

Hand Count Guide

Emergency Preparedness
for Precinct-Level Ballot Counting

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LindellOffenseFund.org

I. Introduction

A. Purpose of this Guide

If an emergency occurs during or near an election day, whether a power outage, natural disaster, cyber-attack, or something else, are election authorities prepared with a 'Plan B'? Even under the worst of circumstances, elections must still be conducted. These emergencies could incapacitate voting machines and necessitate hand counting the ballots, so pre-planning is vital.

This Guide is offered as a resource to assist election authorities in proactively planning for emergencies. Since no two states share identical laws regarding counting ballots, the Guide provides considerations and a basic preparation overview.

Specific requirements may vary based on local regulations and procedures. The key is to have all necessary materials organized and readily available to conduct an efficient and accurate hand count.

B. The Process of Hand Counting Ballots

Hand counting ballots is a process where ballots are manually counted by election workers rather than using electronic voting machines. Most election authorities are familiar with limited hand-counting processes typically used when machines cannot read ballots or for audits and recounts.

The fact that hand counts are used to validate or verify the results of electronic voting machines should reassure election authorities of the accuracy of hand counts. However, it can seem daunting to some to consider hand counting **all** the ballots for an election without using machines and to do so in a timely manner and accurately.

This Guide aims to assist election authorities in creating an emergency preparedness plan, which will include clear guidelines for election workers.

II. Pre-Planning

A. The Counting Location

The optimal location for counting ballots is where the voters cast their ballots: the precinct or polling place. In an emergency, the residents in that area should already be trained and can be called upon to count ballots.

Of course, some states and counties have instituted large voting centers or 100% mail-in voting so that vast numbers of ballots are transported to and collected in central locations. Large

quantities of ballots in such locations can still be hand-counted by utilizing more teams of counters. Pre-planning should include considerations of a location large enough to accommodate the number of counting teams necessary.

B. Counting Team Area

For each counting team assigned to a polling place, consider allotting 100 sq.ft. of space. An additional 40 sq.ft. should be added for a table to hold supplies and personal belongings. (Note: multiple teams could share the supply table.) Create a floor plan for each polling place showing where the counting team should be set up.

Lighting is essential for the counting area. However, if power is out and there is no backup generator, plan ahead with lanterns, flashlights, or other battery-operated light sources.

C. Ensuring transparency for observers

Depending on each state's laws, observers, watchers, and challengers are permitted to be in the counting area and watch the counting process. In space considerations, the election authority should consider how many observers might be in the counting space and establish guidelines that prevent the counting process from being disrupted while also ensuring transparency for observers.

D. Required materials and forms

An emergency means that there will be little or no notice that voting machines will be "out of service," and the election authority must quickly pivot to hand-counting ballots to obtain election results. Forms must be pre-printed and stored with the necessary supplies in emergency kits. For most counties, these kits will take up the same amount of space, or less, as storing a few voting machines.

Ballots are a separate and critical consideration. Even though they are designed to be used in voting machines, they are easily hand-counted if they are printed before an emergency.

If the ballots are not printed before an emergency, or for jurisdictions that have gone to "print on demand," an alternate plan for providing ballots to voters must be decided upon as part of the emergency preparedness plan.

E. Ballot Boxes

Depending on the type of emergency and the available lead time, the election authority should have several options for containers to use as ballot boxes.

- Voting machines – even if they are inoperable, the ballot collecting section of voting machines likely has a "manual" drawer where ballots could be inserted.
- Plastic storage bins – if stores are open, an inexpensive option is to purchase plastic storage bins. It is easy to cut a slit in the top where ballots can be inserted. And holes can be drilled

on the sides to insert security seals. If stores are not open, search the government storage areas for bins being used in storage. Temporarily empty them to use the bins as ballot boxes.

- Metal or wooden boxes – Industries in the area might have metal or wooden boxes that would suffice as ballot boxes, and arrangements could be made in advance to utilize the boxes in an emergency.
- Authentic ballot boxes – It is possible that a jurisdiction retained its ballot boxes from the past or might want to purchase new ballot boxes to have on hand.

F. Verifying seals and chain of custody

If necessary, the same chain of custody procedures and verification of security seals established by the election authority for use with voting machines should be adapted and modified for use with ballot boxes.

III. Counting Process

A. Tally Method

The Appendix contains a sample hand count process. Additional hand count methods are available at CauseofAmerica.org.

Election authorities can choose the method best suited to their state's laws, mix & match parts from different methods, or modify a method where needed.

