



# Election Day Command Centers: A National Snapshot

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## Introduction

Things can go wrong on Election Day: voting machines malfunction, polling places lose power or flood, voting equipment is inadequate to handle the volume of voters, or a state's voter registration database becomes inaccessible, rendering it difficult to check-in voters, among many other potential issues. No matter the cause, each potential issue risks tilting a polling place or an entire jurisdiction into crisis that results in longer lines to vote. In order to effectively address problems on Election Day, administrators must be able to receive communications from the field about issues affecting voting, assign remedies, and track their resolution.

On Election Day 2012, in a handful of jurisdictions, things went very wrong. During his victory speech in 2012, President Obama noted the millions of American voters who were forced to wait to vote for extended periods of time. "We have to fix that," he said. Those five words led to the creation, in 2013, of the Presidential Commission on Election Administration (PCEA).

The PCEA's mission was to identify best practices in election administration and to make recommendations to improve the voting experience. Commission co-chairs Robert F. Bauer and Benjamin L. Ginsberg, formerly the general counsels for competing presidential campaigns, brought bipartisan leadership to the commission, which was also comprised of distinguished election administrators and representatives of successful customer service-oriented businesses.

In January 2014, after six months of public hearings and consultations with state and local election officials, academic experts, and organizations involved in various aspects of election administration, the PCEA presented its findings in a report to President Obama and Vice President Biden.

One of the main focuses of the report was reducing lines at polling places on Election Day. On this, the PCEA found that, as a general rule, no voter should have to wait more than half an hour to vote. The commission believed that this 30-minute standard was achievable if election administrators planned and allocated resources appropriately. It also recognized, however, that even with extensive preparation, there will be processes that break down during voting and lead to lines at polling places.

## Command Center:

**The databases, systems, and personnel available to a jurisdiction's election administrator that are used on Election Day to address issues at polling places that affect the voting experience.**

To reduce the impact of problems at the polling place during voting, jurisdictions must have systems in place for reporting issues to the proper officials and tracking those reports in order to ensure that they are addressed in a timely manner. Without proper planning and systems in place, the risk increases for exceeding the commission's recommended standard that no voter should have to wait longer than 30 minutes to vote.

Election administrators have a variety of tools at their disposal to respond to problems on Election Day (or at any time during the voting period). They may have access to county or local government infrastructure, to local law enforcement, to field staff roving the jurisdiction to provide IT and other support, and to communications networks for coordinating between polling places, elections headquarters, and field staff. Taken together, these tools form an

Election Day Command Center, which is a centralized system for reporting, recording, and assigning responsibility for problems and tracking their resolution.

Election Day command centers must perform certain basic functions including communications and resource/personnel management. A command center should provide communication mechanisms for poll workers and other staff to report issues for resolution. If a voting machine breaks, for example, poll workers should be able to communicate that information to the election headquarters for mitigation before lines develop.

Once information is received from the field, a functional command center allows those responsible for decision making to communicate with the polling place and the proper internal elections office departments to find a workable solution. The command center infrastructure should provide some type of personnel and resource management mechanism that allows elections office staff to assign jobs to appropriate workers, such as field technicians, and to track the progress of issue resolution. Resolution tracking will ensure that issues are addressed and that election administrators are aware of how long it is taking to address them.

Command centers differ both in the breadth of their reach and their architecture. In some jurisdictions, administrators choose to purchase vendor-supplied, all-inclusive command center products. Over the last decade, manufacturers have expanded the non-voting system technology available for purchase. These offerings include electronic poll books (EPBs) and command center solutions. Jurisdictions using these vendor solutions often have access to dashboard functionalities that display the status of various elements of election administration in the field in real time.

In other jurisdictions, the election administrator uses available resources within local government to build an Election Day command center. The administrator could leverage existing local government systems such as 3-1-1 to manage incoming information from the field and to assign responsibility for mitigation to the appropriate staff.

Other administrators have the resources to build their own, in-house command centers situated and staffed exclusively by the elections team using hardware and software solutions that fit their budgets. In-house command centers can be built with commercial, off-the shelf (COTS) technology as well. A jurisdiction could purchase hardware, such as smartphones and tablets, as well as different types of mapping, personnel, and project management software that are not specifically designed for elections but adapt them to local needs.

Whichever approach a jurisdiction takes, a command center must provide the election administrator the capability to effectively respond to challenges on Election Day. This report does not endorse one approach over another. A jurisdiction of 1 million voters needs a much more sophisticated system than a jurisdiction with a few thousand voters. Financial resources are also a concern. Some jurisdictions will be able to afford systems with many features and capabilities. Other jurisdictions will need more cost-effective systems. It is clear, however, that all election administrators must devote time and resources to considering how to manage crises on Election Day.

