR e						
5 states use <b>machines independent*</b> of the election machines to check totals	VA ★ e	VT ▲	CO ★	NY ▲	RI ★															
4 states reuse <b>same ballot images or type of machine</b> as election day, to check	MD ★	CT ▲	IL ▲	NE ▲																
12 states have paper ballots, but <b>do not require</b> them to be checked	AL ▲	AR ▲	ID ▲	ND ▲	NE ▲	OK ▲	SD ▲	WY ▲	MI ▲	NH ▲	ME ▲	WA ▲								
12 states <b>do not have paper ballots</b> for many voters	GA ▲	IN ▲	KY ▲	MS ▲	SC ▲	TN ▲	TX ▲	KS ▲	LA ▲	PA ▲	DE ▲	NJ ▲								
0 states require <b>good security systems for paper ballots</b> , to make checks useful																				

▲▲ **Warning:** election is not necessarily corrected when checking shows a mistake. Loser may need to sue.

e **Exclude** some types of ballots from checking (besides provisional which are excluded most places). So hackers will attack those ballots: AK, OR-small precincts. CA-late mailed ballots. HI, VA, WI-early and absentee ballots. WV and maybe other states-paper trail on a roll of paper, which is very hard to hand-count.

★★ **Good sample** of ballots has high confidence of finding errors. This assumes VA and RI will adopt rules for their risk-limiting audits like the rules CO has, including an independent machine count by SoS.

\* **Independent machines** for a second count make hackers' job a little harder: they must hack both.

Only DC, MA, WI have rules letting the public see ballot marks, to see that staff hand-count accurately.

In FL, most counties hand-check 1 race. Seven counties check all races by independent machines which re-scan ballots and count the new scans.

In IN and WA, elected officials decide whether to check any ballots in each election.

In states which do not have paper ballots for many voters, some areas have paper, which may be checked. In DE and LA, money has been voted to replace all paperless machines with paper ballots.

Sources: <https://www.brennancenter.org/analysis/voting-machines-risk-where-we-stand-today> and

<https://www.verifiedvoting.org/state-audit-laws/>

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