B. Ballot Handling

There are different methods for handling ballots while tallying. Some states require a "sort & stack" method, while others require that a ballot be "touched" only once and all races called before another ballot is 'pulled' from the ballot box. Other states prescribe methods where ballots are sorted by candidates or races and then tallied. Processes written for different states are designed based on the state laws.

The instructions from the election authority to the election workers should clearly define the ballot handling method to be used.

C. Using Tally Sheets and Other Forms

Depending on the hand count process selected, instructions for using the tally sheets and other forms that are part of the process will be included in the process instructions, as they are in the Appendix for the included hand count process.

D. Guidelines for dealing with questionable or irregular ballots

The election authority must provide instructions for dealing with questionable or irregular ballots (e.g., provisional, write-ins, damaged, suspicious or fraudulent, etc.). Handling these issues will likely be similar to how they are handled when voting machines are used, but the instructions from the election authority should point out any deviations.

IV. Completing Required Forms

A. Filling out precinct results forms

Hand count processes, whether the one attached in the Appendix or others from Cause of America, will generally provide the forms necessary for tallying, batching, reconciling, and finalizing. The election authority will provide the precinct results forms that are either incorporated into the hand count forms or have the hand count results transferred to them.

V. Securing and Transferring Materials

A. Properly sealing counted ballots

It is likely that instructions for securing and sealing ballots after hand counting will be the same as when ballots are machine counted, with minor adjustments. These instructions would include separating ballot types (e.g., regular, provisional, absentee).

B. Transporting results to the central election office

Transporting and communicating results to the central election office will either match the processes when voting machines are used or be adapted by the election authority.

VI. Best Practices

A. Scheduling Hand Count teams to count all ballots in 8 hours

The most vital suggestion is to train as many election workers as possible in the hand count process. There are tasks in hand counting that are not suited to people who have hearing, sight, or hand/eye coordination difficulties. But, for others, it is possible to schedule four-hour cycles: about two hours tallying and two hours calling the votes. Then, those election workers could rotate to other tasks (such as checking in voters) while others switch to hand counting.

Cause of America offers a tool for calculating how many hand counters would be needed to complete counting all election day ballots in 8 hours. ([Handcounting.com/Estimator](https://handcounting.com/Estimator))

B. Relevant laws and regulations

Questions will undoubtedly arise during a hand count. Provide copies of relevant election laws and procedures for election workers to use as reference.

C. Clear Instructions and Training Materials

Provide a list of common issues that may arise during hand counts and provide clear instructions for resolving each issue. Training materials for hand count procedures and contact information for the central election office should also be provided.

VII. Citations

- [1] <https://www.maine.gov/sos/cec/elec/temp/2020/hcmail4.pdf>
- [2] <https://www.elections.virginia.gov/media/formswarehouse/election-management/election-day-instructions-and-forms/Virginia-Guide-to-Handcounting-Ballots---Rev-May-2023.pdf>
- [3] <https://bipartisanpolicy.org/report/ballot-paper-shortages/>
- [4] <https://www.essvote.com/blog/our-technology/election-systems-and-equipment-101/>
- [5] <https://archive3.fairvote.org/reforms/instant-runoff-voting/irv-resources/handcount-directions-fractional-transfers-2/>
- [6] https://ballotpedia.org/Voting_methods_and_equipment_by_state
- [7] <https://verifiedvoting.org/election-system/hand-counted-paper-ballots/>
- [8] <https://causeofamerica.org/Post/hand-counting-simplified>

VIII. Appendix

Hand Count Process

This section explains an easy-to-learn tally process for hand-counting ballots. It is an excerpt from a comprehensive manual written for Missouri. Still, it has been ‘generalized’ for this resource guide and is **easily adaptable to other states and their laws because it relies on a basic and straightforward tally method.**

Known as the “Missouri Method,” the full version is available at HandCounting.com/eManual. The process was used in an official election in Missouri in 2023.

While the Missouri Method has an entire repertoire of forms that can be used, it only takes four primary forms to complete the hand count process. The supplies needed are most likely already in the clerk’s office. Anything else is easily purchased from an office supply store.

Training of hand counters for the 2023 election in Missouri was done on two Saturdays less than three weeks before the election. To assist other clerks and states with teaching the hand count process, Cause of America¹ offers training videos from less than 60 minutes to an in-depth 6-hour video. The videos will enable rapid teaching of hand counters, especially in case of emergencies.

