Hands-on Elections:
(Condensed Version)

Instructions for Hand Counting
Real Paper Ballots

Lessons from New Hampshire

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on behalf of
NH Fair Elections Committee *and*
Election Defense Alliance

We the People

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. — That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed.
~The Declaration of Independence

[T]he Declaration of Independence is the ring-bolt to the chain of your nation's destiny. . . . The principles contained in that instrument are saving principles. Stand by those principles, be true to them on all occasions, in all places, against all foes, and at whatever cost.
~Frederick Douglas

Openness in the conduct of public business is essential to a democratic society.
~Preamble, New Hampshire Right to Know Law (Chapter 91-A:1)

All power residing originally in, and being derived from, the people, all the magistrates and officers of government are their substitutes and agents, and at all times accountable to them. Government, therefore, should be open, accessible, accountable and responsive. To that end, the public's right of access to governmental proceedings and records shall not be unreasonably restricted.
~New Hampshire Constitution, [Art.] 8.

Politics should be the part-time profession of every citizen who would protect the rights and privileges of free people and who would preserve what is good and fruitful in our national heritage.
~Lucille Ball

All men are born equally free and independent; therefore, all government of right originates from the people, is founded in consent, and instituted for the general good.
~New Hampshire Constitution, Article 1

Suppose an article had been introduced into the Constitution, empowering the United States to regulate the elections for the particular States, would any man have hesitated to condemn it, both as an unwarrantable transposition of power, and as a premeditated engine for the destruction of the State governments?
~Hamilton, Alexander, Federalist No. 59, 1788

Cautious, careful people, always casting about to preserve their reputation and social standing, never can bring about a reform. Those who are really in earnest must be willing to be anything or nothing in the world's estimation, and publicly and privately, in season and out, avow their sympathy with despised and persecuted ideas and their advocates, and bear the consequences.
~Susan B. Anthony

These [corporate CEOs] do not go around the world spreading peace, justice and democracy. They spread credit card debt, cell phones, sweatshop conditions, factory farms for hogs and not much better for people. They are in it for the money, and they want to economically enslave people, not free them.
~Doris "Granny D" Haddock

There is one safeguard known generally to the wise, which is an advantage and security to all, but especially to democracies against despots —suspicion.
~Demosthenes

It is not up to you to finish the work, but neither are you free to abstain from it.
~Rabbi Tarfon

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Introduction

Do you believe in secret vote counting?

If you don't believe secret vote counting belongs in the greatest democracy on earth, and want to do something about it, then this handbook is for you.

We all know that secret vote counting doesn't belong in a democracy. We know that free and fair democracies depend on open, fully observable elections, to protect and preserve the records of our votes.

Computerized voting equipment began to be used in America's elections in the mid-1960s; it exploded in use after the 2000 election, and now counts the lion's share of America's total ballots. With computerization came privatization of our elections as well. Your ballot and votes—the mechanism by which all your other rights are secured—have been claimed as the private property and trade secrets of corporate computerized voting machine industrialists. These private for profit corporations seize our ballots, count them in secret, tell us what the results are, and then lock away the records, denying citizens and even candidates access to inspect and verify our own votes in our own elections.

We owe it to our country to protect the foundations and the integrity of our democratic processes.

Fortunately for us, it turns out it's pretty easy to do this. Nearly 100% of America's polling jurisdictions have hand-counted paper ballot elections within living memory. And nearly 27% of America's polling jurisdictions are already doing it: hand-counted, paper ballot election administration. It's simple, it's cost effective, and eminently do-able in every polling place in the country. The New Hampshire experience, described in detail in this Handbook, proves this out.

Publicly observable hand counting works in large precincts. The average number of ballots processed through any polling place in the country is under 1000. But New Hampshire towns hand count up to 3,600 ballots on any given Election Night! And at a cost less than the average cost paid to private corporations to program a single machine in a single election. The costs of printing paper ballots, hiring local community hand counters, and even bringing in a specialized manager, if need be, are much lower than the investment into computerized voting equipment requiring continual upgrades, maintenance, and specialized storage space.

Transparent hand counting works with complicated ballots. New Hampshire's ballots are among the most complex ballots in the nation, because we have the largest citizen legislature and many multi-member districts. But we still manage to hand count 3-4 times the national average of ballots in any given polling place, and wrap up the counting to announce our results on Election Night.

If New Hampshire can do this, with our large polling places and our complex ballots, then any place can.

This handbook provides information to help you run hand count elections. We include cost estimates, staffing guidance, and methods for counting and reconciling ballots, voters, and votes.

In New Hampshire, we're counting the votes. With the information provided in this handbook, you can too.

About this Handbook

DOWNLOAD FOR FREE AND DISTRIBUTE FREELY

This Handbook is freely available for download and distribution here:
http://www.electiondefensealliance.org/HCPB_election_admin_handbook

ABOUT THE FAIR ELECTIONS COMMITTEE

The New Hampshire Fair Elections Committee is dedicated to protecting, preserving, and enhancing those aspects of the NH election system that are unique, transparent, secure, and exemplar. The FEC aims for open and accessible election processes, while implementing processes to prevent, pursue and prosecute proven instances of election fraud.

For more information, contact us at fec@DemocracyForNewHampshire.com

ABOUT ELECTION DEFENSE ALLIANCE

The purpose of EDA is to help build and coordinate a comprehensive, cohesive national strategy for the election integrity movement, in order to regain public control of the voting process in the United States, and to insure that the process is honest, transparent, secure, verifiable, and worthy of the public trust. To accomplish this purpose, EDA will provide resources, strategic planning and coordination opportunities for a nationwide network of citizen electoral integrity groups and individuals already working at the national, state, and local levels. The urgent goal of these activities is to rapidly expand and multiply the effectiveness of the election integrity movement by connecting existing groups and encouraging the creation of new ones. EDA seeks to provide connection, coordination, and focus, to eliminate duplication of efforts, to create a clearinghouse for the sharing of materials and other resources, and to facilitate coordinated decision-making about strategic priorities and tactical approaches in the election integrity movement.

For more information, contact us at info@ElectionDefenseAlliance.org

ACKNOWLEDGMENTS

We acknowledge and honor the steady and wise leadership, openness, accessibility, and integrity of the office of our New Hampshire Secretary of State, as well as the dedicated and hard working election officials, workers, and community volunteers in the Granite State. We also acknowledge the assistance and editing from countless election officials and citizen voting integrity activists, such as Betty Hall, Dave Berman and the Humboldt County Voter Confidence Committee, Chuck Garner and the Lassen Progressives, Nashua City Clerk Paul Bergeron, Patrick Arnold, Paul Lehto, Rady Ananda, Sid Hall, the New Hampshire Departments of State and Justice, some activists on the PeopleCount list serv, and many others, all of whom contributed their time to review and comment on make this Handbook.

LEARN MORE AND SEE HAND COUNTING IN ACTION

Please contact us to receive a DVD that shows the two typical ballot counting methods used for hand counting, as filmed during the 2004 election in the New Hampshire towns of Lyndeborough, Walpole, and Wilton, as well as a statewide manual recount conducted in Concord by the New Hampshire Secretary of State.

To download these videos, go to the Democracy for New Hampshire website at:
http://www.democracyfornewhampshire.com/node/view/2648

Or order the DVD online at www.democracyfornewhampshire.com

Legal Disclaimer

The information provided by the New Hampshire Fair Elections Committee and Election Defense Alliance is not intended to be legal advice, but to merely convey general foundational information related to legal and practical election issues of interest to our community. Although we have sought to ensure that the information is correct, complete, and current, we make no warranty about the accuracy or reliability of the information in our documentation or on our website.

Hand Count Basics

MANAGEMENT CONSIDERATIONS

Running a hand count paper ballot (HCPB) election involves good management:

- YOU MANAGE *PROCESS*
- YOU MANAGE *PEOPLE*
- YOU MANAGE *PAPER*
- YOU MANAGE *NUMBERS*

With the right methodology and management in place, the costs come down; the integrity of the election goes up.

Figure 1: Managing a lot of process, people, papers, numbers at NH State recount: 22,024 ballots counted manually for a single contest

METHODS FOR HAND COUNTING PAPER BALLOTS

New Hampshire has identified two accepted and widely used methods for hand counting paper ballots. The sort and stack method is considered more effective and efficient than the read and mark method. This document describes the sort and stack method.

When you have 2-4 people on a team you have built in double checks. You don't necessarily need to rely on post count audits because you are doing simultaneous verification then and there on election night.

In New Hampshire, we have very liberal recount laws, and our manual recounts are integrated into the election system as a natural check and balance on the first counts. The recounts effectively serve as random audits, in this way. But rather than following a statistical formula, the recounts operate under intelligent selection. If a candidate feels something should be double checked, then it is.

WHY HAND COUNTING ON ELECTION NIGHT IS BETTER THEN POST ELECTION AUDITS

There are legitimate concerns about chain of custody if you allow the counting to go past election night, and if you rely on post election "audits" rather than election night first count verification to ensure the integrity of election results.

In New Hampshire, our laws require all counting to be concluded on election night and local election officials may not leave the polls until this is done and the results reported to the Secretary of State. Ballot boxes are then sealed and signed by election officials and stored locally unless collected for a recount.

