Heard in Government Operations Interim Committee meeting on 10.21.2026

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Utah's Election Security

Comparing the Security of In-Person Voting to Voting by Mail

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October 2026

HB 311 asked the Herbert Institute to investigate the security of in-person voting compared to the security of voting–by mail, especially between states that primarily use vote by mail and states that primarily use in-person voting. This study included analysis of accuracy of voter rolls, potential and actual fraud, and consideration of the 2024-20 Performance Audit of Utah's Election System. HB 311 also asked the Herbert Institute for best practices for creating a process where identification must be presented before depositing a ballot in a ballot drop box.

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EXECUTIVE SUMMARY

This white paper examines the security of Utah's election system by comparing voting by mail with in-person voting. In response to HB 311, the Herbert Institute evaluates potential and actual fraud, voter roll accuracy, and issues identified in the 2024-20 Performance Audit of Utah's Election System. It also examines options for verifying identification at ballot drop boxes, including their effects on costs, wait times, logistics, and ballot processing.

As requested by HB 311, this report compares Utah's election system to those of other states. To gather data on Utah's system, we visited eleven Utah counties representing urban, rural, and frontier communities. To gather data on the election systems of other states, we visited six counties across five states representing multiple election systems. Additional research includes a survey distributed to all twenty-nine of Utah's counties, a review of election laws and audits, and interviews with state officials and policy experts. These provide insight into how election safeguards operate and how proposed changes would affect local administration.

The research found no evidence of significant or widespread fraud and no substantive difference in voter roll maintenance between primarily in-person and primarily vote-by-mail systems. Available research also did not establish that adopting vote-by-mail increases reported fraud. However, information about election fraud remains limited. Utah's security relies on overlapping safeguards, including voter verification, documented ballot custody, restricted access to ballots, and audits.

As a result of the 2024-20 audit, several changes to Utah's election system (including some of the recommendations made by the auditor's office) have been implemented that will be discussed in this paper. The available information about fraud in elections is somewhat limited. The 2025, 2026, and recent related audits were reviewed as well to determine the accuracy and maintenance of voter rolls.

Per part 1(b) of the bill, we analyzed possible methods for checking ID at the drop box. Requiring identification to be checked before a ballot is deposited would introduce substantial operational changes. In this study, we consider staffed drop boxes, modified smart drop boxes, and potential use of State Endorsed Digital Identity (SEDI). Each option presents different costs and implementation challenges. Staffing drop boxes would reduce available drop-off hours, increase wait times, and increase election costs, while unmanned verification would require further development to be utilized.

The findings support an adaptable approach to election security that responds to demonstrated vulnerabilities while considering accessibility and administrative capacity. Frequent changes to the system without sufficient funding or delayed implementation can create confusion for both voters and election officials. Therefore, based on our findings, our report recommends continued participation in the Electronic Registration Information Center, realistic implementation timelines, funding for new mandates, and voter education surrounding changes in election law. These measures can help policymakers strengthen election security while preserving confidence and access for eligible voters.

METHODOLOGY

We compared Utah's election system with those of other states that use different approaches to mail and in-person voting. Our team conducted on-site research in six counties across five states, representing three voting-system categories identified by the National Conference of State Legislatures (NCSL)—mostly mail elections (Washington and Colorado), excuse-required absentee voting (Arkansas and Tennessee), and no-excuse absentee voting (Arizona). During these visits, we observed election procedures and spoke with election officials about security measures, staffing, equipment, costs, and administrative challenges.

We also visited eleven of Utah's twenty-nine counties, representing urban, rural, and frontier communities. Following these visits, we developed a survey addressing costs per voter, staffing, operational inefficiencies, and potential vulnerabilities, which we distributed to all twenty-nine counties. In addition, we reviewed Utah's election laws, legislation, legislative audits, official reports, and election data. We also met with Utah state-level officials and policy experts, including representatives from the Lieutenant Governor's Office and the Office of the Legislative Auditor General, state legislators, and policy analysts.

To evaluate potential methods for checking identification at ballot drop boxes, we examined existing technologies, discussed implementation considerations with election officials and other relevant experts, and developed cost estimates using available election data, equipment costs, and operational assumptions.

Although our site visits provided valuable firsthand insight, the counties visited were not a statistically representative sample. Consequently, our findings reflect the observations, interviews, official records, and modeled estimates gathered throughout our research and should not be interpreted as representative of all counties or election systems.

ANALYTICAL FRAMEWORK: ADAPTABLE SECURITY

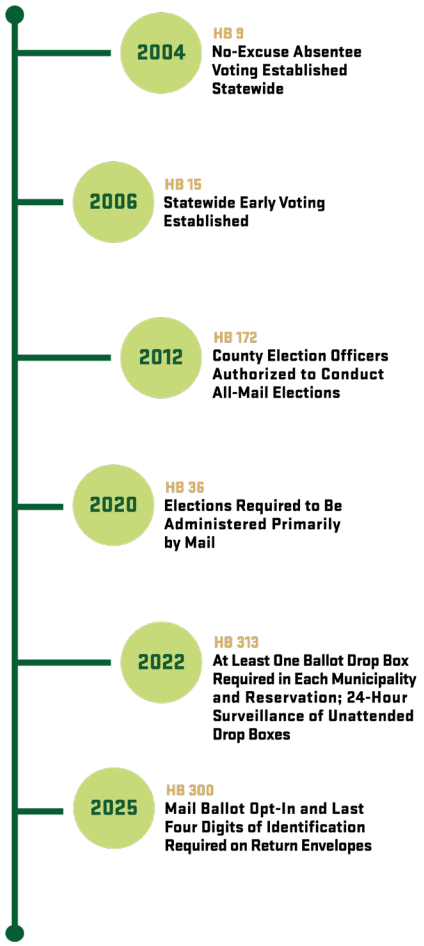
When evaluating the security of Utah's election system, the ideal framework accurately identifies which changes are necessary to ensure said security. Security and accessibility must be balanced—weighing either one too heavily can be detrimental to both. Thus, a framework centered on adaptable security guides decision-makers to consider the threshold at which additional change may not only harm accessibility but also decrease security.

Finding this threshold includes avoiding the following harmful errors. Borrowing the concepts of Type I and Type II errors from statistics, we use them here as analogies for potential errors in policy judgment.

- Type 1 Error—Treating a given election system as if it is insecure when it is actually secure.
- Type 2 Error—Treating a given election system as if it is secure when it is actually insecure.

Committing either of these errors would have consequences on Utah's elections; they should be kept in mind when enacting legislative change. The above framework informs our recommendations for maintaining secure, accessible elections in Utah.

ELECTION HISTORY IN UTAH: A BRIEF STATUTORY OVERVIEW



Voting by mail, as we know it today, has developed over decades, even centuries. A form of absentee voting began during the Civil War and expanded during World War II, protecting the voting rights of soldiers and service members stationed overseas. In the years following, Congress passed laws such as the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) and the Military and Overseas Voter Empowerment (MOVE) Act, to encourage service members and US citizens residing outside the United States to vote.[1] Since Utah gained statehood, and per the provisions of its 1895 Constitution, absentee voting in Utah has existed.[2] Its use, however, has evolved.

Prior to 2004, an absentee voter, referred to in code as an absent elector, had to indicate an inability to vote at their assigned precinct during Election Day polling hours. To prove this, an absentee ballot application had to meet one of the following criteria: physical, emotional, or mental impairment, election duties in another precinct, misdemeanor detainment or incarceration, legal disability, religious beliefs or other strongly held personal values, jury duty, or an expected absence during polling hours.

In 2004, Utah enacted HB 9 which removed these criteria, allowing for no-excuse absentee voting for all voting populations, and expanded the size of remote precincts permitted to conduct all-mail elections, as authorized by their respective county legislative bodies.[3] Even so, in-person voting remained the primary method of voting in Utah. In 2006, in-person voting accessibility was expanded through HB 15, which established our present day early voting period—beginning fourteen days prior to Election Day, requiring a minimum of four days of early voting, and ensuring that ten percent of voting devices at such polling sites be accessible for individuals with disabilities.[4]

In 2012, Utah's method of election administration experienced its first notable change toward a vote-by-mail model. HB 172 authorized county clerks to conduct their elections entirely by mail. In the same piece of legislation, a study was tasked to the Lieutenant Governor, with the participation of county clerks, on how to administer an election by mail with options of early and election-day in-person voting.[5] While our research does not address all conclusions of this study, we acknowledge the value of such early analysis of both policy and operations of the Utah system.