For this report, the Bipartisan Policy Center conducted field studies and interviews in 2015 and 2016 with the following jurisdictions to formulate the included case studies: Kansas City, Missouri; Maricopa County, Arizona; Denver, Colorado; Minneapolis, Minnesota; Montgomery County, Maryland; Cook County, Illinois; the City of Chicago, Illinois; and Orange County, California. Though these jurisdictions have taken different approaches to their command centers, and some time has passed since the initial field research, a number of common lessons and best practices can be drawn from them that are still relevant today.

1. **Efficient and direct communications channels for reporting issues on Election Day is critical.** The easier jurisdictions can make it for poll workers and others to report issues, the more quickly they can be resolved. Some achieve this by having separate hotlines to report different types of issues. Others have allowed poll workers and field staff to directly report issues into the system via tablets or smartphones, which can be more efficient than a phone call.

2. **A centralized tracking and monitoring system makes it easier to identify trends that may develop on Election Day and allow staff to collaborate on resolving issues regardless of their physical location.** Successful command centers aggregate all reported issues in one place and provide ways to assign a level of urgency for the issue to be resolved and sorting of issues based on different characteristics.
3. **Staff initially receiving reports of problems, such as call center operators, can do more than simply record information.** They can be an essential part of resolving the problems. Command center systems can provide this staff with enough information to assist poll workers or other callers in resolving issues and prevent escalation to field staff. This sort of triaging conserves valuable field staff resources for more serious issues.
4. **The data and other information collected in a command center has value beyond resolving Election Day issues.** It can also be used after the election in conducting reviews or audits of how a jurisdiction's overall election system functioned. Removed from the hustle of Election Day, this data can provide election administrators insight into the strengths and weaknesses in their system.

The good news is that there are many resources available to help election administrators in their coordination of efforts. No matter what the budget, there are things that can be done to assist with staying on top of issues and managing difficulties that arise in an expeditious fashion.

Command centers benefit election administrators in responding to the challenges and breakdowns that inevitably occur on Election Day. A plan and system for tackling those issues is an essential component to improving the American voting experience by keeping wait times from growing to unacceptable lengths.

This report summarizes the different approaches taken across the country and is organized as follows for each jurisdiction:

- **Jurisdiction Overview:** background information on the jurisdiction.
- **Command Center System:** what type of platform/service does the jurisdiction use?
- **The System in Action:** basic functions of the system discussed.
  - **The Collection of Information**
  - **Compiling Data**
  - **Identification of Problems**
  - **Assigning Responsibility**
  - **Tracking Resolution**
  - **Follow-up**

Although some of this information was collected in the last Presidential Election cycle, it is still relevant today. Indeed, some could argue it is more important now than ever that election offices are able to maintain real-time logistical communication centers in order to respond to the new threats we face.<sup>1</sup>

# JURISDICTIONS

## Maricopa County, Arizona

### JURISDICTION OVERVIEW

In a general election, Maricopa County has traditionally operated precinct-based polling locations but has recently been transitioning to a vote-center structure. There are approximately 2,300,000 registered voters in the county.

### COMMAND CENTER SYSTEM

The system in Maricopa County was created entirely in-house. Using full-time staff, the county constructed a centralized reporting system that captures communications from the field on Election Day and integrates the data into various components of its election management system.

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## THE SYSTEM IN ACTION

An issue at a polling place on Election Day is reported by phone to elections headquarters by a poll worker, field rover, voter observer, etc. From there, the election administration problem journeys through Maricopa's command center until it is resolved.

**Collecting the information:** The issue is entered by staff into the command center database. Data include precinct numbers, precinct names, and/or polling place facility names. This first step creates a new record in the system. Each record is time stamped at every step in the process.

**Compiling data:** Databases linked to the command center infrastructure auto-populate with information on where the polling place is located, contact information for the lead poll worker, and the assigned field rover for that location.

**Identifying the problem:** Elections office staff select pre-determined categories (such as voter registration, early voting, voting system, language assistance, or lengthy lines), which can generate an email notice to the manager responsible for that department. A text entry field is used to describe the nature of the issue as well as a "Help" function that provides answers to common issues that arise in each of the given areas.