Checks and balances are facilitated by the candidate-requested recounts, which begin the Wednesday of the week following Election Day, and are conducted centrally by the Secretary of State's office; these are manual counts in full public observance.

You can see a state recount online at the Democracy for New Hampshire website:
See our "**We're Counting the Votes and You Can Too**" videos:
http://www.democracyfornewhampshire.com/node/view/2648

New Hampshire has some of the most liberal recount laws in the country, and conducts 10-30 recounts every election cycle. Typically at least one outcome is changed in the recount because we tend to have close races – mostly due to the structure of our government, which includes a very large 400+-person citizen legislature (1 state representative for every 3089 voters). This is the largest state legislative body in the nation, and provides a fertile ground for our grassroots, participatory culture of democracy.

FOUNDATIONS FOR HAND-COUNTED PAPER BALLOT ELECTIONS

Legal Infrastructure: Elected (not appointed) Election Officials

In the Granite State all election night counting is done at the city ward or town polling places. It is all local. By law, local election officials and jurisdictions make decisions about which State-approved method of counting they will employ.

Each jurisdiction has 8 constitutionally defined elected election officials. The election (rather than appointment) of community election officials responsible for managing elections results in a fairly intimate grassroots democratic election administration. In this environment neighbors are beholden to each other in the conduct of their elections.

Our elected election officials include the Moderator, Clerk and Selectmen and Registrars of the Checklist. Additionally, there are a number of appointed election officials including, but not limited to, assistant moderator, moderator-clerk-or selectmen pro tem, deputy voter registrars, and ballot clerks (ballot inspectors). The introduction of additional counters to assist at the end of the night would bring more appointed election workers into the polling place and would likely cause the appointed election officials to significantly outnumber the elected election officials.

For this reason, it is worth trying to recruit workers for appointed positions in such a way that hand count teams are representative, including members from both of the major political parties as well as independents and other parties that may be represented on the ballot.

Nonetheless, the **management of elections by local community members, elected by their neighbors,** has a distinct leavening effect on the integrity of our elections.

Figure 2: Lyndeborough Moderator Walter Holland welcomes newly registered voters with applause

This is quite different from some of the bureaucratic management of elections seen outside of New England. This community-based election system is very supportive of grassroots democracy, and is one of the reasons visitors to the Granite State often remark that "democracy works" here.

Legal Infrastructure: Voter Intent

New Hampshire has more than 200 years of case law relating to **voter intent.** With solid legal protection of voter intent, New Hampshire's election system comfortably lends itself to hand counting. Voters expressing their political intent with their hand marked ballots, can rest assured that each voter has equal protection under our laws to ensure that their intent is listened to.
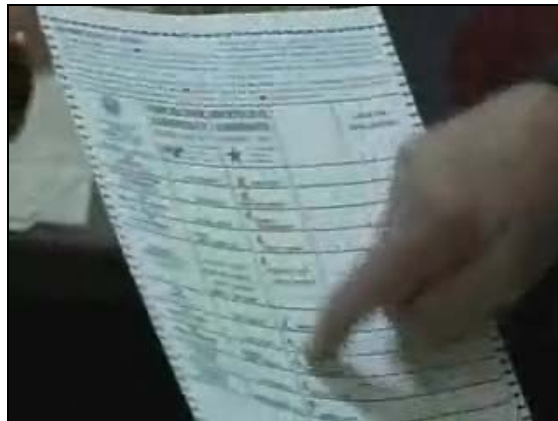

Figure 3: Listening to the voter's intent by reading their marked ballot

The State Election Procedure Manual (http://www.sos.nh.gov/HAVA/Procedure%20Manual-90403.pdf) prescribes legally accepted protocols for determining voter intent in disputed cases.

Legal Infrastructure: Paper Ballot is Vote of Record

New Hampshire state law recognizes the paper ballot as the vote of record, and mandates all recounts to be manually counted.

The NH Constitution requires that our votes be "sorted and counted" in "open meeting."

55% of our polling places use Diebold optical scanners and 45% use the hand count method for counting. The New Hampshire legislature, citizen advocacy groups, and the New Hampshire

HAVA State Plan Committee, are currently researching questions around the constitutionality of using different vote counting technologies.

In 1994 New Hampshire passed the first paper ballot law in the nation, which states that "no voting machine or device shall be used in any election in this state unless it reads the voter's choice on a paper ballot" (RSA 656:41).

CHALLENGES TO RUNNING HAND COUNT ELECTIONS

Staffing is a significant challenge for election officials wanting to run hand count elections. The following observation is offered by an election official in a large New Hampshire city:

> *"The reality is that we have trouble staffing our polling areas with 9 election officials (moderator, clerk, 3 selectmen, and 4 ballot inspectors). Because these officials are all elected or appointed by the parties, there is little accountability if someone chooses to no-show or call in that they will be absent at the last minute. Implying that it would be "easy" to line up 24 people to work each polling area is simply unrealistic. (That would require that [our city] find an additional 135 people to assist at our nine polling places.) It would take the 9 election officials in one of our city wards, where 5,000 ballots may be cast; about 3 hours to hand count their ballots. Add another hour for paperwork, packing, locking up the polls, and returning everything to City Hall, and these folks will be making their returns around midnight. (Our polls are open 6 a.m. - 8 p.m.) I might suggest, however, that there would be value in building a list of the names and telephone numbers of individuals who are willing to volunteer at the polls and to make that list available to the community's chief election official. It would take a lot of non-partisan, discreet manpower, and money, to implement these ideas."*

SUPPORT FOR HAND-COUNTED PAPER BALLOT ELECTIONS

Community

The Online Etymology Dictionary tells us that the word "vote" is derived from the Latin "votum" meaning "a vow, wish, promise, dedication." This is not surprising. When we vote, we are expressing our commitment to our community. When our community reads our voter intent on our hand marked ballot, it is expressing its commitment back to us. This is the heart and soul of a healthy democracy.

Just as we would not use computers to sign a marriage contract, our hand-marked, hand-counted, paper ballot voting system is as close as we can get to sign and seal our commitment to each other in our communities.

Figure 4: Wilton Town Hall where voting takes place

The introduction of cold, computerized, machines into this arrangement is intuitively unsettling. We have no "relationship" with these things. They take no oaths of allegiance to us. They can't sit in a jail cell if they defraud us. These computers, with their complexities, their secret vote counts, their private allegiance to their programmers, their potential for insidious tricks, come between us and our community.

When you remove community from the act of voting, something ineffable is lost. People sense this, and their civic participation in voting declines.

New England in general has long standing traditions of grassroots democracy, from the traditional Town Hall Meeting, to the New England states' original Constitutions, such as in New Hampshire and in Massachusetts, which prescribe the sorting and counting of our votes in open meeting. We New Englanders are used to coming together to slug it out in public, open meeting. We are used to looking our neighbour in the eye while we debate the purchase of a new police cruiser, the opening of a new school, the hiring of a road agent, all these important decisions that we must make together for the collective good of our community.

Communities in New Hampshire often make a celebration out of Election Day. They hold quilt raffles, bake sales, and other sundry events. Adults and children alike invariably find something of interest at the local polls on Election Day, irrespective of their feelings for the candidates and their campaigns in the electioneering zones outside the polling place.

Figure 5: The Lyndeborough Artillery, the longest continuous artillery in the nation, holds their regular Election Day Bake Sale

In New Hampshire, volunteering to be a vote counter is considered a great community honor in the hand count election towns. Volunteers are sworn in on Election Day, and they take their oath of office seriously.

Figure 6: Lyndeborough counters take oath of office

Lyndeborough election official Walter Holland, when training his volunteer hand counters, reminds them to "handle their neighbors' votes with care."

Figure 7: Lyndeborough, NH Moderator Walter Holland, November 2004

Training

The State invests heavily into poll worker and election official training, and the State also holds forums for our election officials to facilitate information sharing and transmission of local traditions, lessons learned, and what not. The ongoing training and information sharing allows local election officials to learn from the State and from each other, and to continuously improve their skills in election administration. This is critical because of the nature of local elections, which involves citizen officials, all of whom have other jobs, and for whom the election work is primarily a labor of love and virtual volunteerism, undertaken in the election cycle timeframe.

Recruiting Counters

Many local election officials are afraid to give up their machines because they fear they will not have enough help to hand count our elections. Or they fear even if they have enough people, they will be the "wrong" kind of people. But our communities are filled with the "right" kind of people. We just need to reach out to them.

Many of our communities have built-in recruitment centers. Think about the community organizations in your part of town. Church groups, Rotary Clubs, Neighborhood Watch groups, PTA's, High School social action or community service groups, these are just a few that come to mind.

Do you think you can come up with 25 people to help volunteer in your polling place? That's usually all it takes. Piece of cake, right?

Americans as a whole are generous, good-hearted, community spirited, and civic minded people. We step up when asked. The key is we just need to ask.