Over the next several years, counties gradually opted into this newly authorized system of conducting elections by mail, all while providing voters with the choice to cast their ballot by mail or in person. Policy discussions surrounding the legislatively authorized use of ballot drop boxes began as early as September of 2016 in response to issues and public concern with postmark deadlines for absentee ballots. Ballot drop boxes, however, were already provided voluntarily by several counties, such as Salt Lake and Weber County.[6] This authorization was not codified into law until 2020.[7]

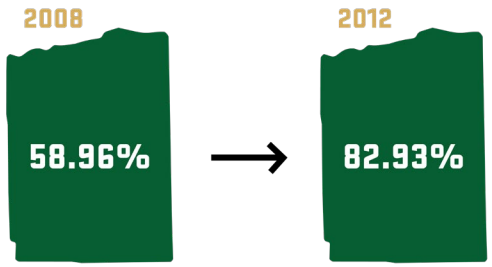
After all counties had begun to conduct all-mail elections in 2019, Utah adopted a statewide all mail election system. HB 36 of the 2020 General Legislative Session, in its totality, updated code to reflect current practices and technology used, directing county election officers to administer elections primarily by mail and officially permitting them to designate official drop boxes. Just two years later, HB 313 (2022) established a required quantity of drop boxes in each municipality and reservation, in addition to requiring twenty-four-hour video surveillance for unattended drop boxes.[8] The latest change to our all-mail election system occurred in 2025 with the passage of HB 300, by which Utah will follow an opt-in vote-by-mail system beginning in 2029.[9] Voters must request to receive a ballot by mail and record the last four digits of their driver licenses, state identification cards, or social security numbers on the return ballot envelope.

The above statutory review of election administration in Utah does not detail all legislative changes that have contributed to the development of Utah's voting environment. Other changes included, but were not limited to, adjustments to election officials' responsibilities and authority, voter education and public notices, voting equipment and its funding, and security.

TURNOUT COMPARISON

The 2008 presidential election was the last year in which none of Utah's twenty-nine counties had all-mail voting. In 2012, the same year that HB 172 was passed, Duchesne County became the first county in Utah to conduct an all-mail election and was the only county to do so that year. According to JoAnn Evans (the Duchesne County Clerk at the time of this switch) the motivation behind adopting all-mail voting was that it would increase voter turnout: "Our voter turnout is between forty percent and fifty percent . . . Our hope is to raise that to eighty percent through mail-in voting."[10] Sure enough, voter turnout in Duchesne jumped from 58.96% in 2008 to 82.93% in 2012.[11]

Duchesne County Voter Turnout
Before and After Mail-In Voting



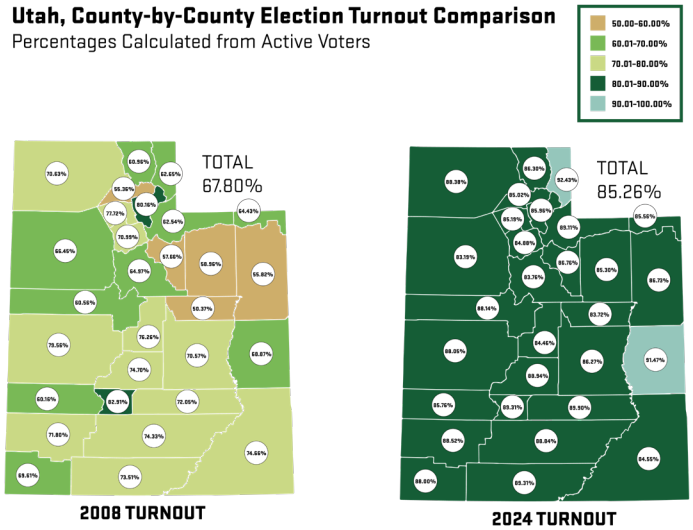
** The Herbert Institute's research cannot and does not claim that this jump in turnout was due to the change in voting systems, but a clear correlation is present and has thus been listed for consideration. Further research is needed to determine a causal link.*

By the 2014 midterm elections, ten of Utah's twenty-nine counties conducted their elections primarily by mail; in the 2018 midterm election this number was already at twenty-seven counties with about ninety percent of Utah voters casting their ballots via mail. All counties in Utah had opted in by 2019, and in 2020, all-mail voting statewide was codified in Utah Code.[12]

Vote-by-mail (VBM) cost savings were partially the reason Utah switched to all-mail elections. All-mail voting is easier to plan and budget for, especially in rural counties where it is difficult to manage sufficient in-person voting facilities to make voting accessible. Rural counties were better able to reach far-flung voters across their jurisdictions, and urban counties were able to streamline processes in a way that was not previously possible with in-person elections.

Across the board, voter turnout in Utah elections increased from 2008 to 2024; this increase followed a clear pattern with the steady increase in mail-in voting across the state. Rural counties saw the most drastic jumps, but every county in the state saw an increase to some degree. In 2008, counties in Utah had turnout numbers as low as fifty percent; in 2024 every county had a turnout of eighty percent or more with some even breaking ninety percent.[13]

Utah, County-by-County Election Turnout Comparison
Percentages Calculated from Active Voters



** The Herbert Institute's research cannot and does not claim that this jump in turnout was due to the change in voting systems, but a clear correlation is present and has thus been listed for consideration. Further research is needed to determine a causal link.*

INTRO TO ELECTION SYSTEMS IN THE UNITED STATES

Election administration varies across the United States, with states taking different approaches to how voters obtain and cast their ballots. While all states provide opportunities to vote in person and by mail, the availability and requirements of these methods differ.[14]

States that rely primarily on in-person voting generally have voters cast their ballots at designated polling locations, either during early voting, where available, or on Election Day. Voting by mail is also available, although requirements vary by state. For example, excuse-required states limit absentee voting to individuals who meet certain qualifications, such as illness, disability, or being away from their jurisdiction. No-excuse absentee states allow registered voters to request a mail ballot without providing a reason.[15] In states with mostly mail elections, also commonly referred to as "vote-by-mail" or "all-mail" elections, ballots are automatically mailed to active registered voters, who can return them through the postal service, designated drop boxes, or other authorized locations.[16] These states also provide in-person voting options, allowing voters to choose how they cast their ballots.

Utah currently administers elections primarily by mail, a system NCSL classifies as mostly mail elections. However, HB 300 (2025) will generally require voters to request a mailed ballot beginning in 2029, rather than receiving one automatically.[17] These differences in election systems provide context for our comparisons throughout the report.

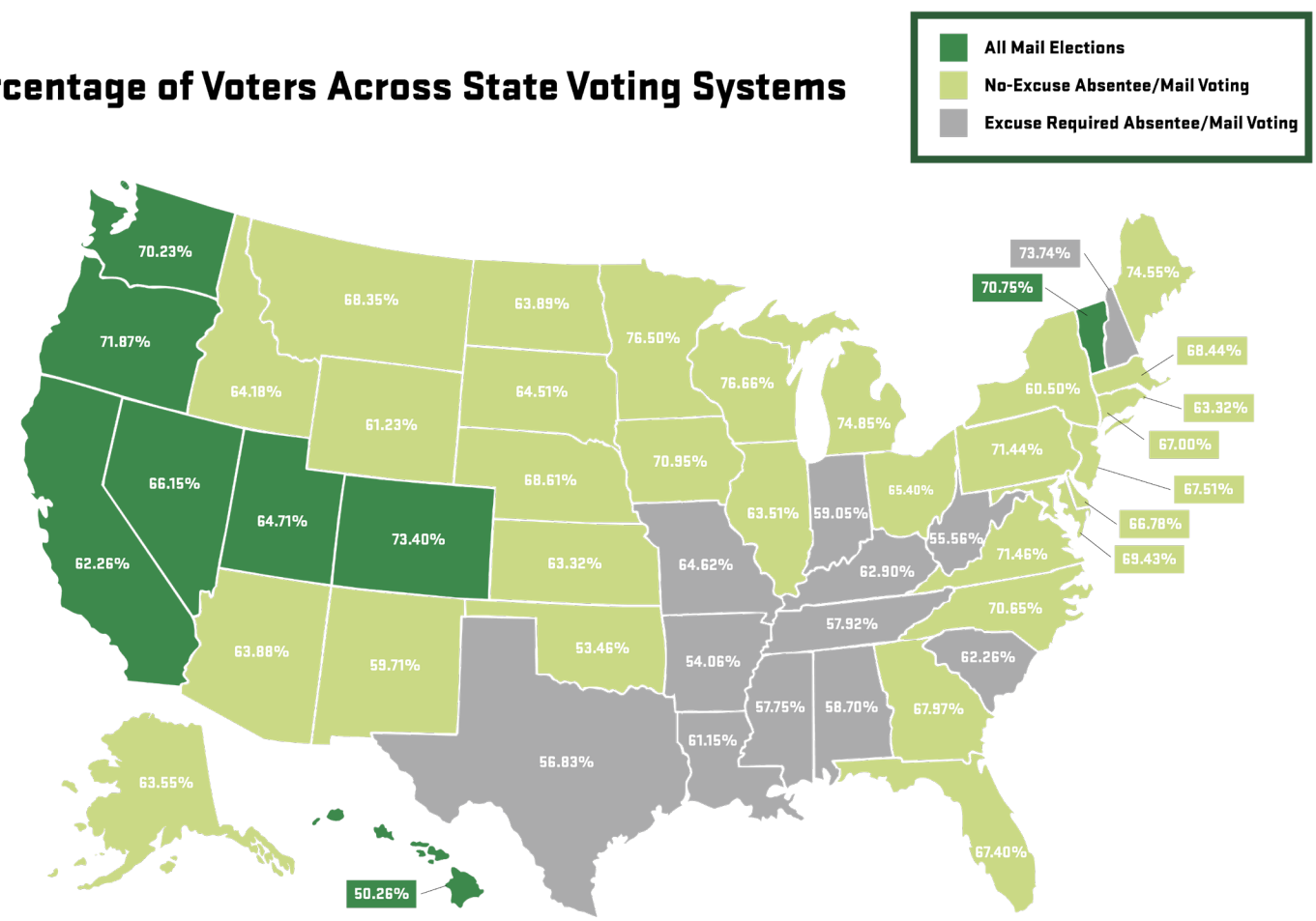
COMPARISON OF ELECTION SECURITY RANKINGS