Definitions

Titles and terminology vary from state to state. For simplicity’s sake, these terms are used in the following pages:

Clerk: the election authority, sometimes referred to as auditor, registrar of voters, etc.

Election Judges: sometimes called election workers, poll workers, etc.

DEM: Democrat, representing the Democratic party

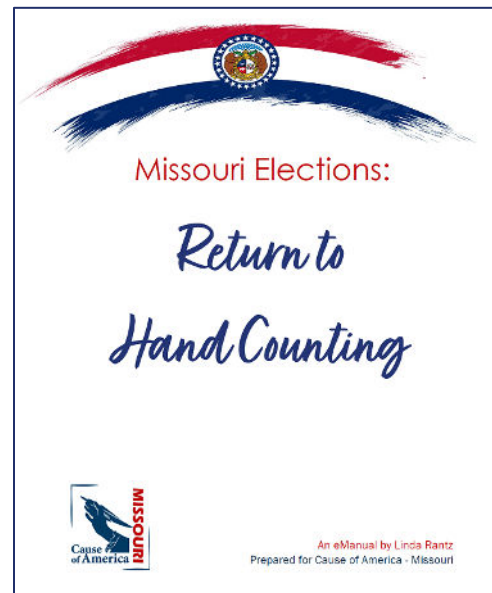
REP: Republican, representing the Republican party

Candidate: A person on the ballot for whom a vote may be cast, including a write-in line

Question: A preference choice to the voter for which the options are YES or NO

Counting Judges: 2 members of the hand-count team who determine voter intent and call out the votes cast on each ballot

Recording Judges: 2 members of the hand-count team, each with their tally sheet, who mark the votes as they are called



¹ <https://causeofamerica.org/Post/hand-counting-simplified>

Four Primary Forms

The core of hand-counting is tallying votes and tabulating the results. The four primary forms in the Missouri Method are shown in the screenshots below and named:

- Ballots Tally form
- Batches Summary Sheet
- Results of Polling Place
- Statement of Returns

These forms can be downloaded from Handcounting.com/4primaryForms. They are double-sided with places for signatures on the backside of each form.

Statement of Returns Determines “Ballot ID” for Counting

The clerk determines all candidates (and questions, if any) that will appear on the ballot in the county for an election.

STATEMENT OF RETURNS - CANDIDATES			
Statement of Returns – Candidates – We hereby certify that:			
BALLOT ID	VOTES CAST:	FOR CANDIDATE:	FOR OFFICE OF:
1		JAMES HEIRSON	United State Senator
2		ANDREW CARLSON	
3		MARGARET BILLINGTON	
4		WES REMISINGER	
5		Write-in	

The “master” list of all candidates and any questions on the ballot is created and then transferred, in order, onto the Statement of Returns. The statement is used by every polling place in the county, even if some of the candidates or questions will not be on the ballot(s) issued at a particular polling place.

The left column of a Statement of Returns contains a number (numerical order), which becomes the **Ballot ID**. This unique ID will appear next to a candidate’s name on every ballot in the county.

Ballot ID counting numbers for questions, if they are used, are preceded by “Q.” so, for example, Q.3 will be used for the same issue/preference on any ballot in the county.

Format of Ballots for Hand Counting

The optimal method for hand counting is to print the **Ballot IDs** on the ballot. This step will increase the speed of calling the votes. If circumstances do not permit the numbers to be printed on the ballot, other options exist for hand counting using the Ballot IDs.

FOR UNITED STATES SENATOR		
Vote For One		
1	<input type="checkbox"/>	JAMES HEIRSON REP
2	<input type="checkbox"/>	ANDREW CARLSON DEM
3	<input type="checkbox"/>	MARGARET BILLINGTON LIB
4	<input type="checkbox"/>	WES REMISINGER CST
5	<input type="checkbox"/>	
WRITE IN _____		

Group and Batch Number

The Ballots Tally form, Batches Summary sheet, and Results of Polling Place report utilize “Group” and “Batch” numbers.

The diagram illustrates the layout of the Ballots Tally form. It shows three overlapping sections, each representing a different group of ballots. The first section is labeled 'A' and contains a 'BATCH #' box with the number '1'. The second section is labeled 'B' and also contains a 'BATCH #' box with the number '1'. The third section is labeled 'Q.A' and contains a 'BATCH #' box with the number '1'. The text 'BALLOTS TALLY' is printed across the bottom of the sections. There are also labels for 'HOLE PUNCH' on the right side of each section.