Here is what one civic minded reader had to say in response to an article about hand counting on the newsblog OpEdNews.com
(http://www.opednews.com/articles/opedne_joan_bru_070814_first_in_the__22fooled.htm):

> *"I'm 67. I'm one of the youngsters in my senior building and at my senior center. We are the ones who usually are pollworkers, although in the last few years I've been pollwatching instead. We all remember hand-counted paper ballots, none of us have forgotten how to count, most of us do not like the machines, very few of us have ever figured out how to make the machines work (at the last election where two precincts voted downstairs in my building, one precinct inspector only managed to print out and post 4 of the 5 machine tapes, and the other didn't manage to post any tapes at all), and we'd be happy to go back to HCPB (hand-counted paper ballots).*
>
> *Rumors of our incapacity are probably sponsored by vendors and officials and are, in any event, greatly exaggerated. As for hostile elections officials, many of us have canes and know how to use them on young whippersnappers trying to steal elections. I don't have a cane myself, but I know how to post reports to websites keeping track of election problems.*
>
> *All you have to do is announce that there will be hand-counted paper ballots, and we seniors will march en masse down to our local elections officials and train them. We potty trained the snivelling little brats in the first place and it's time they learned some respect.*

Hand Counting Large Numbers of Paper Ballots, even Complex Ballots

One of our hand count towns counts up to 3600+ ballots on election night. This is an important data point because the national average number of ballots in any precinct is less than 1000. In other words, New Hampshire hand count towns can manage up to 3 or 4 times the national average of ballots processed in any given precinct. Because of our large legislature, we also have some of the more complex ballots in the nation (many multi-member districts).

For instance, a New Hampshire multimember House district might have up to 26 candidates running for 13 seats in a single district! This is an extreme circumstance resulting from the large legislature in New Hampshire, more than likely not reproduced anywhere else in the world. Many, if not most, of our districts are multimember races with 2,3, 4 or more seats per district in a single contest, with typically at least twice as many candidates (if both the major parties run a candidate Democrats and Republicans).

In a district with four representatives, there will likely be at least eight candidates running in that race. So to count using sort and stack, you'd have to count this single race eight times plus the write ins, overvotes, and undervotes. So you would count 11 stacks for this single race. This gets complicated, and is the reason many of our towns fall back to the read and mark method, which procedures can easily be found in the New Hampshire Secretary of State's Election Procedure Manual, referenced in the **Resources** section of this handbook.

We have spoken with, and filmed, the moderator of at least one hand count town that success-

fully employs the sort and stack method even with a multimember race consisting of three seats for that single district.

New Hampshire has applied for a grant to study both methods of hand counting, and our multi-member districts make it a perfect place for such a study because of the challenges posed by counting these races.

At close of the count and reconciliation, local jurisdictions communicate their numbers to the Secretary of State's office for centralized tallying, where the reported results from each city and town are manually entered into a spreadsheet.

Figure 8: Central recount vote totals tallied and projected for public observation at NH State House, November 2004

Hand Count Systems as Self-authenticating Systems for Election Integrity

With proper management, you can hand count your ballots using teams of 2-4 people, meaning **2-4 sets of eyes on every count, every tally mark, every contest, every ballot.** Using the sort and stack method, this means that 3-4 sets of eyes have the chance to see every mark on every ballot twice: once during the sorting process and once again during the counting process. The ballot markings, therefore, are seen 4-8 times under this system. This means that even a two-person team has an opportunity to review the ballot markings four times, making the sorting and counting members of the team simultaneous observers.

Figure 9: State recount: 2-person counting team, seven observers, Concord, November 2004

This is a self-authenticating system. Complex audit protocols, as defined in proposed federal legislation and in some state laws, are moot in this type of system. Because we have identified methodologies that integrate reconciliation into the process of counting, the self-auditing mechanisms are quite advanced and ensure a high level of integrity for the system overall.

In this way, the "auditing" occurs during the first count itself, when it matters, because this, after all, is the count that declares the winner (as opposed to machine "audits" promoted in some national legislative proposals, and in various state laws, which are intended, albeit weakly, to identify problems with the system but not intended to affect outcomes).

Feasibility of Hand Count Elections

Figure 10: Wooden ballot box, Wilton, NH, November 2004

Five or so well managed self-auditing teams of 2-4 people can count roughly 1000 ballots in less than 2 hours.

All told, with final reconciliation of registration checklists, number of ballots in and out, etc. the whole process is complete in less than 3 hours on election night. Many New Hampshire counters are community volunteers (all sworn in to office on election night).

New Hampshire has found the local hand count method - using teams of three - costs 7 cents per contest on a ballot, meaning $1.05/ballot for a typical 15 contest general election ballot.

The State of NH, which conducts 10-30 manual recounts every election cycle, estimates cost for hand counting at around 7 cents per race on the ballot. This assumes 3-person teams, each person getting paid $10/hr.

What this means is that it doesn't matter how large is the population of a state or county, it matters how many ballots are processed in any given polling place, and whether or not there is the political and community will and the infrastructural integrity to conduct hand count, observable, self-authenticating, elections.

MANUAL CENTRAL TABULATION

On the day after Election Day in New Hampshire, results are tabulated manually by the Secretary of State's office. The State Police pick up the signed Return of Votes from each town and carry them in manually to the Secretary of State's office by around 8 AM in the morning after the election. The results are then entered manually to a spreadsheet program, and aggregated. In the case of city wards, the signed Return of Votes from the Wards are manually carried to City Hall and the city results are then aggregated there. The city results are manually carried to the Secretary of State's office.

Lessons Learned from New Hampshire*

*From the NH Department of State: Hand Count Methods and Costs
Address to Democracy Fest Annual National Convention, June 10, 2007
Sheraton Wayfarer, Bedford, NH, By Anthony Stevens, Assistant Secretary of State,
New Hampshire
http://www.democracyfornewhampshire.com/files/Hand_count_training_D-fest_July_5_2007.pdf

In New Hampshire, decisions regarding vote counting methods are locally-based, often as included in a town meeting warrant article.

The decision to use a vote counting machine is subject to NH Ballot Law Commission approval. Following are some facts about New Hampshire elections, perhaps shedding light on how the state provides fertile ground for hand-counted election administration.

COUNTING IN NEW HAMPSHIRE

In New Hampshire, approximately 80% of our ballots are counted using optical scan machines, and 20% are hand counted.
- 139 polling places (45%) in NH rely on hand counting
- 170 polling places (55%) in NH rely on optical scanning machines
- 138 jurisdictions (58%) in NH rely on hand counting
- 98 jurisdictions (42%) in NH rely on optical scanning machines

NH has perhaps the highest volume of hand recounts conducted at the state level in the nation.
- 10-32 recounts per election cycle
- 50-136 candidates involved in recounts per cycle (due to the large legislature and multi-member districts)
- Current Secretary of State has been involved in over 300 hand-counted recounts.
- In the 2004 general election, there were 7 hand counting polling places with over 2,500 persons registered to vote.
- Each counted over 2,000 ballots, or over 3 X the ballots cast in an average-sized U.S. precinct.

A WIDE RANGE OF SITUATIONS CALLS FOR DIFFERENT SOLUTIONS

New Hampshire jurisdictions vary widely in their needs.
- Individual New Hampshire polling places served as few as 18 registered voters and as many as 18,974 registered voters in 2006.
- New Hampshire has 7 polling places with over 10,000 registered voters, which is over 6 times the national average polling place size.
- The size of the polling place affects decisions regarding counting methods.
- One size does not fit all.

Hand Count Methodology*

The Secretary of State indicates a preferred method in the *New Hampshire Election Procedure Manual*, which is the sort-and-stack method based on observation in recounts.
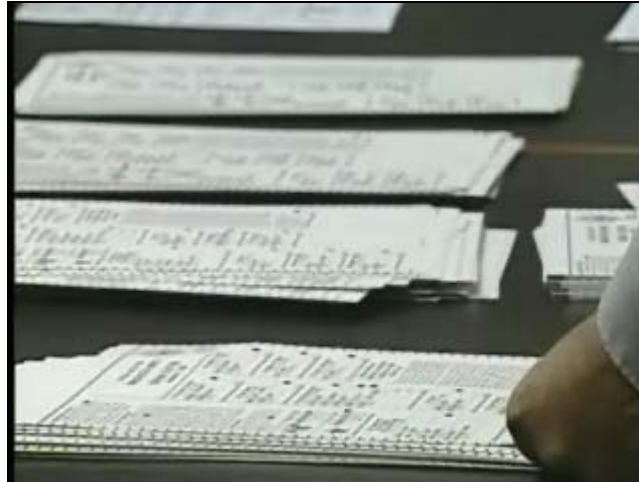

Figure 11: Ballots sorted in stacks

In this method, many of the steps are similar to the read-and-mark method, also used heavily in the Granite State. Generally, the sort-and-stack method is not used by the Secretary of State in recounts for multi-seat races, although the method can be used by treating every candidate as a separate contest. Local traditions reveal that the sort-and-stack method may not yet be used as widely as the read and mark method in New Hampshire polling places on election night.
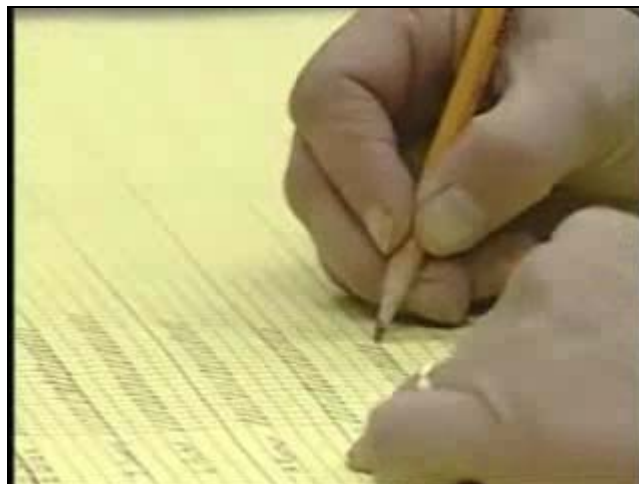

Figure 12: Tallying votes, Wilton, NH November 2004

ELEMENTS IN HAND COUNT ELECTIONS

Following are the foundational elements that come into play in hand-counted elections. These are all described more fully below.