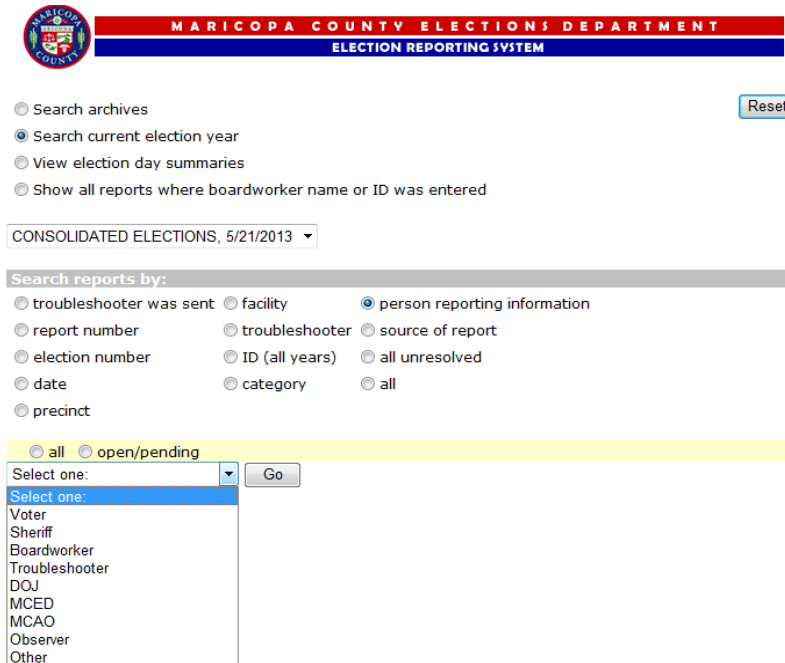
**Assigning responsibility:** Information coming in from polling places is immediately emailed to the appropriate manager upon data input. A hyperlink to the record can be shared with additional staff as needed. Once the manager opens the email, the status of the record changes to "pending" in the command center database. This status change is time stamped and becomes one way of tracking accountability of issues and the timeliness of their resolution. For issues that require a field rover visit, a hyperlink to the report appears on the screen of the radio dispatcher assigned to that field rover. The dispatcher notifies the field rover via two-way radio that the rover needs to call in for instructions. After the dispatcher describes the nature of the issue, the dispatcher notes in the issue record that a field rover has been dispatched.

**Tracking resolution:** If the issue is successfully resolved during the initial call for assistance or after the field rover's engagement, the report is closed. If additional action is necessary, the report remains pending until the field rover reports back that it has been resolved. Performance reports can be run on and after Election Day on all open or pending records representing issues at the polls. The reports can also be filtered by category of issue or by precinct. Additionally, the command center database can be used to generate "snapshot" reports showing the number of issues that were reported on an hourly basis, and how many issues were reported in each category. In both cases, the total number of issues reported is provided, but also the number of precincts where those issues were reported. This functionality allows command center staff to determine whether an issue is widespread or occurring only in a handful of precincts.

**Follow up:** All data generated through the command center is exported for later analysis. Maricopa County has decided to include metrics based on the command center database, such as the timely resolution of issues, into employee evaluations and performance management plans.

The data collected during Election Day is invaluable for planning for future elections. For example, after Election Day using command center data, election office personnel can evaluate performance issues at specific facilities and with specific poll workers. Staff can use this information to make informed decisions about whether to rehire a given poll worker or to locate a polling place at a given facility in future elections. In addition, staff can use database-generated reports to assess the relative effectiveness of the allocation and use of supplies in the field as well as the reported formation of lines at polling places on Election Day. These reports guide future election administration decisions.

The Maricopa County command center efficiently aids in the mitigation of issues on Election Day. The command center's architecture that generates emails to managers with responsibility for finding solutions and tracking their performance has improved responsiveness to problems at the polls.



The screenshot shows the Maricopa County Elections Department Election Reporting System interface. At the top is the Maricopa County logo and the title "MARICOPA COUNTY ELECTIONS DEPARTMENT ELECTION REPORTING SYSTEM". Below this are four radio buttons for search criteria: "Search archives", "Search current election year" (selected), "View election day summaries", and "Show all reports where boardworker name or ID was entered". A "Reset" button is to the right. Below the radio buttons is a dropdown menu showing "CONSOLIDATED ELECTIONS, 5/21/2013". Underneath is a "Search reports by:" section with multiple radio buttons: "troubleshooter was sent", "facility", "person reporting information" (selected), "report number", "troubleshooter", "source of report", "election number", "ID (all years)", "all unresolved", "date", "category", "all", and "precinct". Below this is a yellow bar with "all" and "open/pending" radio buttons. A "Select one:" dropdown menu is open, showing a list of roles: Voter, Sheriff, Boardworker, Troubleshooter, DOJ, MCED, MCAO, Observer, and Other. A "Go" button is to the right of the dropdown.