“Group,” an alpha character, refers to the 25 tally columns on each tally form. The numeral at the top of each column corresponds to the Ballot ID for counting from the Statement of Return.

For Candidates:

- Group A: 1 to 25
- Group B: 26 to 50, and so on.

For Questions (the number is preceded by “Q.”):

- Group Q.A: Q.1 to Q.25, and so on.

Template forms have been created to accommodate elections with up to 200 candidate names and 50 question options. Upon request, additional forms can be prepared for higher numbers of candidates or questions.

When a counting team completes a “Batch” of ballots, they will total and reconcile the “Batch.” Then, if there are more ballots, they will begin counting a new batch. Batches are numbered sequentially.

Forms Prepared in Advance by the Clerk

By calculating the expected turnout at the polling place and the number of candidates and questions, the clerk will print the estimated number of forms needed for the election.

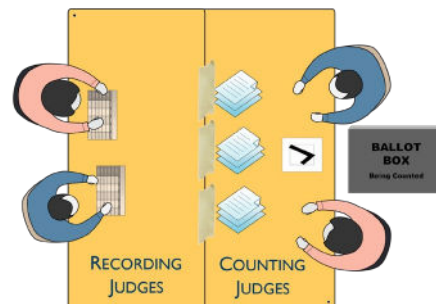
To assist in calculating forms (and supplies needed), Cause of America offers a spreadsheet tool that can be downloaded from [HandCounting.com/FormPrep](https://www.causeofamerica.com/HandCounting.com/FormPrep).

Counting Teams

Each counting team has two Counting Judges (suggested to be 1 DEM and 1 REP) and two Recording Judges (suggested to be 1 DEM and 1 REP).

Multiple Counting Teams at a Polling Place

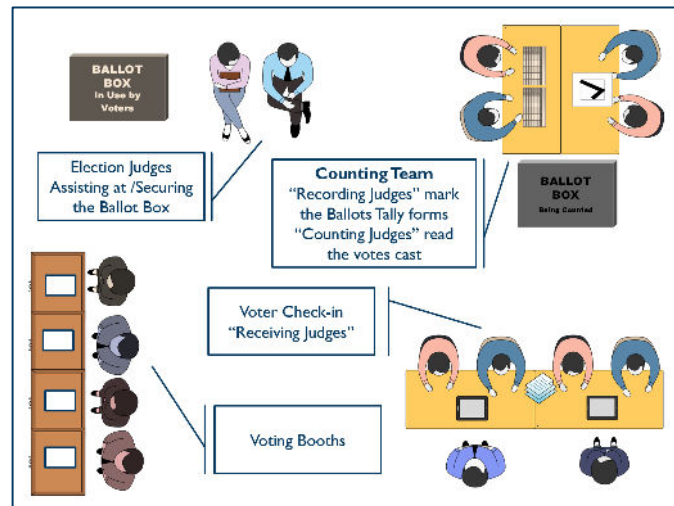
Depending on the anticipated number of ballots that will be cast and the time needed to hand count them, the clerk may want to schedule multiple counting teams at a location.



Counting Location

Hand counting of ballots takes place at the location where voters cast their ballots: the polling place. Instructions are provided by the clerk on where to set up the counting space at the polling location.

The Counting Space will be set up in a private area within the polling place. Higher volume polling locations may be able to offer a separate area for the counting team to use for the counting of ballots. Smaller polling places may not be in a facility with separate work areas. The clerk must evaluate the polling places and determine the best solution.



Furnishings for each Counting Team

- 6' to 8' table with chairs for 4 judges: 2 on each side across from the other 2
- smaller utility table or extra to hold the ballot box should be placed between the Counting Judges

Supplies Specific to the Counting Team

Equipment for Each Counting Team(s)

- 1 empty ballot box
- Calculators (2 per team)
- Magnifying glass
- Flashlight (extra batteries)

Counting Team Supplies

- Color Felt Markers (e.g., Sharpie™ style)
- Blue Ball Point pens
- Pencils with erasers
- Removable "Arrow Flags" stickers
- Binder clips
- Masking tape

Tallying Ballots

Voters Mark Ballots and Place in a Ballot Box

Once voters have marked their ballot, they drop it into the Ballot Box. In an emergency, even an inoperable voting machine may be used to collect the ballots (using the drawer for manually inserting ballots).²



Counting Team Receives Ballot Box

When the Counting Team is ready, a ballot box is brought to their table.