While assessing what makes an election system secure, we found there is no standard measure. Different ranking systems take into consideration different criteria. This explains why Utah is tied for number one in rankings produced by R Street but is ranked number twenty-five in the Heritage Foundation's Election Integrity Scorecard. This discrepancy between rankings isn't unique to Utah either; many other states' rankings vary from one organization to another. Tennessee, for example, was ranked as number one by the Heritage Foundation, yet is tied for number sixteen in R Street's Election Policy Fifty-State Scorecard.

Even though Tennessee is ranked first in the Heritage Ranking in the Election Integrity Scorecard, in the 2024 general election, the turnout was 57.92% the seventh lowest in the nation, up from fifth lowest in 2020. Arkansas is ranked second in the Election Integrity Scorecard and has a 54.06% turnout ranking, the third lowest state in the nation for the 2024 general election. The Heritage Ranking in the Election Integrity Scorecard illustrates the idea that the more an election system is secured, the lower the turnout may be.

**The Herbert Institute's research cannot and does not claim that this jump in turnout was due to the change in voting systems, but a clear correlation is present and has thus been listed for consideration. Further research is needed to determine a causal link.*

Percentage of Voters Across State Voting Systems



STATES	HERITAGE FOUNDATION[18] [As of 09/2026]	R STREET[19] [As of 07/2026]	MIT Elections Performance Index[20] [Based on the 2024 Presidential Election]	Cast of Voting Index[21] [As of 11/22/24]
AL	#3	#45-t	#43	#44
AK	#34-t	#44	#27	#21
AZ	#18-t	#7-t	#21	#29
AR	#2	#32-t	#50	#49
CA	#50	#45-t	#41	#7
CO	#36	#10-t	#22	#8
CT	#40	#37-t	#32	#22
DE	#37	#45-t	#24	#25
DC	#34-t	–	#3	–
FL	#5	#1-t	#20	#32
GA	#6	#1-t	#8	#35
HI	#51	#16-t	#46	#3
ID	#25-t	#40-t	#14	#27
IL	#42-t	#40-t	#26	#9
IN	#7	#10-t	#38	#34
IA	#9-t	#16-t	#19	#24
KS	#9-t	#5-t	#23	#38
KY	#14-t	#20-t	#33	#37
LA	#4	#29-t	#44	#33
ME	#38	#29-t	#18	#14
MD	#32	#43	#11	#17
MA	#41	#20-t	#6	#11
MI	#30	#14-t	#4	#13
MN	#45	#32-t	#1	#10
MS	#14-t	#50	#51	#50
MO	#8	#20-t	#28	#41
MT	#22-t	#20-t	#48	#31
NE	#18-t	#16-t	#10	#28
NV	#46-t	#32-t	#2	#4
NH	#18-t	#48	#31	#47
NJ	#44	#32-t	#45	#18
NM	#39	#29-t	#7	#19
NY	#42-t	#13	#42	#12
NC	#22-t	#7-t	#30	#30
ND	#33	#7-t	#16	#16
OH	#9-t	#1-t	#35	#45
OK	#9-t	#20-t	#39	#36
OR	#48-t	#20-t	#37	#2
PA	#29	#37-t	#25	#26
RI	#22-t	#5-t	#12	#20
SC	#9-t	#10-t	#13	#43
SD	#18-t	#40-t	#47	#39
TN	#1	#16-t	#34	#42
TX	#14-t	#20-t	#36	#48
UT	#25-t	#1-t	#40	#6
VT	#48-t	#37-t	#9	#5
VA	#28	#20-t	#29	#15
WA	#46-t	#14-t	#15	#1
WV	#31	#20-t	#17	#23
WI	#17	#32-t	#5	#46
WY	#21	#49	#49	#40

** Green shading identifies the five states visited for this study and Utah.*

AN ANALYSIS OF STATES VISITED

To better understand the differences between election systems, we traveled to six counties across five states, representing three election-system categories identified by the National Conference of State Legislatures (NCSL).[22] We visited Pulaski County, Arkansas, and Shelby County, Tennessee, both of which are classified as excuse-required absentee voting states and primarily rely on in-person voting.[23] We also visited Maricopa and Pinal Counties in Arizona, a no-excuse absentee voting state where both mail and in-person voting are widely used. Finally, we visited King County, Washington, and Denver County, Colorado, which NCSL classifies as mostly mail election states, similar to Utah's current system.[24]

During these visits, we observed election procedures firsthand and spoke with election officials about security, staffing, costs, equipment, and the challenges they face. These different approaches allowed us to compare how election security works in practice and to identify which risks and safeguards are shared across voting systems.

Although our research was limited to the counties visited and does not represent every county within those states, the visits provided valuable insight into how different election systems operate and compare to Utah.

COMPARING ELECTION SYSTEMS TO UTAH

One of the most important findings from these visits was how many security measures Utah shares with other states, regardless of their primary voting method. Across the counties visited, officials emphasized accurate voter records, identity verification, restricted access, documented chain of custody, reconciliation, and auditing. Utah already uses these same types of safeguards, although the procedures and resources needed to carry them out vary between states and counties.

Our visits to Arkansas and Tennessee highlighted some of the differences in administering primarily in-person elections. In Pulaski County, approximately seventy percent of voters in the 2024 general election voted early, compared to twenty-eight percent who voted on Election Day, and two percent who voted by absentee ballot. The county operated approximately thirteen early voting locations and ninety-one Election Day polling locations.[25] Similarly, Shelby County officials described operating approximately 144 Election Day polling locations and twenty-six early-voting locations.[26] Maintaining these locations requires considerable staffing, equipment, transportation, and training. Utah also provides in-person voting options, but its primarily mail-based system places more of its administrative workload within centralized ballot-processing operations rather than across numerous polling locations.

Officials in Arkansas and Tennessee also discussed security challenges involving voter check-in, ballot issuance, and human error. In Shelby County, officials described two instances in which electronic poll-book warnings were reportedly overridden, allowing individuals who had already voted early to vote again. According to officials, the discrepancies were later identified through reconciliation and referred for investigation.[27] Utah similarly relies on multiple safeguards to detect errors and prevent duplicate voting, including voter-specific ballot tracking, verification procedures, and reconciliation.

Washington and Colorado provided useful comparisons because their mail-voting systems are similar to Utah's. During our visits to King County and Denver County, we observed many of the same safeguards used by Utah counties, including signature verification, ballot curing, secure ballot collection, surveillance, restricted access, and centralized processing.[28] Denver County officials also emphasized the importance of maintaining accurate voter rolls and reconciling election records. Like Utah and Washington, Colorado participates in the Electronic Registration Information Center (ERIC), which helps election officials identify potentially inaccurate voter records.

Arizona provided another useful comparison because both mail and in-person voting are widely used throughout the state. Maricopa County officials described measures to protect election operations from unauthorized access and insider threats, including physical security, surveillance, and oversight.[29] These concerns are also addressed through security procedures used by Utah counties. In Pinal County, our team visited a new $32 million election facility that opened in 2024, designed to improve ballot processing, security, storage capacity, and public observation.[30]

Another theme that emerged during our visits was the impact of legislative changes on election administration. Officials in Pulaski County discussed how changes to absentee-voting requirements can create additional work, including updating forms, procedures, and staff training. In King and Shelby Counties, officials emphasized the importance of involving election administrators in legislative discussions so that practical challenges can be considered before new requirements are implemented.[31] These conversations reflected similar concerns raised by Utah election officials about the time, funding, and other resources needed to implement changes to election law. Our discussions with legislators, auditors, and election officials in Utah also highlighted the importance of communication and collaboration among those responsible for developing, evaluating, and implementing election policy.