- Planning
- Recruiting
- Knowing your method & how to present it
- Preliminary organizational work
- Training
- Oath of office
- Opening ballot box, counting and distributing ballots
- Tallying votes in contests
- Entering on tally sheet
- Moderator (local election manager) review
- Dealing with discrepancies

RECRUITING COUNTERS & OBSERVERS

Consider the following to help recruit poll workers for hand-counted elections.

- Cost estimates of $10 per hour here are on the high side. Many counters in New Hampshire work for between $0 and $5 per hour and are justly proud of their contribution.
- Locations paying $0-$5 per hour are some of the most effective at inspiring and recruiting good election night counters of all ages.
- Plan on using a second shift for counting. This makes it easier to recruit people with day jobs
- High school students are now required to contribute community service hours and log them. They are a good target group for recruiting as poll workers.
- 17-year olds qualify as vote counters in New Hampshire & other states.
- Seek a balanced mix.
  - Numbers person
  - Young people
  - Middle aged
  - Older people
  - Managers
- Count your contest equivalents on the ballot, to get a sense of the work needs.
- Know your method.
- Estimate your target number of counters & observers at each table.
- Estimate the number of sets of eyes per ballot.
- Estimate the number of times each individual will look at each ballot.
- Consider using people who have worked all day as observers rather than counters.

Figure 13: Four-person team, Wilton, NH, November 2004

Management of Hand Count Elections*

CALCULATING CONTESTS PER BALLOT

- The number of contests per ballot varies widely.
- In NH, the typical range on a primary or general election ballot is 12 contests, plus questions.
- The NH state representative contest normally is a multiple-seat race, with as many as 26 candidates running for 13 seats in the same district.
   - We would count this example as 13 contest equivalents. When added to 11 other contests on the ballot, the contest equivalents on this ballot should be estimated as 13 + 11 = 24 contests.

TEAM AVAILABILITY ON ELECTION NIGHT

The following estimates should be adjusted according to how many contests or contest equivalents appear on the ballot.

- 3 hours available (8 PM to 11 PM) X 60 minutes X 60 seconds = 10,800 seconds per team available in one night.

Assumptions:
- Second shift (8-11 PM) brings in fresh counters.
- 20 minutes of training and organization for the counting is included in 3 hours

ESTIMATING HAND COUNTING STAFF

Average U.S. precinct in 2006 = 936 registered voters X 67% turnout in general election = 627 ballots X 20 contests/ballot = 12,540 contests to count.

Assumption:
It takes approximately **6 seconds** to hand count a contest on a ballot; this number is averaged from the aggregate time for training, organizational working, sorting, stacking, counting and tallying.
- Distributing the ballots
- Sorting the ballots
- Counting the ballots
- Tallying the ballots.

Experienced towns average 4 - 5 seconds to count each contest on a ballot, including training time, sorting, stacking and counting.

This is based on:
- Videos and interviews with towns that conduct hand counts efficiently
- Secretary of State experience with hand counting

CALCULATING STAFF

- 12,540 contests to count X 6 seconds for a team to count a contest in NH experience = 75,240 seconds required on election night, divided by 10,800 (3-member) team seconds available per night = 7 teams needed.
- ***7 teams X (2 counters + 1 observer = 3 persons per team) = 21 counters/observers + 3 managers = 24 total staff***

Estimated Staff Costs
21 counters/observers X 3 hours @ $10/hr = $630
3 managers X 4 hours @ $20/hr = $240
Total: $870

Using 3 person counting teams:
$870 per polling place/627 ballots counted @ 20 contests/ballot = $1.39/ballot, or ***$0.07/contest on a ballot***

Assumptions:
- In NH, general election ballots may contain contests for as few as 12 positions per ballot and contests for as many as 25 position equivalents.
- Multi-seat races are harder to count than races with single outcomes.

The Sort and Stack Method for Hand Counting*

Following are detailed instructions for hand counting using the sort and stack method.

OVERVIEW OF SORT AND STACK METHOD

I. Ballots are sorted into piles:
1. One pile for different categories
2. Each candidate or alternative on a question
3. Overvotes (defective in that contest)
4. Undervotes (skipped races)
5. Write-ins
6. Ballots requiring voter intent judgment calls for the moderator (local election manager)

Figure 14: Sorting ballots, Danville, November 2006

ADVANTAGES OF SORT AND STACK METHOD

Of the two commonly used hand-count methods ("sort and stack" and "read and mark", the sort and stack is favored for significantly reducing risks of human error. The reason for this is simple. With the sort and stack method, physiologically, the eye is looking only at one place on the ballot; it is trained on that spot both during the sort and during the count, effectively creating a double check even by that one person doing the sorting and counting.

In contrast, marking tally sheets is an inherently error-prone task. Observers, readers, and markers alike, face challenges in the read and mark method. Going back and forth from one name to another, to one spot on the tally sheet or the ballot to another, against the continuing drone of the reader, who is reading off names aloud, creates a situation where all involved—the reader, the marker and the observer—find their eyes, hands, and minds easily wander.

For checks and balances in hand counting, observers are a necessary component. Observing the read and mark method is more difficult than observing the sort and stack. In the sort and stack, the counters sort one contest into its piles, and then count one contest in its piles. This is simple. On the other hand, in the read and mark, observers must listen to different names read aloud and observe marks as they are made up and down and all over any given tally sheet. If the names

range from A to Z, the eyes of the observers and the markers are really jumping around, making the process become confusing very quickly and very easily. When using the read and mark method, however, having dual observers increases the ability to observe that both the reader and marker are being accurate.

If counting teams are employing the read and mark method, they should have at least two observers: one to observe the reader and the other to observe the marker. Otherwise, it is impossible to observe that both the reader and the marker are being accurate.

With the read and mark method, it is easy to fall into a "counting trance" of a sort. Your mouth becomes used to saying one name, and even if it's not the name you are looking at, it comes out of your mouth anyway. This is the same with marking. Your hand and eye are used to going to one place on the tally sheet no matter what. As an observer you fall into the same traps.

These are physiological and cognitive realities. The sort and stack method handily removes these challenges, and therefore removes these high-risk avenues for human error.

- Counters and observers are looking at only one candidate or question on the ballot.
- Counters' and observers' eyes do not have to move to different locations on the ballot and on the tally sheet.
- Counters and observers have to focus on getting only one thing right. When looking for evidence of only one mark on one precise location on the ballot, it is harder to make mistakes.
- Recording the number of votes for a candidate or question is done when the stack is counted.
- Other methods rely on a separate mark on a tally sheet being made with each ballot. This requires more sets of eyes to track accurately.

RULE OF THUMB FOR SORT AND STACK

- Aim for at least 2-3 sets of eyes on each ballot, and each vote recording.
- Using a 2-person team, that might mean that both members watch as one member sorts the ballots.
- At least one member checks the marks again when counting the number of ballots in the stack.
- Both members count each pile and record and check the sum on the tally sheet.

Figure 15: 2-person team of hand counters, Danville, NH November 2006

CHOOSING NUMBER OF SORT AND STACK OBSERVERS

- The more sets of eyes on a single ballot, the greater certainty in the results.
- Generally, this means the more observers, the greater degree of certainty in the results.
- (Still, using the sort and stack method, 2 counters (no observers) can apply 3-4 sets of eyes to each ballot, and still achieve accuracy.)
- An extra set of observers for 7 teams would cost $210 (7 observers X 3 hours X $10/hour) in an average U.S. polling place counting a 20-contest ballot without volunteer help.
- New Hampshire recounts rely on observers selected by the candidates, often resulting in tables with 4 or 5 persons – 2 counters and 2-3 observers.