The Counting Team receives the ballot box and exchanges it for their empty ballot box after demonstrating that their ballot box is indeed empty.

The empty ballot box is secured and set in place for voters to drop their ballots. The ballot box remains in public view until the polls close, or it is brought to the counting team to count another batch.

Pull Ballots from Ballot Box one at a Time

One Counting Judge pulls a ballot from the Ballot Box to proceed with counting. Then, holding it so that the other Counting Judge can read it, the votes are read for every race (and question, if applicable).

READ THE NUMBER NEXT TO THE BOX, THEN read the candidate's name and office sought. If the ballots do not include numbers for the candidates (or questions), the Counting Judges refer to the Statement of Returns and locate the candidate's ID number. (This may slow the process slightly, but it is as fast as if names were printed on the tally forms.)

FOR UNITED STATES SENATOR		
Vote For One		
1	<input type="checkbox"/> JAMES HEIRSON	REP
2	<input type="checkbox"/> ANDREW CARLSON	DEM
3	<input type="checkbox"/> MARGARET BILLINGTON	LIB
4	<input checked="" type="checkbox"/> WES REMISINGER	CST
5	<input type="checkbox"/> WRITE IN _____	

Marking Votes on the Ballots Tally form

An easy-to-use Ballots Tally form has been created to mark votes. There should be 2 Recording Judges (1 Republican, 1 Democrat) who have their own tally forms and work independently to mark (dab) the votes as they are called.

These 2 Recording Judges, comparing their totals later in the process, are part of the assurance of accuracy. If their totals do not match, reconciling is done immediately before moving forward with more ballots. Reconciling in this way is one of the steps that helps to ensure accuracy and security in the process.

Ink Colors to use on the Ballots Tally form

Tallies must be made in ink. It is recommended that standard blue, black, green, or red not be used—no pencil marks for tallies. Tally marks are made using a fine or medium felt tip marker with a rounded tip. It leaves a sufficient size dot by simply touching it on the paper. There is no need to fill in the entire oval. It is recommended that any other writing on the form be done with a ballpoint pen, preferably in blue ink (but it is recommended not to use black ink).

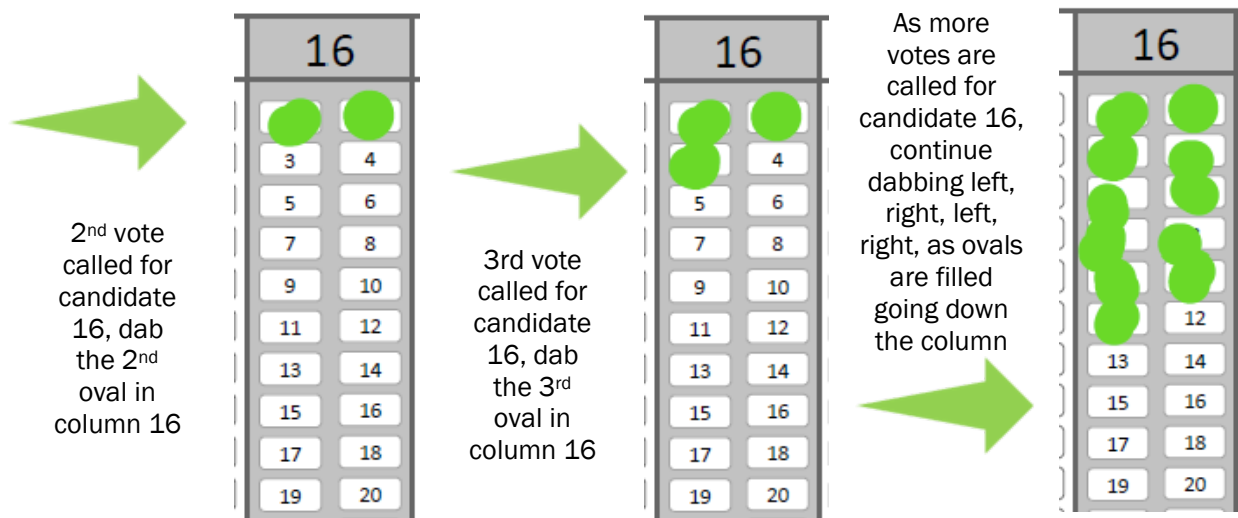
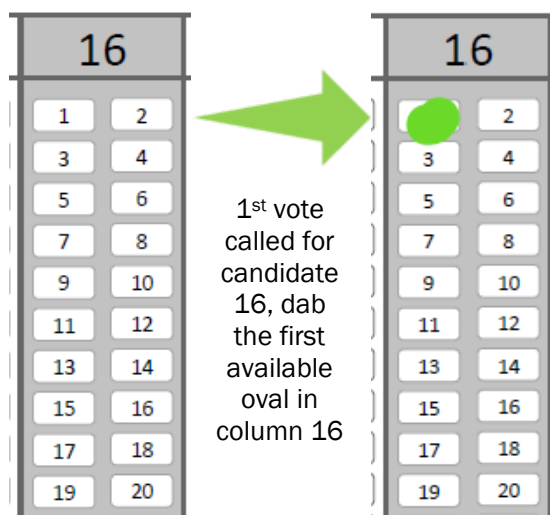
² Ballot Box: <https://electionsource.com/collections/metal-ballot-boxes/products/steel-non-stuffable-ballot-box-12-x-12-x16>