Overall, our visits showed that many of the security measures used in other states are also present in Utah's election system. While procedures and resources vary between jurisdictions, election officials share many of the same responsibilities, including voter verification, accurate recordkeeping, secure ballot handling, reconciliation, and auditing. Our research did not establish that either in-person or mail voting is inherently more secure. Instead, it highlighted how each voting method presents distinct administrative demands and potential vulnerabilities, while both systems remain subject to many of the same risks.

CROSS-STATE FRAUD COMPARISONS

CLEANLINESS OF VOTER ROLLS IN BY-MAIL VS. IN-PERSON VOTING STATES

Preventing fraud starts with clean voter rolls. In-person and by-mail voting states both have an incentive to keep their voter rolls updated. However, in by-mail states, a greater incentive may exist to correct errors so that dead voters aren't sent a ballot, and ballots are mailed to the correct address. Overall, our research has not found enough data to support any claims about substantial differences between the voter roll maintenance of by-mail and in-person states.

The Electronic Record Information Center (ERIC) is a crucial method of keeping our voter rolls clean. It is a cross-state information sharing platform that shares encrypted state voter registration, DMV, Social Security death data, and US Postal service change of address data from states that opt in (currently there are twenty-seven states opted in).[32] ERIC provides member states with reports detailing potentially inaccurate voter roll information. ERIC also sends states information on eligible citizens who are not registered to vote, and it details voters who may have double-voted in a member state (though this is very rare).[33]

The information that ERIC records is kept secure as it's sent across different states. ERIC first encrypts voter's private data, meaning that it turns the data into an unreadable ciphertext that can only be reversed with a key. ERIC then hashes the data, meaning that it converts the data into a fixed-length string of characters that cannot be reversed, thus protecting the voter's private data.

Member states of ERIC have the keys to decrypt the private data, but they cannot unhash it, meaning they can only see the hashed values. County clerks then compare these hash values to identify if a voter has moved to another state or died and then updates the voter rolls, which keeps voter rolls clean.

Several states have withdrawn from ERIC in recent years, while others have considered alternatives to the program. However, replacing ERIC's interstate data-sharing capabilities presents challenges. Virginia, for example, withdrew from ERIC in 2023 but rejoined in April 2026, citing the value of multistate information in maintaining accurate voter rolls.[34]

CURRENT FRAUD

Total voter fraud is rare. There are 2276 total cases of voter fraud from the year 2000 to 2019 across all fifty states, according to the News 21 and Heritage Foundation databases, which are the most comprehensive fraud databases we could find.

The Heritage Foundation Fraud Database and the News21 Fraud Database (the most comprehensive databases of election fraud) have found only fifty-one cases of alleged election fraud in Utah. All fifty-one cases were from a 2006 mayoral election in Daggett County.[35]

From what we could find, reported fraud does not increase when in-person

states switch to voting by mail. In "Does Voting by Mail Increase Fraud? Estimating the Change in Reported Voter Fraud When States Switch to Elections by Mail," Jonathan Auerbach and Steve Pierson study the effects of states implementing vote-by-mail policies. Auerbach and Pierson found that, "After making these comparisons, we find no evidence that voting by mail increases the risk of voter fraud overall; if voting by mail creates more opportunities for fraud, those opportunities do not appear to have been realized in the data."[36]

AUDITS

2024-20 PERFORMANCE AUDIT

The 2024-20 audit found that there were 1400 dead voters on the voter rolls, 700 of which were sent a ballot. However, only two of these "dead" voters voted in 2023, a very small number out of the two million voters on the rolls. Additionally, there were 300 potential duplicates found in the audit and 450 shared driver's license numbers.[37]

For this study, we spoke with officials from the Lt. Governor's Office and officials from the Office of the Legislative Auditor about these errors. There was a system error with death record data being sent to the county where a person died, even though they were a registered voter in another county, and the clerks were not cross-checking with each other.

The 300 duplicate voters were caused by county clerks "missing" a close match already in the voter rolls, such as two digits in their social security number were switched, for example. These occurred when the clerk inadvertently created a new profile for the voter, or the voter accidentally inputted incorrect information. Part of the issue is that VISTA, Utah's statewide voter registration database, looks for an exact match and would say a profile didn't exist if one of the numbers in the driver's license was off, for example.

One thing that will help in the future is changing our systems from VISTA to Total Vote, which automatically checks for errors and duplicates in the system better than VISTA. Total Vote also creates a task list for the clerks to check, so the process is less manual.

The Lieutenant Governor's (LG) Office has responded to the audit by making some changes. As a result of the 2024 audit, clerks certify monthly that they've cleaned the voter roll to the Lieutenant Governor's office. The LG's Office is legislatively mandated to conduct a yearly audit, but they voluntarily do a quarterly audit on top of that.[38] As a result of the audit, there's been more training, more on-site support, and the clerks cross-check with each other.

2025 VOTER REGISTRATION CITIZENSHIP REVIEW

To review actions taken to improve the accuracy of Utah's voter rolls, the Herbert Institute also reviewed the 2025 Utah Voter Registration Citizenship Review.

The comprehensive citizenship audit of Utah's voter rolls was intended to evaluate potential vulnerabilities or necessary changes to ensure only eligible citizens voted in Utah elections. Any citizenship verification that could not be completed using data from the Utah Driver License Division (DLD) or the Systematic Alien Verification for Entitlements (SAVE) program, was manually reviewed. The Lieutenant Governor's Office reviewed 2,069,640 voter records.[39]

The majority of remaining voter records which needed verification were "legacy records," imported into the current registration database when driver's license numbers and Social Security numbers were not required. These individuals have received a letter requiring documentary proof of citizenship. The Lieutenant Governor's Office has taken steps to strengthen voter registration verification through both existing online checks and planned system improvements. After website improvements, only individuals with a Utah driver's license that confirms citizenship are able to register online, where previously applications containing self-affirmed citizenship with no documentary proof were sent to the clerk for processing. Additionally, by 2027, Utah's new voter registration system Total Vote, "will allow clerks to run a check through SAVE at the time of registration for any individuals without a driver's license number that proves citizenship." Both measures increase the accuracy of voter rolls and streamline registration processes used, or which will be used, by all counties.

2026-28 PERFORMANCE AUDIT

In this audit, the Office of the Legislative Auditor General was clear to acknowledge meaningful improvements and stated, "We repeat what we have said in the past—that we did not observe significant fraud in Utah's election system."[40]

As it pertains to issues addressed in the 2024 audit, the legislative auditor found seventy potential deceased voters remaining on the rolls after the LG's Office conducted its pre-election statutory analysis of the voter registration database.[41] This represents a significant decrease from the 1400 potential deceased voters found during the 2024 Performance Review. However, none of the seventy potential deceased voters identified in the 2026 audit had cast a ballot. Of these records, an analysis of data from the Office of Vital Records and Statistics (OVRS) showed that election officials had not received records for twenty-five of the deceased individuals. The LG's Office and OVRS intend to improve practices for resolving gaps in record sharing.

According to the legislative auditors, records left unresolved by clerks due to mismatching death records and voter records may benefit from two measures—standardized removal criteria established by the Legislature and more thorough identification and verification procedures by the LG's Office.

In reference to the LG's Office citizenship review, the legislative auditor confirmed the removal of all confirmed noncitizens and the designation as federal-only voters whose citizenship status could not be verified.

Of the audit's findings related to voter roll accuracy and maintenance, we conclude that the analysis applies to all ballots cast, regardless of voting method. These issues are not unique to vote-by-mail systems.

SECURITY MEASURES TO MITIGATE RISK

ELECTION PREPARATION

The election process begins with voter registration: First time voters must present their ID, and returning voters' identity is verified. County Clerks and the LG's Office use ERIC and Vital Stats data to remove deceased voters and voters who have moved off the voter rolls. The chain of custody process begins when ballots are sent out to (only) active voters. In the pre-election process, logic and accuracy tests are conducted on the machines to ensure they will function correctly.

VOTES CAST

Voter then fills out their ballot: By-mail voters sign AND fill out the last four digits of their identification number (by 2029); in-person voters show ID and then vote. By-mail voters drop their ballot in a secure drop box under twenty-four-hour video surveillance OR return their ballot via USPS.