Figure 16: 3-person team (Democrat, Republican, Independent) using the read and mark method

Figure 17: Four person team, using the read and mark method, Wilton, NH, November 2004

ORGANIZING FOR THE COUNT

- Close the polls
- Verify all absentee ballots processed
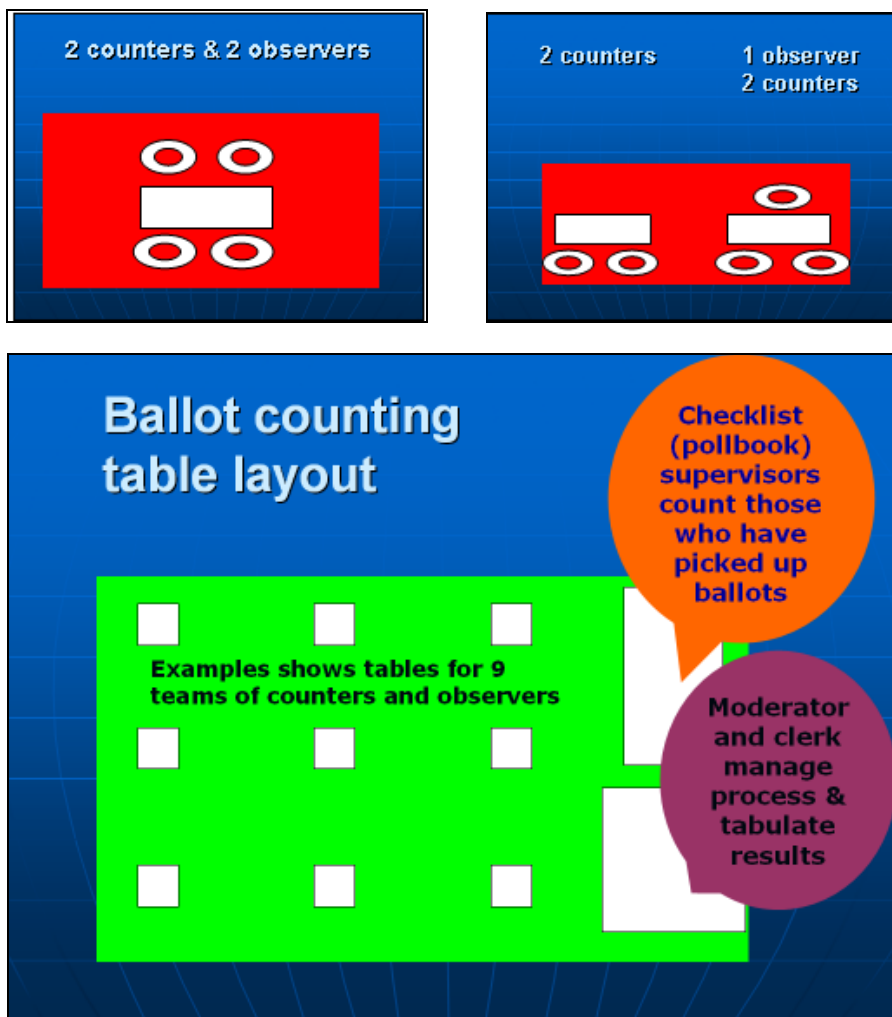- Rearrange the polling place for counting

Figure 18: Room layouts for counting

- Have the checklist (pollbook) supervisors count the number of voters who are checked off as having voted.

Figure 19: Reconciling checklist and counting ballots, Wilton, NH, November 2004

- Identify those who will be counting.
- Identify those counters who have not yet taken the oath of office.

OATH OF OFFICE

Swear in non-election officials as election officials

"I, (state your complete name), do solemnly swear (affirm), that I will bear faith and true allegiance to the United States of America and the State of New Hampshire, and will support the constitution thereof. So help me God. This I do under the pains and penalties of perjury.

Alternate language for those scrupulous of swearing, or mentioning God in this matter, is set forth in italics.

New Hampshire Constitution, Part 2, Article 84; RSA 42:1; RSA 21:24; RSA 21:25. All town officers must take the oath of office. RSA 669:9.

Figure 20: Lyndeborough Moderator Walter Holland administers the oath of office, November 2004

TRAINING

- Read the instructions for counting to all the election officials who will be counting.
- Provide clear directions regarding method to achieve consistency.

Figure 21: NH Deputy Secretary of State Dave Scanlon explains method to counters and observers, State recount, Concord, November 2004

- The moderator (senior local election official) has control and should exercise it.

- If people insist on using another counting method, consider asking them to act as an observer.
  Observing the counters count is a key role and helps achieve accuracy.
- Observers should be advised of the process that will be used in the count. They should be advised that they are not allowed to touch the ballots, but ballots can be turned in such a way so they can easily see them.
- Observers should be told that they have the right to ask counters to slow down, or speed up, or to question any count if they want. They should NOT be allowed to ask counters to back up to ballots they have already seen, counted, and recorded. Backing up will cause confusion in the recordkeeping. So the rhythm of the count should be kept so that observers are comfortable enough to call out a question without having to back up.
- Oath of office and training take 20 minutes.

STEPS TO IMPLEMENT SORT AND STACK METHOD

Distributing ballots to teams

1. Open the ballot box in view of the public.

Figure 22: Opening locked ballot box in open meeting, Lyndeborough, November 2004

2. Place an established quantity of ballots on the table to be used by each counting team.

Figure 23: Distributing ballots, Danville, November 2006

3. Both members count the ballots in groups of 50. *This is important in case it becomes necessary to redo a particular part of the process because the results do not equal the number of ballots, then counters only need to recount 50.*

4. Counting by stack facilitates continuous self-auditing and ongoing reconciliation of the count. *Counters always know the number of ballots they are working with, and can easily retrace their steps if they encounter a discrepancy.*

Figure 24: Ballots removed from ballot box and distributed, Lyndeborough, November 2004

Start counting ballots

5. Team members should look at each ballot to ensure it is sorted into the correct pile. A 2-person team should swap sorted piles for the counting. *This ensures a double check with a new set of eyes of the sorted piles during the counting.*

Figure 25: Sorting ballots, State House, Concord, November 2004

6. Once each table has the ballots assigned to it sorted into the six piles, start the counting process with the pile of ballots for the first candidate on the ballot. *Some teams tape a piece of paper with the candidate's name on the table to facilitate sorting.*
7. All other ballots should be set aside, but remain in public view on that table.
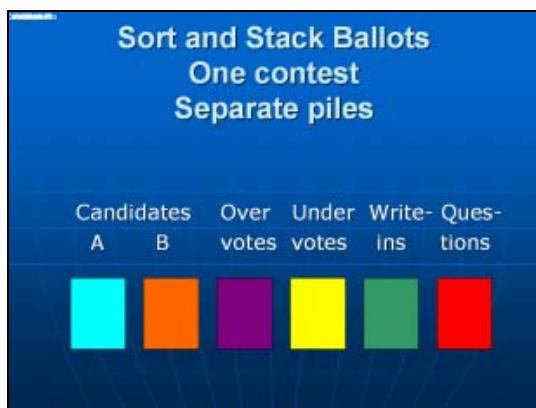
Figure 26: Sort ballots into piles

COUNTING BALLOTS

8. The team should count the ballots in the first candidate's pile into groups of ten.
9. Stack each group of ten ballots and the remainder at right angles to each other on the same pile. *This allows an easy count by "tens" for the entire stack.*
10. Resolve any questions by calling the moderator to make determination of voter intent.

Figure 27: Resolving question of voter intent, Lyndeborough, NH, November 2004

11. Both counters count the piles of ten, plus remainders, agree on the number and enter it in the tally sheet.

Tally Sheet – single contest

	Candidate A	Candidate B	Candidate C	Under-vote	Over-vote	Write-ins	TOTAL
1st group of 50 ballots	19						

Figure 28: Tally sheet: Candidate A

12. Counting in stacks of ten facilitates ongoing reconciliation of votes and ballots counted during the count. *Any discrepancies discovered along the way are resolved at the level of ten ballots, rather than a larger number, which would take some time to backtrack for resolution.*

Figure 29: Sorted ballots stacked in piles of tens

Next candidate, same contest

13. Then begin counting the next candidate in the same contest, repeating the process described above (**Steps 8 – 12**).
14. When all the piles have been counted and checked, that counting team is done with that set of ballots for that candidate in that contest.
15. Counters agree on the number to enter on the tally sheet.

Tally Sheet – single contest

	Candidate A	Candidate B	Candidate C	Under-vote	Over-vote	Write-ins	TOTAL
1st group of 50 ballots	19	17	9				

Figure 30: Tally sheet: Candidate A, B, C

16. If there is another candidate in that contest, counters count the pile for that candidate and agree on the number to enter on the tally sheet.

Same contest, counting the piles of undervotes, overvotes, and write-ins

17. Counters repeat the process (**Steps 8 – 12**) for three additional counts, counting separately the piles for undervotes and overvotes and agree on the numbers to enter on the tally sheet.

Figure 31: Tally sheet: Candidate A, B, C, Undervotes, Overvotes, and Write-in votes

18. The team should add the votes for each candidate (including write-ins) and the number of undervotes (skipped/abstentions) and overvotes (defective) in that contest.
19. Enter the total in the far right column of each row. **It should equal 50.**
20. When the count for the stack of 50 ballots is complete, contain the stack with an elastic band to identify it as counted. *It's a good practice to use a specified color elastic or even sticky notes to keep the counted stacks easily identifiable.*

Figure 32: Tally sheet: Single contest completed for first 50 ballots

Next contest

21. Begin the sorting and counting process for the first candidate in the next contest (**Steps 3 - 16**).
22. When all piles for that contest have been counted, checked and entered on the tally sheet, the counting team is done with that set of ballots for that contest. (**Steps 17 - 20**).
23. The team should add the votes for each candidate (including write-ins) and the number of undervotes (skipped/abstentions), overvotes (defective), and write-ins in that contest. That number should equal 50 (**Steps 17 - 19**).