Tally the Vote When it is Called

When the Counting Judge calls a vote, the column number on the ballot next to the candidate's name (or question, if applicable) is spoken.

On the Ballots Tally Form, the Recording Judges, each with their own Ballots Tally Form, go to the corresponding column for the number called. If the column is blank, "dab" the first available oval.

The next time that candidate is called, the Recording Judges will dab the oval with the number 2, which is to the right. Continue going left, right, left, right, and down the column as that candidate receives more votes.

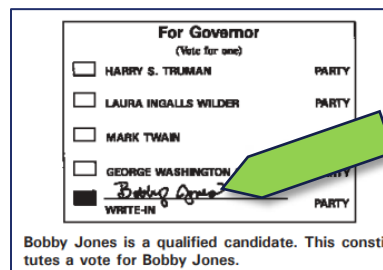


Votes for Write-In Candidates:

If a vote is cast for a write-in candidate, depending on state law, the Counting Judges determine if it is an eligible candidate and should be counted. If it is, the ID number is read so that the Recording Judges can tally.



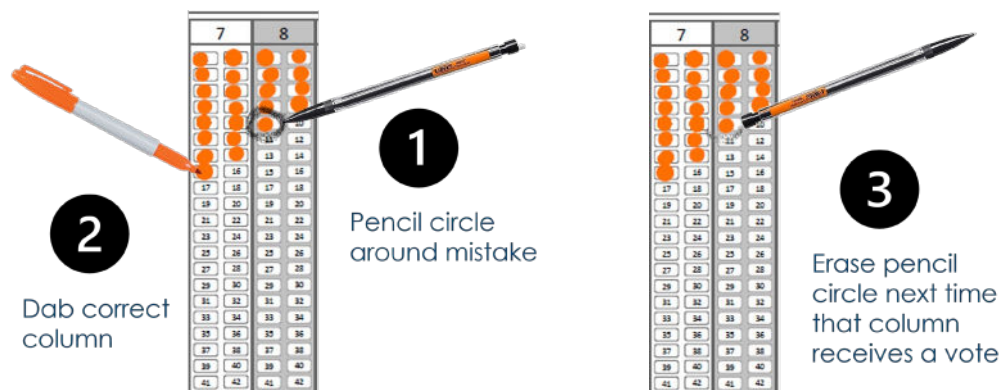
The Counting Judges place a removable arrow "flag" pointing directly at the candidate's name. When reconciling write-in votes, the flag will make it possible for the clerk to quickly identify which write-in candidates were counted as eligible at the polling place.



Correcting a Tally Mistake

If accidentally marking a tally in the wrong column, use a pencil to circle the oval in which the mistaken tally was marked. Then follow one of these steps to correct the tally:

- If **another vote is called** for the column with the pencil-circled oval, use an eraser to remove the pencil marking. The mistakenly marked oval becomes the tally for the new vote.
- If there are **no subsequent votes** is called for the column with the pencil-circled oval during the remainder of the batch:
 - Leave the pencil marking as is.
 - Use a blue ballpoint pen and put an “X” on the oval circled in pencil.
 - Initial below the oval with the “X.”
 - When recording the column total, disregard the oval with the “X” and use the number from the oval preceding it.