BALLOTS RECEIVED

Votes must then get to their designated precinct: Sworn-in mailmen pick up ballots from mailboxes, and the Postal Inspection Service monitors the ballots as they move through the postal network. For drop boxes, the county sends teams of two who match and replace multiple distinct serialized seals to log chain of custody.

ENVELOPES PREPPED

From arrival at their precinct and onwards, ballots are under twenty-four-hour surveillance. The privacy tab is removed by workers (this reveals ONLY the voter's signature and last four digits of their ID number).

ENVELOPES VERIFIED

After the voters are given credit for voting, ballots are sorted into two groups—"require curing" and "accepted." When contacted, voters may submit an affidavit to cure (rectify an inaccurate signature or identification number) their ballot. Once accepted, ballots are placed into batches that they will stay with until the end of their lifespan. Each batch goes through a one-percent audit (done by a full-time employee).

ENVELOPES OPENED

Immediately after being opened, ballots are separated from any connection to a voter; it becomes impossible to trace a vote back to the person who voted (preserving anonymity). Each batch is flattened separately, then scanned and labeled (traceable back to the individuals who flattened the specific batch of ballots). Envelopes are stored.

BALLOTS TABULATED

Batches are sorted into adjudications, rejections, and accepted. If rejected, ballots are replicated by teams of two and then put through the tabulator for the second time. Adjudicated ballots go through the adjudication process.

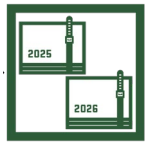
ADJUDICATION

During adjudication, teams of two review ballots to determine voter intent, and ensure votes are counted accurately. This may include reviewing unclear markings, overvotes, and write-in votes.

RESULTS RELEASED

Results are stored on a secure, air-gapped server and not looked at until election night. Results are combined and released.

POST-ELECTION



Canvassers certify that the election results are correct. The LG's Office then randomly selects batches that are one percent of the ballots. These are audited/hand counted by two people, at least one person outside of the county's office. Ballots are stored for twenty-two months (with serialized zip ties) and can be audited at any point within that period. Ballots are then destroyed.

Our team investigated the mitigations associated with three common fraud concerns. Although these fraud concerns are largely theoretical and not realized as significant in relevant data, it is important to consider how Utah's system prevents these concerns from being realized.

VULNERABILITIES	SECURITY MEASURES
Noncitizens, deceased voters, and voters who have moved; Registrations and ballots sent (VBM-specific)	• Electronic Record Information Center (ERIC) data sharing • Accurate & timely maintenance of voter rolls (VISTA) • Checks from the Lieutenant Governor's Office • Requirements for voter registration » Driver's license number (online or in person) OR two forms of evidence proving identity/address (must be in person)
Masquerade Voting	• Last four digits of driver license, state ID, or Social Security number (HB 300) • Signature verification • Personal identifying information • Mail ballots sent to registered voters' addresses on file (see above) • BallotTrax notifications and county clerk assistance • Early voting and replacement ballots
Insider Threats	• Signature verification audits (one percent of ballots) • Two-person rules for designated election procedures • Badge/ID required for access to rooms and tabulators • 24/7 camera surveillance • Serialized seals, several steps of matching and replacing • Two-person teams for ballot adjudication • Election results stored securely on tabulators • Hand-count audits, including one outside the county • Canvassing and reconciliation

CHECKING ID AT THE DROP BOX

HB 311 asked us to study best practices for conducting and implementing a process where identification is presented and checked at a ballot drop box before a voter may deposit their ballot. We were asked to consider analysis and recommendations regarding logistics, wait times, costs, and ballot processing.

Currently, staffing drop boxes is the only viable solution that meets the full requirements listed in 1(b) of HB 311. We have identified two more solutions that do not currently meet every requirement listed but could possibly do so with modification or further development—the Sentinel Smart Drop Box and State Endorsed Digital Identity (SEDI). Sentinel drop boxes cannot check ID; it is unlikely this will change in the foreseeable future.[42] A version of SEDI that allows for checking ID at the drop box could potentially be developed.

Our operating assumption is that voters would no longer be able to return ballots via USPS, as this method does not allow for checking ID at the drop box. Based on numbers from the 2024 general election, around 370,000 voters returned their mail-in ballots through USPS.[43] This would mean an added 370,000 voters choosing between voting in-person or returning their ballot at the drop box.

Drop Box Requirements

There are 1,775,483 current, registered active voters in Utah.[44] Currently, the law requires that there be at least one drop box per municipality (257) and reservation (8).[45] It is up to the election officers to designate additional ballot drop boxes, which is why there is a difference between required drop boxes (265 total) and the current number of drop boxes. There are currently 323 ballot drop boxes that serve these voters across the state of Utah.

Considerations

From this one requirement comes many questions and considerations regarding ballot processing and statutory changes. Currently, Utah verifies the identity of those who vote by mail twice—once at registration and again during ballot processing, when election officials verify the voter's signature and identification information.[46] Checking ID at the point of drop would either change at which stage in the process the second verification happens or add a third verification.

Currently, code allows for returning another voter's ballot and returning ballots via USPS. If Utah transitioned to checking ID at the ballot box, would these options be available for disabled voters and would the latter option be available for military or overseas voters? Additionally, as of HB 300, voters cannot vote in person without a photo ID. Would this in-person voting requirement apply to presenting and checking ID at the drop box?[47] If so, certain non-photo IDs that currently count as verification to vote would no longer be allowed.

Any system of checking ID at the drop box would also affect wait times and costs—some to a much higher degree than others. These factors can dramatically impact voter turnout and experience ,and thus heavily influence how the requirement would be implemented.

STAFFED DROP BOXES

As part of our research for this section, we studied 2026 HB 479 which, if passed, would require voters to present and check ID at a drop box before depositing their ballot.[48] We compared the fiscal note for HB 479 to the "alternative fiscal note" presented by Representative Jefferson Burton and found that the official fiscal note is a better estimate of the cost of this bill. The alternative fiscal note for HB 479 is based on numbers for volunteers handling ballots, which would be illegal under state law.

It is necessary for election security that only trained election staff (in pairs) ever handle ballots. It is also necessary that only full-time trained election staff receive the ballots after the ballots are collected. Although we are presenting costs and looking at ways to reduce costs, keeping elections secure does require funding.

Hours

Assume drop boxes are open two weeks prior to Election Day. The hours of operation would likely look something like the following:

Ten business days, each day open for twelve hours (7:00 a.m.–7:00 p.m.)	120 hours
One weekend day, open for nine hours (8:00 a.m.–5:00 p.m.)	+ 9 hours
Election Day, open for fourteen hours (6:00 a.m.–8:00p.m.)	+ 14 hours
	= 134 hours

In terms of labor, another two hours would likely be required each day for set-up and poll-worker travel to and from the precinct[49] (e.g. bringing materials such as provisional ballots, shelter tents, poll pads, ballot batches, etc.). This would mean a total of 167 labor hours per drop box, per election.

Wait Times

Currently, depositing a ballot at the drop box takes around a minute or less. With an ID check added, depositing a ballot would take a voter around four minutes on average and become a multi-step process—present ID, verify ID, resolve issues, and deposit ballot.[50]

Four minutes may seem small, but with just a few voters in line, the total wait increases very quickly. With a one-minute deposit time, five cars/voters in line would mean around a five-minute wait; with a four-minute deposit time, five cars/voters would mean around a twenty-minute wait.

Two out of every three Utah ballots go through a drop box; forty-four percent of these arrive in the final two days of the election—that works out to be roughly 430,000 ballots deposited in just forty-eight hours. With wait times likely already quadrupling due to ID checks at the drop box,[51] this increase in ballot volume in the final days could cause very long wait times for voters. Changes in ballot volume would need to be accounted for to keep wait times in check; this may mean a large increase in number of staff to increase capacity which would likely increase costs by large amounts.

Though Utah Code §20A-5-403(6)(a) does not set a hard thirty-minute legal maximum at every drop box, it directs county clerks, "to the extent possible," to keep polling-place waits (to vote or to return a mailed ballot there) at thirty minutes or less. If someone waits longer than thirty minutes, the Lieutenant Governor may require the county to submit a line-management plan for the next election (6)(b).[52] It is a benchmark, not a legal limit for drop boxes. With the ID checking requirement, violations would likely become commonplace.