One area for potential improvement is at the point of data entry. Currently the command center is used as a mechanism to capture and categorize calls coming in from the polls. Poll workers, troubleshooters, voters, and other stakeholders did not have the ability to directly enter information into the system when the field interviews occurred. Adding that functionality could potentially improve effectiveness.

## Kansas City, Missouri

### JURISDICTION OVERVIEW

In a general election, Kansas City operates precinct-based polling locations run by 1,200 poll workers. There are approximately 226,000 registered voters in Kansas City.

### COMMAND CENTER SYSTEM

The Kansas City Board of Elections staff designed the jurisdiction's command center in-house using commercially available technology. The system utilizes software available from Google, as well as tablets and smartphones, to report and record issues that need to be addressed, to assign responsibility to the proper staff for addressing issues, and to track the progress of issue resolution.

The main components of Kansas City's command center are Google Forms and Google Coordinate, Hello Tracks, and Breadcrumbs.

Google Forms is a free service that allows users to create customized, fillable online documents. The data that is submitted then populate a corresponding spreadsheet to which only the creator has access. Google Forms can be accessed via web browser or through a Google app for mobile devices.

Google Coordinate is a web and mobile app that functions as a workforce management tool. It shows the location of workers on a map and allows users to assign jobs to the nearest worker available. A dispatcher can assign jobs on a computer, tablet, or smartphone to workers in the field who typically access the app on a mobile device. Their devices also communicate their current locations back to the dispatcher through the app.

Kansas City uses a combination of these technologies as the main architecture of its command center.

### THE SYSTEM IN ACTION

When an issue occurs on Election Day, it can be reported to the command center through several channels.

**Collecting the information:** Typically, a poll worker calls into the election board headquarters to report a problem at the polling place on Election Day. In November 2015, the elections board piloted a program where poll workers could directly input problems online without calling headquarters. The system also allows for input from voters through a separate portal.

**Compiling data:** Staff at election headquarters enter data about the issue into a “Service Call Form” created using Google Forms. The form must be used for all service calls and includes inputs for data about the polling place, the nature of the issue, poll worker contact information, and a timestamp of when the issue was reported. Much of this information is selected through standardized drop-down menus for consistency. Other elections board staff, such as division and field supervisors, can directly enter information into the Service Call Form as well.

**Identifying the problem:** The data in the form automatically populates a spreadsheet, which the command center dispatchers constantly monitor. The dispatcher determines whether the issue can be resolved over the phone or whether it needs to be assigned to a field rover.

**Assigning responsibility:** If a problem cannot be resolved over the phone, the command center dispatcher creates a “job” in Google Coordinate. The job includes polling place location, nature of the issue, and other pertinent information taken from the spreadsheet. The dispatcher uses the Google Coordinate map, which shows the location of all of their field technicians, to assign the job to the nearest available worker. Technicians are alerted of new assignments on a tablet or smart phone through the Google Coordinate app.

**Tracking resolution:** Technicians mark assignments as “accepted” before leaving for the location of the service call, as “checked-in” when arriving at a location, and as “completed” when service is complete. This data is communicated back to the dispatcher at the command center. The dispatcher updates the tracking spreadsheet with progress and timestamps as each of these status changes are made.

**Follow up:** In addition to managing issues as they occur on Election Day, the board of elections uses the command center database as a resource management tool. For example, the database creates a record for when the ballot inventory is checked out of the warehouse on Election Day and when it returns back from the field. For additional one-off analyses, election office staff use spreadsheets generated by the system.

Kansas City was able to build its command center at low cost. The Google Forms element of the command center is free. Google Coordinate, which is a part of Google Maps, costs approximately \$24 per month per user. The Kansas City Elections Board only pays for the months that they use it, that is, only during elections and not year-round.

This system also requires the use of tablets and smartphone devices. Each field technician must have a smartphone or tablet. During the November 2015 pilot, polling places also had access to a smartphone or tablet. Field technicians require access to mobile broadband, and polling places require an Internet connection. To operate the system, the command center can be controlled at headquarters from a computer with Internet access. In the case of the tablets, for those that need mobile broadband, Kansas City’s data plan provides 1 gigabyte for three months per tablet at a cost of \$25 per month per tablet. This allows the elections board to pay for data during a short period of time rather than for an entire year.