Continue Calling Votes until the Batch is Complete

Two circumstances determine the completion of the batch:

1. All ballots in the ballot box have been called and tallied; or,
2. A column on any of the Ballots Tally forms reaches 100. When any candidate or question has received 100 votes, finish counting the remaining votes on the ballot. **DO NOT PULL ANY MORE BALLOTS FROM THE BALLOT BOX.**

Totaling a Batch of Ballots

Record column totals in the Bottom Row Totals

When a batch is complete, the number of votes cast in the batch for each candidate or question is totaled and written in the bottom row of each Ballots Tally form group.

A Batch # 1 **BALLOTS TALLY**

COUNTY: Freedom JUDGE: Liberty HS ELECTION DATE: 11/8/2022 BATCH-START TIME: 2pm JUDGE: JP WHEN FINISHED: CB

POLITICAL PARTY REPRESENTED (candidate): REP DEM

IS THIS TO BE USED FOR THE OFFICIAL COUNT? (yes/no): YES

IN SUMMARY, COPY TOTALS TO BATCHES SUMMARY A THEN RECORD PG R: 1 ROW #: 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Enter Total # Ballots Counted This Batch	108																									
Row Total	708	70	28	6	4	0	74	15	9	0	58	43	6	0	97	5	0	85	21	0	74	36	0	22	24	31

Calculate the Sum of the Bottom Row Totals

Calculate the sum of the totals and write it in the Row Total box on the left end of the row.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Row Total	708	70	28	6	4	0	74	15	9	0	58	43	6	0	97	5	0	85	21	0	74	36	0	22	24	31

Recording Judges Agree on Totals

The Recording Judges compare the totals on each Group form from the batch by overlaying their Ballots Tally forms and comparing their totals. If there is a discrepancy between the judges' forms, the Counting Team reconciles by double-checking column totals and row totals to ensure they are correct. The Counting Judges may have to recheck how many votes were cast for a particular candidate to verify tallying or dabbing accuracy.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Row Total	708	70	28	6	4	0	74	15	9	0	58	43	6	0	97	5	0	85	21	0	74	36	0	22	24	31

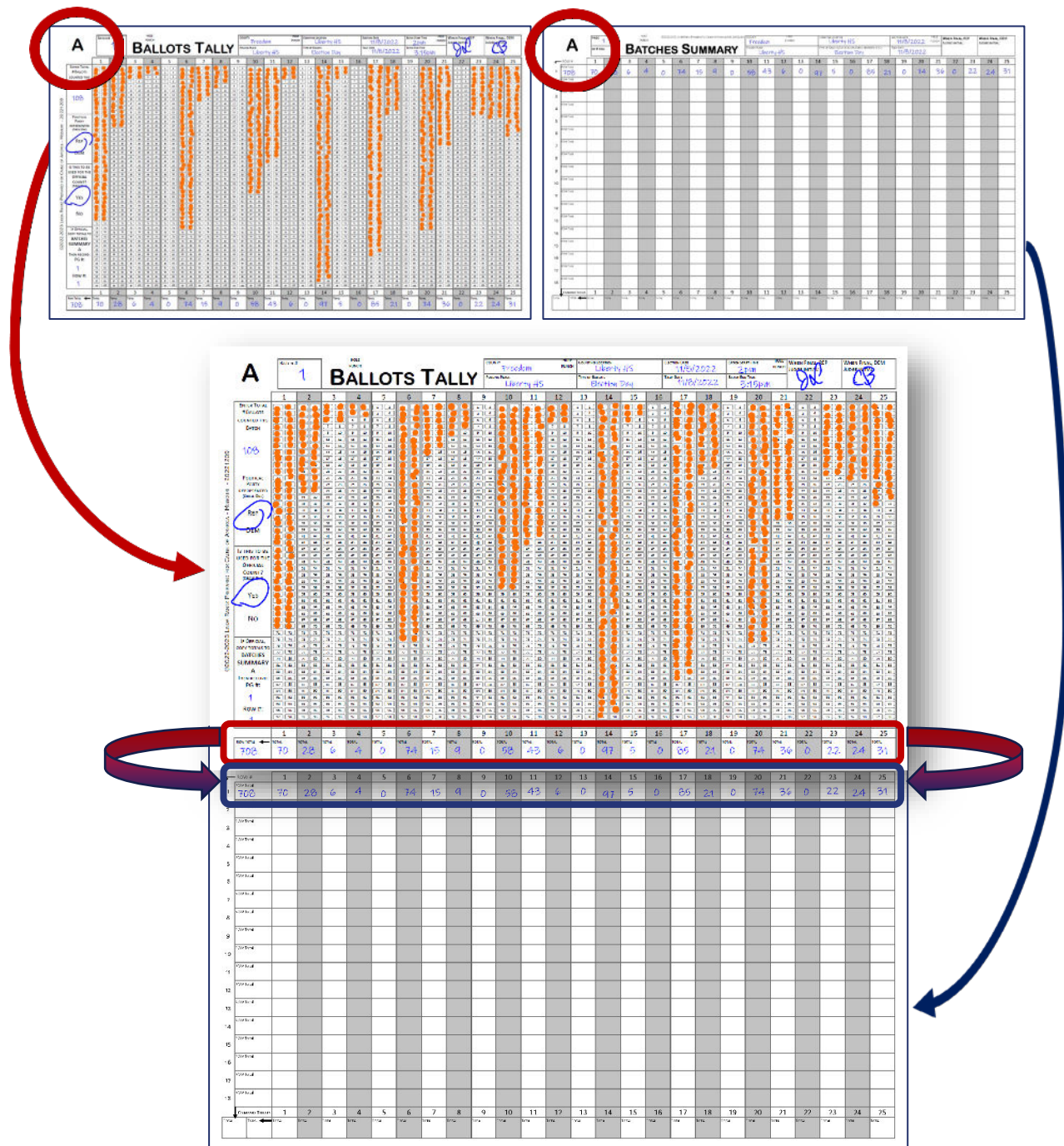
In the left sidebar, each Recording Judge marks their political affiliation on their own form.