STEPS TO DEPOSIT BALLOT (CURRENT SYSTEM VS CHECKING ID)

TODAY

Deposit Ballot ≈ 1 minute

WITH ID

Present ID → Verify ID → Resolve Issues → Deposit Ballot ≈ 4 minutes

TIME TO SERVE 5 VOTERS IN A ROW (1 MIN VS 4 MIN EACH)

TODAY

1 1 1 1 1 ≈ 5 minutes

WITH ID

4 4 4 4 4 ≈ 20 minutes

Staff and Wage Requirements

The State of Utah requires at least two election officials, which may include poll workers, to be present whenever active ballots are handled, collected, delivered to ballot processing centers, or processed.[53] An additional person would be needed to issue and process provisional ballots and ensure there is enough staff to provide breaks. Given the above requirements, each drop box would likely need a staff of three or four people depending on the size of the county. Salt Lake County, Davis County, Weber County and Utah County would likely all require at least four election staff due to their ballot volume. Additionally, a supervisor would need to be available for every eight drop box staff (every two drop boxes) at a minimum.[54]

** Based on conversations with election officials, best practive would be to have a lower number of poll workers per supervisor; however, we wished to keep our estimates conservative.*

The average hourly wage for poll workers statewide is currently around $16.28 and the average wage for supervisors tends to be about twenty percent more hourly than their staff ($19.65).[55] Our cost estimates take into consideration the average wage per poll worker of each county and calculate the wage for supervisors based on this average wage. Additionally, counties may need to pay more to retain their employees due to intense weather if drop boxes remain outdoors.

Equipment Requirements

For ID to be checked at the drop box, a poll worker will need a poll pad to check the voter in, to verify voter ID, and to give voter credit. At a minimum, then, a county would likely need around 2.5 poll pads per ballot box; this allows for two poll pads per location and one poll pad for every two locations so that backup is available in situations where tech fails.

On average, a poll pad costs $1,250. Multiplying this number by the total amount of poll pads needed (807.5 poll pads) gives a rough estimate of upfront technology costs ($1,009,375 total). However, it is important to note that this estimate exclusively accounts for poll pads—many other factors would need to be considered for a comprehensive cost estimate (e.g. weather shelter/possible indoor locations, miscellaneous equipment, traffic control, possible security, equipment replacement overtime, storage, etc.).[56]

Staffed Drop Boxes Cost Calculations

** The following formulas are applied to each county, then total costs per county are summed to find the final upfront or continous cost number. If calculating on the statewide level (as is done below), averages should be weighted according to county size for a more accurate cost estimate.*

Simplified Upfront Cost Formulas

# of drop boxes x 2.5 poll pads = 807.5 total poll pads

↓

total poll pads x average poll pad cost = $1,009,375 total upfront cost

Simplified Continuous Cost Formulas

# of drop boxes x 4 staff = 1,292 total staff

↓

total staff / 8 staff = 161 total supervisors

↓

total staff x average staff hourly wage x 167 labor hours = $3,521,696 total staff labor cost

↓

total supervisors x average supervisor hourly wage x 167 labor hours = $528,254 total supervisor labor cost

↓

total staff labor cost + total supervisor labor cost = $4,049,950 total labor cost per election

↓

total labor cost per election x 2 elections = $8,099,900 total election year continous cost

Estimated Total Upfront Cost

$1,009,375

Estimated Total Election Year Continuous Cost

$8,099,901

This cost estimate is far from comprehensive. Other costs may include voter support with ID-checking system, possible indoor locations, traffic control, possible security, equipment replacement overtime, storage, tents, chairs, tables, traffic control materials, etc.[57]

Further note that the added 370,000 voters choosing between in-person voting and returning their ballot via drop box have not been included in wait time or cost considerations.[58] How voters will choose to behave with already increased wait times is unknown. This influx of voters would likely dramatically increase wait times and costs for both in-person and drop box voters.

SENTINEL SMART DROP BOX

The Sentinel is a smart drop box that photographs both sides of a deposited ballot envelope, photographs the voter casting said envelope, and associates the ballot barcode image to the voter. Importantly, it does not check ID. Either manually matching the voter to their photo from the DMV or using AI technologies back at the county elections office would be required to verify voter identity.[59]

Additional Feature Required: Facial Recognition

HB 311 asked us to research methods of "checking ID at the drop box." According to our research, there are no current automated methods of doing such a check. Developing the technology would be possible, however, there are many potential complications and considerations. The Transportation Security Administration (TSA) currently has facial comparison technology called Credential Authentication Technology (CAT-2) which has an accuracy rate of 99% when comparing a live face to a photo ID, according to the Department of Homeland Security (DHS).[60] The photograph taken is not stored by the TSA (unless for data purposes) but the technology does have the capability of storing the photos.[61]

Hypothetically, the Sentinel could be altered with CAT-2 technology to check ID at the drop box. The Sentinel currently associates the picture it takes of the voter with the envelope's barcode and the pictures of both sides of the envelope. Hypothetically, the facial recognition pass (or rejection) could also be attached with this information and stored inside the drop box. With a human operator, the CAT-2 technology works 99% of the time. If this technology were added to the Sentinel drop boxes, there would be no human operator. Therefore, we cannot predict its independent functionality. If the machine were to malfunction, there would be frustrated or inconvenienced voters until a Runbeck Election Services mechanic (the operators of Sentinel drop boxes) arrived. Given conversations with Runbeck representatives regarding data security, we would recommend that the Sentinel should not have access to voter rolls, even though it would be possible to give the voter credit in VISTA, which is an important step in preventing fraud. If there were 323 Sentinel drop boxes placed across the state, all of which contained VISTA and data identifying who voted, a large amount of information could potentially be accessed by a hacker in the parking lot outside a drop box.[62]

The Sentinel does not have the capability to prevent someone from depositing a ballot if they do not scan their ID. This would require a technology that prevents the drop box from accepting a ballot until the voter's ID has been scanned and verified, essentially locking the drop box until the verification is complete.[63]

A facial recognition feature is unlikely to be available anytime soon, according to Runbeck representatives, as it raises logistical, cost, and data privacy concerns. It would likely increase costs dramatically; however, as it does not currently exist as an option, it is omitted from our cost calculations.[64]

Drop Box Base

The starting price for purchases of nine or fewer outdoor drop boxes is $15,000 per box, with the per-box cost decreases as more boxes are purchased. Assuming Utah buys these drop boxes in bulk, the cost would be $13,500 per box. If Utah maintains its existing 323 boxes, this would equal a total upfront cost of $4,360,500 (without any optional add-ons).

Quantity	Price (per unit)
1-9	$15,000
10-49	$14,250
50+	$13,500

One optional add-on is a custom wrap, allowing counties to choose a unique design for the drop box rather than using the standard Sentinel appearance. This would cost an additional $1,250 per drop box and would bring the total upfront cost for 323 boxes to $4,764,250.[65]

Software, Support, and Warranty Requirement

To use the technology within the Sentinel, Runbeck requires the purchase of a five-year software, support, and warranty contract. This contract provides the software necessary to operate the Sentinel as a smart drop box rather than standard drop box, and includes Runbeck technical support, and a warranty covering the technology within the box.[66]

The software, support, and warranty (SSW) contract costs $2,500 per unit per year, with a three percent year-overyear "accelerator," or annual increase.[67] To calculate the cost for a given year, the formula $\$807{,}500 \times (1.03)^{n-1}$ could be used, where n represents the year number and year one is the first year of box ownership.

Applying this formula provides the following figures for the first five years of the SSW contract.

Year	Total Cost
1	$807,500
2	$831,725
3	$856,676.75
4	$882,377.05
5	$908,848.36

Runbeck representatives stated that if the Sentinel drop boxes were purchased statewide, they would work to ensure an adequate number of support staff were available across the state and by phone during an election to assist with possible malfunctions, voter concerns, and other operational support as needed.[68]

After the five-year contract expires, Runbeck would renew the contract with the same three percent accelerator. This warranty only covers the technology within the shell, however, and replacing the shell would cost $7,000. Runbeck did not have information on how long the shell would last; it is unclear how often the drop box shell would need to be replaced or how these replacement costs could increase over time.[69]

The Sentinel can be bolted to the ground from inside the box, placed on leveling feet, or equipped with casters (wheels) for indoor use. It is equipped with a fire suppression system and backup data drives in case the box is damaged or destroyed. The Sentinel also has overlapping steel and weather stripping to prevent precipitation and moisture from getting inside the box.[70]

Data Connectivity and Security

With a purchase of the Sentinel, Runbeck provides a secure server box that is hosted on the county network; every drop box in a county connects and is tied to the county's specific server box. There are three ways the drop boxes can connect to their server box—cellular connectivity, Wi-Fi, or a physical USB drive that can be retrieved and taken directly to the server box.

If the cellular connectivity option is chosen, a county provides a SIM card that is then attached to a cell module within the drop box; this creates a secure network for the data to flow from the drop box to the county server box.[71]

The cellular connectivity option, unlike the other two, is an optional add-on that costs an additional $1,000 per unit. Assuming boxes are purchased at the bulk discount price of $13,500 per unit, the cost would increase to $14,500 per unit ($4,683,500 total upfront cost).[72] Multiple features of the Sentinel require this add-on to function; with it, a county can use the dashboard to see real-time data regarding battery life, envelopes, voter-facing images, the number of envelopes received, which boxes are full, and other box statistics.