Recently, Kansas City migrated from Google Coordinates to Hello Tracks when the former became cost-prohibitive after a dramatic rise in fees. Although the new system works almost identically with their pre-existing structure, there are some disadvantages to the new program. Hello Tracks is only available for use on Android systems making it unusable on any of the Apple products already owned by the Board of Elections. Additionally, during piloting of the program in 2016, the system went down for approximately 45 minutes due to service updates unanticipated by staff. This experience highlights a crucial consideration for any jurisdiction utilizing commercial products: if possible, communicate with service providers and vendors to notify them of critical election dates and possibly coordinate system updates and service interruptions. After this experience, Kansas City put in place a second back-up system. Breadcrumbs, a similar tracking program, is operational on Apple’s iOS system in addition to Android, and will be downloaded on all tablets being used in the field. By utilizing two inexpensive programs Kansas City is able to have redundancy in their command center system and still come in under their previous budget.

## Denver, Colorado

### JURISDICTION OVERVIEW

There are approximately 410,000 active, registered voters in Denver.

In 2013, the Colorado General Assembly passed legislation requiring that all registered voters be mailed ballots twenty-two days prior to Election Day. Between the date ballots are mailed and Election Day, voters can appear in person at a Voter Service and Polling Center (VSPC), to register to vote, update their voter registration, request a replacement ballot, cast a ballot on an ADA accessible voting machine, or drop off a completed ballot. The transition to VSPCs allowed Denver to reduce the number of poll workers and locations necessary on Election Day. However, they still must monitor these locations in the event issues develop.



## COMMAND CENTER SYSTEM

The backbone of Denver's command center system is a vendor provided solution called WebEOC. WebEOC is an internet-based, incident management system that provides a single access point for the collection and dissemination of emergency or incident-related information. Election Day issues are entered into this central system and tracked until resolved. The city and county government already used the WebEOC system, and the elections division found that it was available to them at no additional cost. Other elections administrators may find that their local or county governments have similar emergency or incident management systems available for their use at little or no additional cost.

## THE SYSTEM IN ACTION

Although Denver sees less traffic at the polls on Election Day mostly due to the prevalence of vote-by-mail, issues can still arise, and their command center system is essential for managing these incidents. For each election, a unique event is created in WebEOC under which all reports associated with that election will be tracked.

**Collecting the information:** Incident information is entered into WebEOC through several channels. In 2009, Denver adopted the 3-1-1 system to take phone calls from the public to both collect information about voting problems and disseminate general information about the election. The implementation of this system has freed staff from answering general questions and allowed them to focus on other aspects of administering the election. Other election departments across the country, including the City of Minneapolis and the City of Chicago, also use 3-1-1 to direct calls from the general public.

Denver has four additional hotlines to collection information about problems on Election Day. One line takes calls from campaigns, candidates, and the media. A field representative line is devoted to procedural calls from field staff. An operations line addresses issues related to ballots, voting equipment, and related supplies. Lastly, the poll worker line is for the site supervisors at the VSPCs. Workers staffing the hotlines enter issue information into WebEOC. Supervisors at the VSPCs also have tablets from which they directly enter information about an issue. The tablets provide for two-way communication between the VSPC and election central.

**Compiling data:** All users are required to log in with their username and password. This provides the ability to track who created a record and who has modified it. All entries are also time and date-stamped so that a timeline of events can be observed. Certain information is prepopulated in the system for consistency and efficiency including VSPC location, address, and phone numbers.

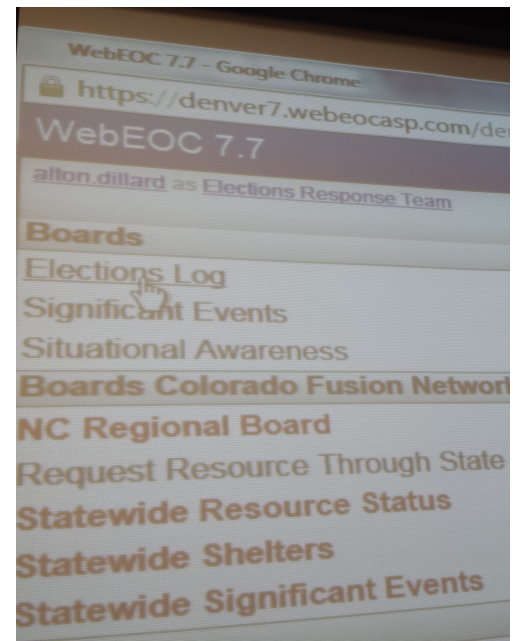
**Identifying the problem:** Each issue entry is categorized based on its nature. Staff can also indicate if this is an initial call or a repeat, and assign an appropriate priority level for the issue being captured. There are four priority level categories: normal, safety emergency, site open-needs attention, and unable to open site.