Tallying

24. Tally sheets should be turned in to the moderator - after the numbers equal 50 on the far right, and the aggregate of votes = 200 on the bottom right.
25. Tally sheets should be signed by the counters before being turned in. *Often counters sign the tally sheets before counting to ensure they don't forget this important step.*
26. The Moderator should designate someone who routinely works with numbers to tally and check the team tally sheets. *Find people in your community who work in professions such as accounting to help you out on Election Night.*

Tally Sheet – single contest

	Candidate A	Candidate B	Candidate C	Under-vote	Over-vote	Write-ins	TOTAL
1st group of 50 ballots	19	17	9	4	1	0	50
2nd group of 50 ballots	17	22	8	3	0	0	50
3rd group of 50 ballots	16	18	11	3	1	1	50
4th group of 50 ballots	18	20	9	2	0	1	50
TOTALS	70	77	37	12	2	2	200

Figure 33: Tally sheet: Completed single contest count of 200 ballots

Moderator (local election manager) Review

27. The moderator (manager) should check the final tallies before announcing the results.
28. The count should be done of the total number of persons checked off as having voted on the checklist, and the aggregate tallies for each contest (office or question) should be verified against that count. *See **Election Night Reconciliation** below.*
29. The total votes for all candidates (including write-ins) in a single contest, plus the under-votes (skipped/abstentions) in that contest, plus the overvotes (defective) in that contest, should equal the total number of ballots used.

Dealing with Discrepancies

30. The moderator should be looking for any significant discrepancies between the totals. It may be difficult to get a perfect count from the checklist (pollbook).
31. It is not essential that the total count for each office or question exactly match the total of those checked off on the checklist (pollbook).
32. Provided the write-ins, undervotes (skipped/abstentions) and overvotes (defective) were tallied, the totals from one contest to the next *for the same set of ballots* should be the same (50 per batch).
33. Tally sheets from each team should be carefully checked as each contest is counted. *This helps you to keep reconciliation current during the night.*
34. Any mismatch of **votes per contest** with **number of ballots per batch** should be ad-dressed immediately.
35. With ongoing reconciliation as described here, when the last tally sheet is handed in for the last race, reconciliation should be largely complete. Little tally work remains.
36. If any discrepancies are found, the moderator should investigate and attempt to resolve the discrepancy before declaring the results.

Advantages of using tally sheets to track undervotes and overvotes

- Tally sheets permit ongoing reconciliation (number checking) as the count progresses. *This allows you to handle large numbers of ballots efficiently and with little confusion.*
- Surprises at the end are less likely.

Election Night Reconciliation*
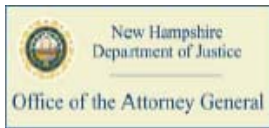
The most effective way to ensure the legitimacy of any election is to demonstrate the validity of election night results. Election night reconciliation—balancing the books, so to speak—is an important part of this process.

When a neighborhood convenience store locks up at night, the owner reviews inventory against sales made, and sales made against the money in the register. The store owner wants to be sure that what appears to have happened during the day is factually verified. If the numbers show that ten dollars worth of sales have occurred but twenty dollars of inventory is missing, that store owner knows there is a problem, and steps can be taken immediately to identify the source and rectify the situation.

Similarly, on election night, election officials and the citizens they represent want to know that the numbers all add up properly in the polling place. Election night reconciliation verifies the integrity of all of the important activities that add up to the final election results: the number of ballots delivered to the polling place, the number of ballots cast, the number of voters checked in, the number of voters checked out, the number of votes cast in any given race, and the number of races or issues being voted on.

ELECTION NIGHT BALLOT COUNT RECONCILIATION

Moderators are obligated to ensure that votes are counted accurately. **(RSA 659:60**.)

Figure 34: Reconciliation of number of ballots, Danville, NH November 2006

Moderators are strongly encouraged to adopt an election night reconciliation procedure that checks the apparent results of the ballot counting against other known election statistics to ensure that the results are accurate.

It is inherent in the nature of an election night count, particularly at polling places that hand count ballots, that even the most careful election officials can make mistakes. Most of the officials con-

ducting the counting will have been working for 12 or more hours before the counting process starts. Often the counting is done under the pressure of the candidates, the public and the press watching and anxiously waiting for the results. Therefore, taking the steps described below to ensure that the count is accurate is necessary.

Each election, a small number of polling places report results which are conspicuously inaccurate. The results report votes for the candidates in a given race that when added together total more than the reported number of ballots used, or more than the total number of voters reported as voting. In most cases, an inquiry by the Secretary of State or a recount discloses a counting or tabulation error. Either mistakes are made when tallying up the counts done by individual teams doing hand counts or errors are made in the manner in which ballots which were machine counted but contain write-in votes are counted.

When election night results are invalid on their face, this diminishes the public's trust in our election system. It often results in a call for a recount. Finding and correcting easily identifiable errors on election night is less work and less expensive than a recount.

A great deal of effort is taken to afford every qualified voter the opportunity to vote quickly and easily. That effort is ineffective unless every vote is accurately counted. Voters deserve the extra effort that is required to conduct a reconciliation of election night results with other election statistics.

BALLOT INVENTORY

The inventory of ballots is the starting point for the election night reconciliation of ballot counts. The ballot inventory establishes a baseline of how many ballots were used at the election. The moderator and clerk are required to keep track of the ballots made available for use at the election and those actually used. The Return of Votes that must be filed with the Secretary of State requires a report of the number of ballots used.

The Ballot inventory should start with determining the number of ballots received from the Secretary of State ("SOS"). During the counting process, determine the number of ballots produced by the Accessible Voting System ("AVS") the telephone – fax voting system that must be available for use by voters with disabilities.

The number of absentee ballots must be determined. This can be done during the hand count by segregating the ballots or this can be kept track of during the processing of absentee ballots. At elections where federal office only ballots are used, these will always be absentee ballots; the number of these ballots should be kept track of separately. When reconciling the votes cast for federal offices, these federal office only ballots should be included in the calculation of the total number of ballots used at the election. When reconciling the votes cast for state and county offices the number of federal office only absentee ballots must be subtracted from the total number of ballots used.

BALLOTS USED

Determine the total number of ballots used at an election as follows:

Election Day Ballots received from SOS =   _____

+ Ballots from accessible voting system   _____
+ State Absentee Ballots Cast   _____
+ Federal Office only
        Absentee Ballots Cast   _____
+ Absentee Ballots/Photocopy ballots
used for election day ballots   _____
- Spoiled Ballots   _____
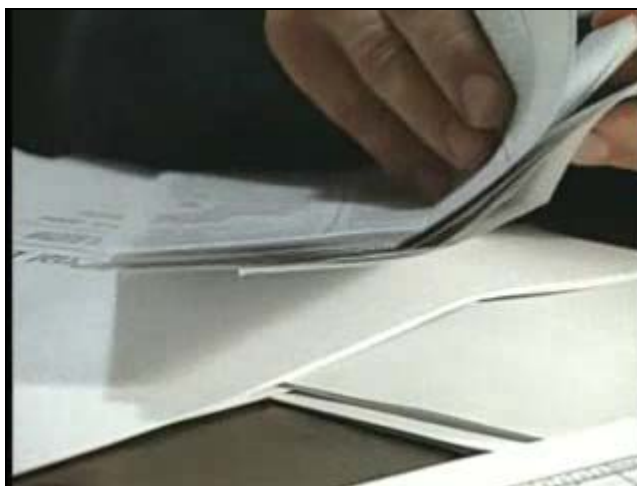- Election Day Ballots not used   _____
= Total Ballots Cast at the Election   _____

Figure 35: Counting stacks of ballots, Lyndeborough, NH, November 2004

COUNTING NUMBER OF VOTERS VOTING

The Return of Votes form requires that the number of voters checked off on the checklist as having voted must be counted and reported.

HAND COUNT POLLING PLACES. In a hand count town the check-in checklist should be counted and compared to the check-out checklist to establish the number of voters who voted.

MACHINE COUNT POLLING PLACES. In a machine count town the number of voters checked off on the check-in checklist should be compared to the results tape from the ballot counting machine. The total ballots counted reported on the end of the election results tape must be added to the number of ballots that had to be hand counted. Typically a small number of ballots are rejected as not readable by the Diebold optical scanning machine. These should be put in the side pocket during polling hours and hand counted after the polls closed. These ballots, which are entirely hand counted, are not included by the machine in its report stating the total number of ballots counted. Other ballots which contain write-in votes or which were read by the Diebold machine as entirely blank will be found in the write-in bin beneath the machine. These ballots are included in the total ballots counted reported by the machine. Do not add them in twice, but ensure the write in votes have been recorded.