If a county prefers no connectivity due to security concerns, it can select the physical USB drive option. With this option, the county possesses a USB drive that staff insert into the drop box when retrieving ballot envelopes; they export the data onto the drive and then bring said drive back to the server box.

According to Runbeck representatives, the Wi-Fi option would likely be difficult to implement due to the majority of Utah drop boxes being outdoors.

Generally, the USB drive option is the most secure because it does not transmit data. However, no matter what option is chosen, drop box data is encrypted both at rest and in transit. County server boxes are encryption devices, and therefore data must be viewed from the county server to be comprehensible. This encryption of data makes it very unlikely that voter information could be accessed through either hacking or interception of a data transmission. Further, if the data was decrypted by some means, it would only provide images of voters and their envelopes—not the vote inside.

The Sentinel also has a fire suppression system and an internal backup drive. In a situation where a drop box is somehow damaged or destroyed, the backup drive allows county staff to identify which ballots were destroyed and which voters they belonged to so that they can be notified (this data only includes a unique envelope barcode image attached to a voter image; it does not include information about who or what the voter voted for).[73]

Powering the Drop Box

The Sentinel comes in two different versions—indoor and outdoor. The indoor Sentinel is plugged in and equipped with a twenty-amp battery backup; this allows about five to six hours of continued operation if power goes out. The outdoor Sentinel comes with a 100-amp battery that powers the unit and lasts around three to five days (depending on weather) before needing to be recharged.[74]

Drop boxes are often outside in Utah, so powering the Sentinel without a wired electrical connection is an important consideration. Beyond the 100-amp battery inside outdoor units, the Sentinel has an optional solar panel add-on that costs an additional $1,500 per unit (increasing the cost per unit to $15,000); if half of all drop boxes in Utah were equipped with this add-on, the total upfront cost would be $4,602,750.[75] With the solar panel option, the county should not need to recharge the battery (according to a ninety-day outdoor testing period conducted by Runbeck).

Runbeck also sells optional additional batteries ($575 each) and battery charging stations ($625 each). If a backup battery were purchased for every two drop boxes, this would increase the total cost across the state (without any other add-ons) to $4,453,352.76.[76]

Sentinel Smart Drop Box Cost Calculations

**Because of the three percent accelerator year over year on software, support, and warranty costs a total upfront cost must first be calculated for year one after which the following formula applies (where n represents the year number and year one is the first year of box ownership): $807,500 x (1.03)$^{n-1}$*

Simplified Upfront Cost Formulas

# of drop boxes x $13,500 unit price = $4,360,500

OR

# of drop boxes x (13,500 unit price + solar add-on) = $4,845,000 total upfront cost with solar add-on

Simplified Continuous Cost Formulas

# of drop boxes x per SSW price = $807,500 total year 1 SSW cost

↓

total year 1 SSW cost x $(1.03)^{2-1}$ = $831,725 total year 2 SSW cost

↓

total year 1 SSW cost x $(1.03)^{3-1}$ = $856,677 total year 3 SSW cost

↓

total year 1 SSW cost x $(1.03)^{4-1}$ = $882,377 total year 4 SSW cost

↓

total year 1 SSW cost x $(1.03)^{5-1}$ = $908,348 total year 5 SSW cost

↓

total year 1 + 2 + 3 + 4 + 5 SSW cost = $4,287,127 total election year continuous cost

Estimated Total Upfront Cost

$4,360,500 base

OR

$4,845,000 with solar add-on

Estimated Total Election Year Continuous Cost

$4,287,127 base

Another consideration is that labor costs are not included in this estimation. Labor costs for verifying a voter's identity for a vote-by-mail ballot would likely increase significantly because workers at the county elections offices would need to manually match the voter's identity to the photograph taken at the drop box. Additionally, the costs of voter education are not included in the above calculation.[77]

STATE-ENDORSED DIGITAL IDENTITY (SEDI)

Another potential approach to identity verification at ballot drop boxes involves Utah's State-Endorsed Digital Identity (SEDI) Program. Initially developed through SB 260 (2025) and subsequently established under SB 275 (2026), SEDI is a digital identity framework designed to provide secure identity verification while protecting individual privacy.[78] Unlike traditional state-issued identification, SEDI is designed around the principles of self-sovereign identity, allowing individuals to maintain control over their digital credentials while receiving state verification and endorsement of their identity. Through cryptographic verification, organizations can authenticate these credentials without requiring the state to monitor each transaction.[79] Although Utah has established the statutory framework for SEDI, its technical implementation is still being developed, and its use in elections remains a proposed application.[80]

In discussions with Utah's Chief Privacy Officer, Christopher Bramwell, and other SEDI officials, we explored how this technology could potentially be adapted to verify identity at ballot drop boxes. Under one proposed approach, a voter would authenticate through a SEDI-compatible digital wallet and scan

unique QR codes associated with their ballot return envelope and the drop box. The system could then generate a digitally signed record associating the authenticated individual with their ballot return envelope and the drop box where they completed the verification process. Once the ballot envelopes are retrieved, election administrators could reconcile these records during ballot processing to determine whether a corresponding authentication transaction exists. Officials also discussed the possibility of allowing voters to authorize another individual to return their ballot, potentially accommodating voters who cannot physically visit a drop box.[81]

One potential advantage of this approach is that voters who choose to use SEDI could complete identity verification through their own devices, potentially reducing the need for additional equipment or personnel at drop boxes while preserving twenty-four accessibility. During our discussions with Utah County election officials, we learned that ballot return envelopes already contain unique identifiers associated with individual voters and their issued ballots. These existing identifiers could potentially be incorporated into QR codes, requiring relatively limited changes to ballot envelopes and drop boxes.[82] However, because digital identification would remain optional, a nondigital verification alternative would also be necessary. The full costs of implementation have not been established. Additional expenses could include software development, integration with existing county election systems, cybersecurity safeguards, technical support, maintenance, and voter education. Consequently, while this approach could reduce some infrastructure and staffing costs associated with in-person identification checks, its total implementation and ongoing costs have not yet been determined.[83]

There are also several security, logistical, and legal questions that would need to be addressed before SEDI could be used in elections. For example, safeguards would be necessary to prevent QR codes from being copied, replaced, or tampered with.[84] The system would also need to protect ballot secrecy and accommodate voters who do not use digital identification. Utah Code § 63A-20-101 protects an individual's right not to be required to use digital identification in place of physical identification.[85] Any election application of SEDI would therefore need to account for these protections, as well as voters without smartphones or SEDI credentials, individuals with disabilities, and those relying on someone else to return their ballot. Additionally, scanning the envelope and drop-box identifiers would create a digital record of identity verification but would not necessarily prove that the physical ballot was deposited or prevent someone from depositing a ballot without completing verification. Election officials would still need to reconcile these records with the returned envelopes and determine how to handle ballots without corresponding verification. Although SEDI presents a potential alternative, its use in elections has not yet been tested. A limited pilot program could help assess its feasibility, technical requirements, costs, and potential implications for election security and voter accessibility.

COUNTY CONCERNS

In the case that a requirement to check ID at the drop box were to be put in place, urban counties would face the highest cost to implement it. Counties such as Salt Lake and Utah have a much larger ballot volume than the rest of the state as they contain over half of the state's population. Therefore, they would need the most staffing for this change to the system. Urban counties would potentially struggle keeping the wait time under thirty minutes—per Utah Code § 20A-5-403(6) (2025)[86]—especially in the last forty-eight hours of the election when forty-four percent of ballots are deposited.[87] This would require traffic and queue management, and local law enforcement to increase their patrols in the area.

Rural and frontier counties, on the other hand, would face a different set of difficulties. Considering these areas cover large geographic areas with low population density, a portion of the voters that live in these counties would have to change their voting behavior since they will no longer have the convenience of submitting their ballot through USPS. Instead, they may potentially have to travel long distances in order to reach their closest drop box. These areas tend to have smaller labor pools; it would likely be much more difficult to hire enough qualified poll-workers to man the current amount of drop boxes. Based on the interviews we conducted with county clerks and elections officials, we found that some counties struggle with staffing as it stands. If they had to hire four employees per drop box, it is feasible that the number of drop boxes in these counties may have to be reduced. Clerk-auditors in rural/frontier counties have discussed with us that they already have limited funding and can't afford replacements for current equipment. To require them to purchase new equipment (be it poll pads or Sentinel) would put extreme strain on them financially.