**Assigning responsibility:** Election staff are assigned to particular response teams depending on their area of expertise: machine technicians, personnel replacements, field representatives, and "runners." An issue is assigned in the system by the response team and the record goes on either an individual's or a team's worklist. These notifications can be sent via email.

Because of the two-way communication between elections headquarters and the field, this system allows for network-wide notifications to be sent should that be necessary. Additionally, because the system is used by other county departments, coordination of contingency and disaster planning is optimized.

**Tracking resolution:** Field staff can update the status of each record assigned to them as it changes and eventually close the ticket out. All records appear in a central log that can be monitored throughout the election. The log can be sorted by criteria including category of issue, location, priority, and status. As a result, it is easier to identify trends that may be developing at certain locations or times of day, to assess the number of outstanding issues to be resolved, and to respond to issues based on their priority level.

**Follow up:** An exhaustive post-election review is carried out with extensive analysis of the calls received, records generated, and resolution actions taken. This review compares call volumes, timing of calls, and issue types per VSPC for the election as well as a comparison with previous elections to track performance across time. Numeric oversight is complemented with word-cloud representations for a visual statement of record.



Denver's use of pre-existing county systems to service their voters, communicate with their field operations, and memorialize critical administrative facets of the election serves as a prototype many election officials can replicate in their own jurisdictions with little to no cost.

## Minneapolis, Minnesota

### JURISDICTION OVERVIEW

The City of Minneapolis, Minnesota has approximately 227,000 registered voters, voting in precinct-based polling locations run by approximately 1,500 pollworkers.

Voters in Minnesota tend to go to the polls in person on Election Day and Minneapolis voters are no exception with typically less than 10% voting absentee (either by mail or in person). Minnesota only recently began allowing "no excuse" absentee voting, however, and this change has increased the number of in-person voters voting prior to Election Day.

### COMMAND CENTER SYSTEM

The City of Minneapolis adopted 3-1-1, the non-emergency municipal services system to provide voters with automated information about elections and appropriately direct calls as necessary. This has significantly reduced the amount of staff time and resources necessary to respond to calls. Of the calls received, 70 percent to 80 percent are standard voter questions regarding matters such as proper polling location or voting hours. Twenty to 30 percent are not time-sensitive, but require some follow-up.

A small percentage are immediately escalated and sent directly to the Deputy City Clerk because of the nature of the issue. Other calls—for example those from poll workers and field rovers—are taken on a separate, dedicated line that allows for forwarding to the appropriate person at the elections department dependent upon the nature of the issue.

Minneapolis acquired an election administration system in 2015 that includes a call center module which functions as a command center to resolve issues at the polls on Election Day. This new, vendor-provided solution has the ability to track calls, categorize issues, and generate reports. Other non-command center functions include asset management and inventory, recruitment and hiring (including payroll and training), and additional communication functions.

### THE SYSTEM IN ACTION

With the new command center system, public calls will still be taken via the old 3-1-1 system and other calls—such as those from poll workers and field staff—will be handled through the new system.

**Collecting the information:** As issues occur on Election Day, poll workers report them via phone to the call center. The call center module allows workers to direct their call to a specific department (voting procedures, voting equipment issues, absentee ballot issues, supplies, judge scheduling, etc.) Call center staff create a record for each issue and enter relevant information into the system. Field rovers, who are equipped with tablets, can create issue records and enter information directly into the system without having to call. In the future, Minneapolis intends to provide tablets to all polling locations to allow poll workers to enter issues directly into the system and eliminate in most cases the need to call.

**Compiling data:** The system modules were tailored to fit the architecture and needs of the department allowing for specific category definitions. There are currently 5 general categories under which each issue is filed: procedures, machines, election judges, absentee ballots, and supplies/others. The main categories are then subdivided for additional refinement.

**Identifying the problem:** Tickets for each issue can be created and assigned to specific field rovers or staff depending on the issue. The module also has a ticket tracker application so staff are able to view tickets out in the field, sort them by precinct, problem category, status, and priority level. They can also mark tickets as resolved and create new tickets.

**Assigning responsibility:** Field rovers receive their assignments on tablets provided by the department or via phone. The system has the capability to send message notifications through robocalls, emails, and text messages to all users, as well as specific types of staff such as only field rovers or only poll workers.

**Tracking resolution:** Tickets are aggregated into a space where their status can be tracked. This makes it easier to identify developing trends related in the tickets. The system can create a report showing how many tickets have been created for each type of issues in each precinct. Another report shows from which polling place calls are being received over the course of the day.