Enter the Total Number of Ballots in the Batch

The Counting Judges, together, will count the quantity of ballots for which votes had been called and tallied. When they agree on the number of ballots, they announce the number to the Recording Judges, who enter it at the top of the left sidebar of their Ballots Tally form.

Record Bottom Row Total of Ballots Tally form to the Batches Summary sheet

Using only one of the “Group A” Ballots Tally forms, overlay it so that the bottom row is right above the first available row on the “Group A” Batches Summary Sheet. Write the totals from the bottom row of the Ballots Tally form to the Batches Summary Sheet. Repeat for Group B and any other groups.



1. SUM of each individual column

- The totals of items 2 and 3 must match

[illegible]

If items 2 and 3 from the list in the preceding section do not match, the Counting Team works to

doi:10.1371/journal.pone.0142466.g002

After completing Group A, repeat the steps to complete and reconcile the Batches Summary

Copy Final Results to Statement of Returns

The column numbers on the Results of Polling Place correspond to the Ballot ID numbers in the left column of the Statement of Returns (either for Candidates or Questions, if any).

Copy the vote tallies from the Results of Polling Place to the corresponding Ballot ID on the Statement of Returns.

HOLE PUNCH												
©2022-2023 Linda Rantz Prepared for Cause of America MO 20221210												
COUNTY Freedom												
POLLING PLACE Liberty HS												
RESULTS of POLLING PLACE												
GROUP	1	2	3	4	5	6	7	8	9	10	11	
A # SUMMARY SHEETS	1	275	103	20	18	1	301	65	27	0	164	158
GROUP	26	27	28	29	30	31	32	33	34	35	36	
B # SUMMARY SHEETS	1	4	209	99	75	12	209	217	0	404	0	418

COUNTY	POLLING PLACE	ELECTION	ELECTION DATE
FREEDOM	LIBERTY HS	GENERAL	NOV. 8, 2022

STATEMENT OF RETURNS - CANDIDATES

Statement of Returns – Candidates – We hereby certify that:

BALLOT	MARKS CAST	FOR CANDIDATE:	FOR OFFICE OF:
1	275	JAMES HEIRSON	United State Senator
	103	ANDREW CARLSON	
3	20	MARGARET BILLINGTON	
4	18	WES REMISINGER	
5	1	Write-in	
6	301	HOLLY KESTREL	United State Representative
7	65	CYNTHIA BRAZELL	

Election Items Returned to Clerk

Return the election items to the clerk as prescribed by the clerk.

This Appendix section is an excerpt from **“Missouri Elections: Return to Hand Counting”** © 2022-2024 Linda Rantz & Craig Rantz. All Rights Reserved.

The hand counting process herein and any accompanying commentary are based on a layperson's interpretation of Missouri State statutes and rules, not legal authority. Therefore, nothing herein is qualified as legal advice. Accordingly, it is not offered as legal advice and should not be used or considered a replacement for qualified legal advice. Readers are encouraged to contact a licensed attorney for legal advice or assistance understanding Missouri's laws, statutes, and rules (or any other state's).

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