EFFECTS OF ELECTION SECURITY POLICIES ACROSS STATES

When a state implements new election policies, unintended consequences may arise. The effects of election policies on voter accessibility and turnout have been examined in numerous studies, with findings varying depending on the requirements and populations studied.[88] While certain policies intended to strengthen election security have been associated with decreased voter turnout or increased barriers for eligible voters, these effects are not universal.[89] Consequently, policymakers should consider how additional security requirements may affect accessibility and participation.

Balancing accessibility and security are important considerations while analyzing these case studies. Documentary proof of citizenship is one example of an election policy intending to secure an election and having some negative consequences. In Kansas, for example, there was a documentary-proof requirement that would have prevented about 31,000 eligible citizens from registering to vote "while identified noncitizen registration represented about 0.002% of registered voters."[90] This proposal was ruled unconstitutional, however similar proposals in Kansas and across the United States continue to proliferate.

Texas's SB 1 banned twenty-four-hour voting, restricted early voting, and required that if a voter registered with the driver's license number or the Social Security number, then they must also use that number to vote. It is this last requirement that had the most effect, according to some sources.[91] In a study on the results of this bill on ballot rejection rates, SB 1 "led to ballot rejection rates in excess of ten percent in the 2022 primary, and these rates were higher for voters of color. We further show that rejections in the primary reduced turnout in the 2022 general and 2024 primary elections, and many of those who did vote shifted to doing so in person."[92] This rejection rate does not count the ballots that were initially rejected but cured by the voter. This rejection rate is quite high; in comparison, some states see rejection rates as low as one percent.[93] The results of SB1, the authors concluded, are that "...the cost of voting has materially increased for [voters]—and, as the turnout effects in the 2024 primary election make clear, they may be more likely to abstain in the future from some contests due to this increased cost."[94] Higher rejection rates, inconvenienced voters, and negative turnout effects are all examples of this increased cost.

Voters with disabilities are especially affected by these security measures. "In 2022, fourteen percent of voters with disabilities reported difficulties in voting, compared to four percent of voters without disabilities." The lower turnout of disabled voters in excuse-required-for-absentee states—which tend to score higher for security on the Heritage index—may be attributed to its constrictive nature. "States that expanded access to mail-in voting saw the highest increases in turnout among people with disabilities between 2018 and 2022. States that adopted 'no-excuse' mail voting saw a 6.9% increase in turnout among disabled voters."[95]

Taken together, these case studies demonstrate that restrictive election policies—intended to improve security—can have the consequence of erecting barriers for eligible voters. Additional requirements can prevent eligible citizens from voting and discourage future participation, with consequences for voters with disabilities and others who already face barriers. For Utah, these findings reinforce the need to evaluate proposed changes against existing protections and demonstrated risks.

CONCLUSION

Part 1(a) of HB 311 requested an analysis of the security risks of in-person vs. mail-in voting including potential and actual fraud, voter roll accuracy, and the issues raised in the 2024 Elections Audit.

In regard to this section of the study, we found the following—

- A high level of security in Utah's elections
- No evidence of significant nor widespread fraud in Utah elections

- No clear causal relationship between the type of election system (in-person or mail-in voting) and the security of said system
- No substantive difference in voter roll maintenance between in-person and mail-in voting systems
- A continuous effort on the part of the Utah Lieutenant Governor's Office and county clerks to mitigate potential fraud in the areas identified in various audits

Part 1(b) of HB 311 requested an analysis of the best practices for checking ID at the drop box before a ballot is deposited including logistics, wait times, costs, and ballot processing.

In regard to this section of the study, we found the following:

- There are three clear potential ways to check voter ID at the drop box—staffed drop boxes, smart drop boxes (e.g. an altered version of Runbeck's Sentinel Smart Drop Box), and State Endorsed Digital Identity (SEDI).
- This requirement would raise a myriad of questions including statutory and ballot processing questions.
- Utah would likely need to end returning ballots via USPS altogether; approximately 370,000 voters would have to change their voting behavior.
- Urban counties would be impacted differently than rural and frontier counties, with urban voters likely having to wait longer times and rural/frontier voters likely having to travel farther distances.
- The three options for checking ID at the drop box would have varying costs, hours, and other considerations.
  - » Staffed drop boxes
    - Continuous cost exceeding $8 million and upfront costs around $1 million
    - Hours of operation would likely need to be drastically decreased, and wait times at drop boxes would quadruple, leading to possibly hours-long waits in the final two days of voting.
  - » Runbeck Sentinel Smart Drop Box
    - Continuous costs around $4.25 million and upfront costs around $4.25 million
    - Because existing technology does not presently check ID, doing so at the drop box would require dramatic changes to be made to the existing smart drop boxes, likely resulting in large cost increases.
  - » State-Endorsed Digital Identity
    - Total costs are undetermined; potentially there are limited physical infrastructure costs, but additional expenses could include software integration, cybersecurity, voter education, and technical support
    - Could preserve twenty-four seven drop-box access without additional staffing, but technical issues and ballots lacking digital verification could increase administrative workloads.

Utah's elections are highly secure. This is not because it uses any one specific system, but because many dedicated public servants have continued to find key control points and vulnerabilities, and have worked to continuously monitor and mitigate them. The security of Utah's elections can be seen in the lack of evidence of significant fraud, extensive chain-of-custody tracking, continuous auditing by the Legislative Auditor General and the Lieutenant Governor, and transparency of county-level election processes.

At the beginning of this paper, we set up an analytical framework describing a balance between security and accessibility, and a threshold at which additional policy aimed at securing elections can actually hinder security.

Throughout our research, we saw a consistent pattern: Counties across Utah—especially rural or frontier counties—struggle administering elections in the face of frequent change, especially when it is unfunded. The continuous debate regarding the security of elections in Utah and across the nation has led to Utah implementing a myriad of changes to its election law in the last half decade (≈ sixty statutory changes). Utah's election laws have changed enough in the past few years that we have seen more than just a misunderstanding of policy among the public; election officials and state legislators are also sometimes confused about the current code. When those who are meant to be experts in a state's elections cannot explain the full details of the policies they administer, voter confidence and election integrity become vulnerable. When the required steps to administer an election are changed or expanded, resources can become stretched thin. As county clerks and poll workers attempt to implement these changes with insufficient funding, they struggle to decide where their focus should be. Control points become more likely to go unmonitored, and vulnerability may increase.

Changes can also have far-reaching effects that negatively impact accessibility especially for rural, disabled, and other disadvantaged voting populations. This does not mean that changes cannot or should not be made when needed, but that there must be an awareness of the gravity of changing election law.

We often heard another concern as well—sudden changes, or changes in policy that are close to an election, are difficult to put into practice in limited time frames. This can introduce a sense of rushing, which may lead to undetected security issues or insufficient implementation. This finding is supported by the Purcell Principle, the legal principle establishing that courts shouldn't change election policy close to an election because it confuses voters and election officials. If election officials are confused about election policies, they cannot properly administer them, and this hinders security. If voters are confused, then their confidence in elections decreases. Utah currently has many opportunities where voters are able to observe the election process in real-time. However, public understanding of elections is still lacking. Adequate education regarding the processes of Utah elections and their structures can strengthen public confidence.

Perhaps the most consistent issue raised by legislators and election officials alike in Utah—also echoed by election officials in other states over the course of the study—was the strenuous relationship between those who create, evaluate, and implement election policy. However, in conversations with individuals in each of these groups—legislators, auditors, and election officials—protecting the security of elections was continuously brought up as a top priority. Pursuing strengthened relationships and active collaboration with each other can help ensure—both collectively and individually—that this shared goal of security is realized to its fullest extent.

While election policy change can be harmful, it is important that it is able to change when needed. Accurately identifying when this necessity exists first requires avoiding the two harmful errors mentioned at the beginning of this report. Avoiding falsely assuming the security (Type II error) or insecurity (Type I error) of Utah's elections can be done through continuing to monitor vulnerabilities, evaluating technological solutions as they develop, and researching new risks by collecting comparable county-level data. Equipped with strong relationships and the knowledge of the security of Utah's elections, legislators and election officials can work together to ensure election policy is informed by both data and ground-level experience. Through this, changes that inadvertently have a negative impact on security, voter confidence, turnout, and accessibility are less likely.

To ensure Utah's continued election security and accessibility, we recommend the following:

- Implement policy when clear, strong evidence shows that it is needed.
- Provide adequate funding for implementation of election policy.
- Allow for delayed implementation of election policy.
- Provide adequate voter education when implementing election policy.
- Strengthen trust and collaboration among legislators, auditors, and administrators.

Utah has many existing protections in place to ensure both security and accessibility. A dynamic adaptability—where legislators, election officials, and citizens can fuel informed public policy when it is needed—will continue to bolster security in a sustainable way for many years to come.

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