**Follow up:** The city conducts a rigorous review after each election. The command center system generates data visualizations of the issues reported in graphs and charts for easy consumption. It also allows for the inclusion of outside resources such as reviews of staff and poll workers, and survey data.

The system has other useful functions in addition to the command center. For instance, it is a one-stop shop for the poll worker during their recruitment process. Workers each have an account through which they can access a portal from the time they are hired, which gives them access to training modules and allows them to track their pay. The system is also used by equipment delivery teams to track assets and chain of custody. This information is then available to staff when equipment questions arise on Election Day.

## Montgomery County, Maryland

### JURISDICTION OVERVIEW

Montgomery County also operates precinct-based polling locations on Election Day to serve 665,000 registered voters.

### COMMAND CENTER SYSTEM

Montgomery County, Maryland has a command center system based on two main components: a system of hotlines for problems to be reported combined with software to record issues and track issue resolution. The county sought out a commercial off-the-shelf software solution for tracking activity on Election Day. Calls coming into the office are logged into a web-based database system provided by the company Smartsheet. The county pays a minimal licensing fee (around \$100) for the software.

### THE SYSTEM IN ACTION

On Election Day, issues are reported to the command center through telephone hotlines. Information about the nature of an issue or incident are entered into the system's database. Staff are able to collect, analyze, and react to issues in real-time using this software.

**Collecting the information:** two main hotlines receive reports of issues on Election Day: one for the public, and one for poll workers and field roamers. Information about each issue is entered into the Smartsheet database. The system allows staff to record who received the call, who the caller is, and what type of caller they are (voter, poll worker, candidate, etc.). Many of these fields can be efficiently recorded because they appear as drop-down menus.

**Compiling data:** All entries are compiled in a master spreadsheet for staff to monitor. Once caller information is captured, staff collect information about the nature of the issue and categorize it in one of four areas: supplies, technical assistance, judge calls, and emergency. Each of these categories provides examples of typical entries for the category. For example, "supplies" lists: voting equipment issues, ballot supply shortages, need for additional booths or signage. "Judge calls" suggests poll worker issues such as no-shows, personality conflicts, or incompetence.

**Identifying the problem:** The system uses color-coding to differentiate between types of issues and easily identify issues of urgency. For example, an entry is coded red if it is an emergency or a voter complaint. Staff also have the ability to sort the master sheet according to the other categories.

**Assigning responsibility:** If an issue cannot be resolved over the phone, staff can submit the ticket for assignment by a senior staff member or email it directly to the person responsible for its resolution. If the ticket is submitted, a member of the senior staff will assign it to a field roamer either by sending it via email or phone. Some, but not all, field roamers have tablets and are able to receive assignments and observe the master sheet.

**Tracking resolution:** In addition to the red designation of certain records, issue status is also tracked via the color-coding system. Those logs which are open are highlighted in yellow, while those that are closed and resolved are green.

**Follow up:** Montgomery uses the information that they gather in their early voting period to augment their Election Day planning. Common issues that arise before Election Day can be a harbinger for what may come. By identifying these issues before the polls open on Election Day, administrators are able to prevent many voter problems.

Montgomery County has piloted the use of the tablets by some of their field roamers and other field staff. Each polling place is also equipped with a tablet and there is interest in expanding the program in the future to allow for poll workers to enter issues into the system directly, and for the most part eliminate the need to call.

# Cook County, Illinois

## JURISDICTION OVERVIEW

Cook County serves approximately 1,500,000 registered voters. Voting takes place in precinct-based polling locations. Approximately 8,700 poll workers serve on Election Day.

## COMMAND CENTER SYSTEM

Cook County utilizes a multifaceted Election Day command center approach with dedicated phone lines for different types of callers to report issues, a reporting and tracking system that was created in-house, and administrative dash-board functionality in their vendor-created electronic pollbooks. Command center staff are located in administrative offices in downtown Chicago as well as in their warehouse facility off-site where equipment is stored. The use of a centralized reporting system allows for all staff to contribute and observe the election in real-time regardless of their location.

## THE SYSTEM IN ACTION

When an issue occurs on Election Day, it can be reported to the command center through several channels.

**Collecting the information:** Cook County utilizes separate, dedicated phone lines to receive calls on Election Day from the public and poll workers. Voter calls are answered at the clerk's downtown office and can be directed to several specialists handling language assistance, special accommodations for voters with disabilities, and legal issues. Reports received through the public lines are not automatically entered into the tracking system unless there is an escalation, the issue cannot be resolved over the phone, or the report needs to be documented. Standard matters such as polling place location or voter registration inquiries are not logged. To better coordinate among the various hotlines, Cook County has set the desktop background for all computer screens to a list of the critical hotline numbers to make them readily available to all staff.