The total from the tape plus the number of completely hand-counted ballots is a statistic that serves the same function in a machine count town that the check-out checklist serves in a hand

count town. This total of ballots should be compared to the number of voters checked off as having voted on the check-in list to determine the total number of voters who voted.

TOTAL VOTES COUNTED

The next step in reconciliation is to determine the total votes counted for each contested office or question. To effectively reconcile the election night results it is necessary to count not only votes for candidates in a race but also the number of voters who skip the race, that is abstain (submit a ballot with no candidate marked for that race). A ballot in which the voter overvoted, that is marked two or more candidates for a race where the instruction is to vote for no more than one, should for this purpose be treated as a skipped or abstention. The same applies in a multi-seat office where the voter votes for more than the permissible number of candidates. Because the voter may only vote for the permitted number and it is impossible to determine which candidates the voter preferred most, the ballot is treated as if the voter did not vote for anyone for that office.

RACES OVERVOTED AND UNDERVOTED (BLANK, SKIPPED, AND ABSTENTIONS) In a hand count polling place the counting teams should be instructed to record the number of ballots where the voter skipped or abstained from voting in the race and the number where the voter overvoted. These numbers must be reported along with the total number of votes for each candidate and write-in.

The ballot counting machine automatically records as a "blank" each ballot where the voter skipped the race or abstained or where the voter overvoted. It is necessary to count the abstentions and overvotes only on the ballots that are entirely hand counted. If entirely blank ballots are found in the write-in bin which were improperly marked and can be hand counted, it will be necessary to subtract that ballot from the total blanks reported on the machine tape for every race where a vote is counted for a candidate.

VOTES CAST FOR AN OFFICE

To determine the total votes cast for an office:

For each office (vote for no more than one):
All votes for first candidate	_____
+ All votes for second candidate	_____
+ All voters for each additional candidate	_____
+ All write in votes	_____
+ All blank/skipped/abstention/ overvote ballots	_____
= Total votes counted for the office	_____

Reconciliation. The election night results are reconciled if each of these statistics are equal for each contested race or question.

Ballots used =	_____
Voters Voting =	_____
Total Votes Counted for the Office/Question	_____

Small differences in the number of ballots used, number of voters voting and the total number of votes counted for an office or question sometimes occur even when counts are accurate due to human error in marking the checklist. Under no circumstances should the total votes counted for an office or question exceed the total number of ballots used or the total number of voters voting. Every effort should be made to resolve any discrepancies of this character. Errors in the other direction, where there are fewer total votes counted than ballots used or voters voting are problematic, but do not create conspicuously invalid results.

If you are certain there is no counting error, declare the final results even if a small difference exits. Occasional human error in checking the checklist as voters check in or in counting large numbers of blank ballots when determining the number of ballots used are unavoidable. Make the existence of that difference part of the record of the results. The difference usually will not be an issue, unless the margin of victory is less than the difference. In that case, a candidate will often request a recount.

PREDICTABLE UNDERVOTE

A second approach to reconciling election night results is to compare the total votes counted for each candidate and write in the total number of voters voting/total number of ballots used and access whether the undervote makes sense. At every election a certain number of voters will abstain in certain races, i.e. they will not vote for any candidate. Alternately, they will purposefully or by error vote for too many candidates, an overvote, thereby casting a ballot with the same effect as an abstention.

The rate of such undervoting is reasonably stable for the races at the top of the ballot. At elections where voters are voting for President of the United States, an undervote of ½ of one percent (.005) is common. Therefore, when reconciling the apparent results at an election where President is being voted for, if your results suggest that more than 3% (.03) of the voters did not vote for President, this is a warning sign. This result is possible, but should prompt the moderator to recheck the results before announcing them.

At an election where the Governor is the top candidate on the ballot, the undervoting rate is less constant, but generally should be less than 5% (.05). The same is true for candidates for United States Senate. If the apparent election night results indicate that more than 5% of the voters did not vote for Governor or United States Senator, the moderator should re-check the numbers before announcing the results.

The undervote rate for Representative to Congress can average around 4 – 5%. Therefore, results indicating that more than 7% of the voters did not vote in that race should prompt a review of the numbers. The undervote rate for offices below these on the ballot is too unpredictable to be helpful in reconciliation. However, it is sometimes the case that if an error is found regarding a top-of-the-ballot race, for example that the results from a hand count team were omitted from the tally, that error will have affected all the races and questions on the ballot. Checking the undervote for the top of the ballot races is another effective way to identify problems with the tallying.

In New Hampshire Election 2004:
- 2.43% of the voters did not vote for Governor,
- 3.89% did not vote for United States Senator,
- 4.7% did not vote for Representative to Congress

An unusually high number of blanks or undervotes may be the result of atypical voting patterns, however, it may also result from adding or transposition errors, from an unusual number of improperly marked ballots, or an error in calculating the total ballots cast/total voters voting number.

SECURE ENOUGH ASSISTANCE TO KEEP THE PROCESS MANAGEABLE

We strongly endorse the practice of some Moderators who have chosen to recruit a volunteer Math teacher, Bookkeeper, CPA, Accountant, or someone who is both skilled in working with numbers and who works with numbers daily to serve the Moderators as an assistant for the purpose of verifying counts before the final results are determined.

WHY RECONCILE ON ELECTION NIGHT

- It is the law.
- Voters deserve accurate ballot counts

- Voter confidence in elections is eroded when recounts disclose election night errors.– Fewer voters participate
- Election Officials are accused of partisan malfeasance
- It is less work than a recount.

Securing the Ballots*

Ballot security and chain of custody is an important component of trusted elections. The following instructions for securing the ballots at conclusion of the count on election night are taken from the New Hampshire Department of State's Election Procedure Manual. These instructions reflect New Hampshire law regarding ballot security.

> After the ballots have been counted and a declaration and record of the result has been made, the moderator in the presence of the selectmen shall put the cast, canceled and unused ballots in suitable containers.

> Each container must be securely sealed and signed by the moderator and selectmen. Do not put marked checklists, tally sheets, or any other documents that may be needed later in with the ballots. The containers should be sealed with filament tape, as provided for each election by the Secretary of State and upon which is printed the following:

> > *Enclosed are the ballots from the state election in the town of _____ (or in ward ___ in the city of _____) held on _____, 20__ required by law to be preserved.*

> Local officials should make certain that they have suitable containers available for preserving ballots after any local election. RSA 659:95; RSA 659:97.

> The town officers designated to deliver the ballots by the clerk should deliver the cast and counted ballots in their sealed container to the town or city clerk. The clerk shall subscribe upon the label the hour when he or she received the ballots and sign his or her name in the place provided. RSA 659:98.

> The clerk shall preserve these ballots for 60 days after a local election.

> The ballots used for federal races must be preserved for twenty-two months.

> If a recount is requested for a state election, the ballots will be collected by the Secretary of State. If a recount is conducted for a local election, the ballots must be retained for at least 60 days from the date of the recount unless some action regarding those ballots is pending, in which case they must be preserved 44 until the courts have made a final ruling and either the appeal period has ended or the appeal is final. RSA 659:98-100; RSA 669:33.

Read and Mark Method for Hand Counting*

* From the NH Department of State: Election Procedure Manual
http://www.sos.nh.gov/FINAL%20EPM%208-30-2006.pdf

The steps for conducting a hand-count election using the Read and Mark method are outlined here, as described in the New Hampshire Department of State Election Procedure Manual.

Step #1 – Close the Polls.

Step #2 – Verify that all absentee ballots have been processed.

Step #3 – Rearrange the polling place for counting. Counting tables must be at least 4 feet from the rail. All counting, however, must occur where it is visible to members of the public located outside the rail.

Step #3a – (Optional whether done election night or later) Have the supervisors count the number of registered voters (including those who registered on election day) who are checked off as having voted on the checklist.

Step #4 – Identify all those who will be counting.

Step #5 – Identify those who will be counting who are not election officials and who have not taken an oath of office.

Step # 6 – Swear in these non-election officials as election officials (inspectors of election pro tempore). RSA 658:7 gives the moderator authority to appoint such election officials as he or she deems necessary. As election officials the volunteer ballot counters are swearing or affirming that they will perform their duties lawfully and they become subject to criminal prosecution for official misconduct pursuant to RSA 666:3.

Step # 7 – Read the instructions for counting to all the election officials who will be counting.

Step # 8 - Open the ballot box(es) in view of the public. Place similar quantities of ballots on the table to be used by each counting team.

Step #- 9 - Have the counting teams count the ballots into piles of a known size (10, 25, 50 or 100 ballots).

Step #10 – Wrap each pile with a rubber band, clip it with a large binder clip, or stack them crosswise.

Step # 11 - Prepare a tally sheet. (Tally sheets should be prepared ahead of time.) The sheet should be organized in the same order as the ballot, with sections for each office and question and the name of each candidate listed in the same order as they are listed on the ballot. There should be a space following each name/question for one of the counters to put a hash mark for each vote for that candidate/question. See sample election tally sheet at page 150.

Step #12 – Overview of the counting process:

> ➢ Each counting team will usually count all races and questions in one pile of 50 ballots at a time.

- A mark must be made on the tally sheet for each ballot for each office and question. Make a vertical line for the first four votes for any given candidate and then cross a horizontal line over the vertical lines for the fifth vote for that candidate, e.g., //// . If the voter wrote in a candidate, that name should be written in on the tally sheet.
- If the voter skipped a race or question, that is they did not vote for any candidate or did not mark either yes or no, put a hash mark in the "Skipped" line for that office on the tally sheet. If the voter overvoted, that is they voted for more candidates than they are permitted, put a hash mark in the "defective" line for that office on the tally sheet.
- The objective will be that when the team is done counting the 50 ballot pile they will be able to total the hash marks for each candidate and question.
- The team will then total the votes for all candidates for each office and all the "yes," "no," skipped, and defective for each question. The total votes for a single seat office must equal 50 votes for that office (including the votes for each candidate, write-in, "skipped" and "defective").
- For offices where the voter may vote to fill two positions (for example where the race is for state Representative where voters get to choose two) the total votes counted should total up to 100. For offices where the voter may vote to fill three positions the total votes counted should total 150, and so on.
- If the total does not equal 50 the team should check their hash marks for that office/question and correct any errors. The team is done counting a 50 ballot pile at the point when the office/question totals equal 50.
- As the teams count if there is any question regarding how a ballot should be counted, call the moderator to your table and seek his or her instructions on how the ballot should be counted.
- If a ballot is marked for any office or question in a way that does not leave the intention of the voter clear or if after getting basic instructions on how different marks are counted from the moderator there is disagreement over how to count a particular ballot for a particular office a vote should be taken of the election officers present and counting votes. RSA 659:64.
- The moderator should call together the election officers, discuss the ballot in question and take a vote. The majority rules, and if there if no alternative receives a majority of the votes, the ballot shall be treated as defective for that office or question.
- If there are many questioned ballots that need to be voted on, the moderator may choose to hold these ballots aside and vote on several at one time. If this is done, however, it is the best practice that all questionable ballots be voted on before the team totals are tallied up. This ensures that the election officials do not know whether the vote on a particular ballot will affect the outcome of the election. This process reinforces the neutrality and enhances the legitimacy of the counting process.

Step # 13 - -Starting with the first office on the ballot one counting team member (the reader) should read off the name of the candidate (the word yes or no for questions) who received the te on the ballot being counted. The second member of the ballot counting team (the marker) should make a hash mark beside that name on the ballot. If the moderator can staff each team with three counters, the third counting team member (the observer) should look at the ballot and ensure that the correct name was read off and should watch the hash mark being made to ensure it is made in the correct row.

Step # 14- The reader then reads off the name of the candidate in the second office who received the vote on the ballot being counted, the marker should then make a hash mark on the tally sheet in the appropriate row, which is checked by the observer. Continue this process until the entire ballot has been marked on the tally sheet. Then proceed to the next ballot. If a voter has not voted for any candidate for a particular office the reader should state "skipped" and the marker should mark the "skipped" row for that office on the tally sheet.

If the voter voted for two or more candidates for an office where the ballot instructs to vote for one the reader should read off "defective" and the marker should mark the "defective" row on the tally

sheet. If the instructions are that a voter should vote for two and the voter voted for three or more follow these same instructions.

Step # 15 – When all 50 ballots have been marked on the tally sheet the hash marks should first be totaled for each candidate including the "skipped" and "defective" rows and then for each office. The total votes for each office/question should equal 50. If they do not, go back through the pile and correct any counting/marking errors.

Step # 16 - Bind the pile of ballots with the tally sheet on top with a rubber band or clip and notify the moderator that he or she can pick up that pile.

Step # 17 – Start the process over with the next pile of 50 ballots.

Step # 18. – The moderator should designate some election officer who routinely works with numbers, often the clerk, to tally the piles. Ideally a second election officer will assist and act as observer for this tallying process. Usually these individuals do not work on a counting team. As each team completes a pile of 50 ballots and has confirmed the accuracy of the count, the moderator can carry the pile to the team who will be tallying the piles.

Step # 19. - When the last pile(s) have been counted and turned into the team that is tallying piles the moderator should ensure that these officials have peace and quiet to finish the tallies. The tallying must occur in public, however, when all the election officers and counters gather at the tallying table and watch the final calculations it puts pressure on those making the final calculations and makes errors more likely. The tallying team should tally the results for all elections. The use of a printing calculator allows the team or the moderator to check the printed tape as a means of ensuring the accuracy of the tally. The final tallies should be written down and presented to the moderator.

Step # 20 – The moderator should stop before announcing the results and check the final tallies. If a count was done of the total number of persons checked off as having voted on the checklist the tallies for each office and question should be verified against that count. In towns or wards with 1000s of ballots and 1000s of voters checked off on the checklist the moderator should be looking for any significant discrepancies between the totals. It is difficult to get a perfect count from the checklist, therefore, it is not essential that the total count for each office or question exactly match the vote totals. Provided the write-in, skipped and defective votes were tallied, however, the totals from one office to the next should be the same. If any discrepancies are found the moderator should investigate and attempt to resolve the discrepancy before declaring the results.

Resources

Black Box Report, SECURITY ALERT: July 4, 2005: Critical Security Issues with Diebold Optical Scan Design. July 2005.
http://www.blackboxvoting.org/BBVreport.pdf

California Top to Bottom Review (information and reports)
http://www.sos.ca.gov/elections/elections_vsr.htm

Collins, Michael , New Zogby Poll: It's Nearly Unanimous, Scoop News, August 21, 2006
http://www.scoop.co.nz/stories/HL0608/S00220.htm

Available from Democracy for New Hampshire:
    "We're Counting the Votes" booklet
    http://www.democracyfornewhampshire.com/node/view/2606

    "We're Counting the Votes" videos
    http://www.democracyfornewhampshire.com/node/view/2648

    Election Integrity Resources Page
    http://www.democracyfornewhampshire.com/node/view/2375

Election Assistance Commission's 2004 Election Day Survey
http://eac.gov/election_survey_2004/statedata/StateLevelSummary.htm

Election Data Services 2006 Voting Equipment Report
http://www.edssurvey.com/images/File/ve2006_nrpt.pdf

ESI Study of DRE VVPAT for Cuyahoga County
http://www.votingindustry.com/TabulationVendors/1stTier/Diebold/esi_cuyahoga_final.pdf

Government Accountability Office (GAO). Federal Efforts to Improve Security and Reliability of Electronic Voting Systems Are Under Way, but Key Activities Need to Be Completed. September 2005.
http://www.gao.gov/new.items/d05956.pdf

Humboldt County Voter Confidence Committee Spreadsheet Tool for Calculating Hand Count Management Needs
http://www.guvwurld.org//Voting/Hand%20Counting%20Paper%20Ballots%20Calculator%20For%20Manpower%20and%20Cost.xls

Letter Report on Electronic Voting, Committee on a Framework for Understanding Electronic Voting, National Research Council.
http://www7.nationalacademies.org/cstb/letter_evoting.html

Machinery of Democracy: Protecting Elections in an Electronic World. Brennan Center for Justice at NYU School of Law. June 2006.
http://www.brennancenter.org/programs/downloads/SecurityFull7-3Reduced.pdf

New Hampshire State Constitution. Bill of Rights, Article 11.
http://www.state.nh.us/constitution/billofrights.html

NH Department of Justice: Counting and Reconciliation on Election Night
http://www.democracyfornewhampshire.com/files/democracyfest_reconciliation_handcounting.pdf

Available from the NH Department of State:
    Election Procedure Manual
    http://www.sos.nh.gov/FINAL%20EPM%208-30-2006.pdf

    NH Election Laws
    http://www.sos.nh.gov/statutes.htm

    Hand Count Methods and Costs
    http://www.democracyfornewhampshire.com/files/Hand_count_training_D-fest_July_5_2007.pdf

    Improving Disability Access for Voters
    http://www.democracyfornewhampshire.com/files/Dem4NH_DisabilityVoting.pdf

New Hampshire Local Government Center Information on Town Meeting Warrant Articles
http://www.nhlgc.org/LGCWebSite/InfoForOfficials/townandcityarticles.asp?TCArticleID=48

Overview of Red Team Reports, Matt Bishop, University of California, Davis
http://www.sos.ca.gov/elections/voting_systems/ttbr/red_overview.pdf

Putting the Party Back into Politics: Results of a Pilot Experiment Designed to Increase Voter Turnout through Music, Food, and Entertainment. May 2005.
http://www.yale.edu/isps/publications/hooksett.pdf

Requiring Software Independence in VVSG 2007: STS Recommendations for the TGDC, William Burr, John Kelsey, Rene Peralta, John Wack, National Institute of Standards and Technology, November 2006
http://vote.nist.gov/DraftWhitePaperOnSIinVVSG2007-20061120.pdf

Security Analysis of the Diebold AccuBasic Interpreter. Voting Systems Technology Assessment Advisory Board for the State of California. February 2006.
http://www.ss.ca.gov/elections/voting_systems/security_analysis_of_the_diebold_accubasic_interpreter.pdf.

Zogby Press Release August 23, 2006: "Americans Concerned About Election Transparency and Security".
http://www.zogby.com/news/ReadNews.dbm?ID=1163

Table of Figures