The division of phone lines gives poll workers direct access to election officials when they need information and support in the field. Poll worker hotlines are answered at Cook County's warehouse. That part of the operation consists of roughly 70 individuals receiving and recording calls, and an additional 30 staff members providing technical support over the phone.

A common issue election administrators face in their call-centers on Election Day is the difficulty of communicating need-to-know information to a large number of telephone operations while any number of them will be on the phone throughout the day. This can be a challenge when important information needs to be brought to the attention of phone operators over the course of the day. To address this, Cook County has positioned two large projection screens at either end of their largest call center room on which they display alerts throughout the day to keep their staff apprised of breaking issues.

**Compiling data:** The information received from poll workers is tracked in the county's tracking system, which was created in-house. All call logs are entered by election staff; poll workers and field rovers do not have the capability to enter directly into the reporting system. Each record captures the name of the caller, the location of the issue, and a description of the issue.

Certain pieces of information are auto-populated from pre-loaded data for efficiency and accuracy. Polling location addresses, phone numbers, emergency contacts, names of assigned poll workers, and serial numbers for touchscreen voting equipment units are already in the system and presented to the operators creating call logs once basic information is entered.

Categories for different types of issue are presented to the user in a hierarchical manner from drop-down menus. Depending on the issue, a subcategory menu will present itself to further define the type of issue. For instance, an issue related to "equipment" can then be marked as relating to the "card activator," and then further specified as related to "configuration problem," "error message," "unable to activate cards" etc. By presenting the most common issues in a uniform manner, standard mitigations and solutions can be presented to staff receiving calls and, hopefully, allow the problem to be resolved over the phone rather than requiring field staff intervention. A unique category, "911—No Voting Only," is an option to select when voting has ceased at a particular location because of a problem, which elevates the status of that call log.

In addition to the drop-down menus, a key word field can be used to assist in problem identification. Entering commonly used words that describe an issue will auto-populate possible entries that match with the issue.

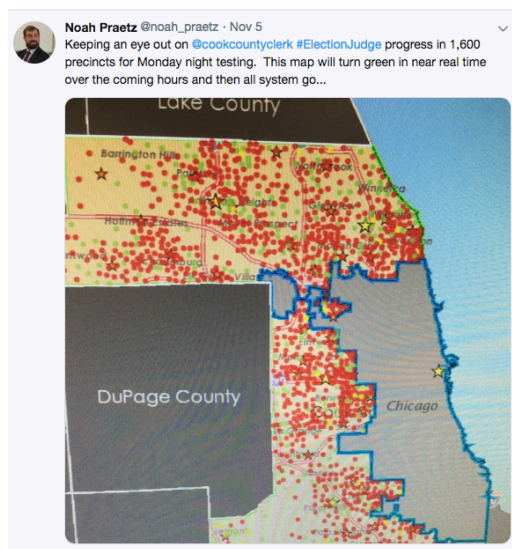
**Identifying the problem:** As issues are entered on Election Day, call logs are monitored by staff to determine how to deploy resources to resolve them. Issues that cannot be resolved over the phone by call center staff are escalated for assignment to field staff. All logs can be viewed in a centralized spread sheet that can be sorted by type of issue, polling location, actions taken, and issue resolution status.

Administrators also utilize information obtained from their electronic pollbooks (EPBs) to identify polling locations which are not open or do not have all of their assigned EPBs operational and ready to service voters. Cook County has recently worked with their vendor to add an additional module to their EPB which will allow them to record how many voters are in line at timed intervals. This will aid the dispatch of additional staff and resources should a polling location become overwhelmed.

**Assigning responsibility:** Issues that cannot be resolved over the phone are escalated for assignment to field staff. For example, if equipment needs to be replaced, call center staff select “send to level two” and this report goes to staff in the appropriate department to prepare equipment for deployment. In the case of equipment replacements, five coordinators oversee 19 depot receiving sites that receive notice of escalations over the phone and are staffed by field staff who deploy the new equipment.

**Tracking resolution:** If an issue is resolved over the phone, the initial call log allows call center staff to select a “problem solved” box, and the report is considered resolved and closed. For other calls, an “action taken” menu provides options to describe stages of efforts to remedy issues. Once resolved, an issue can be marked as such and closed.

**Follow up:** Cook County leverages the information they gain from the use of electronic pollbooks along with their call logging system to plan for future elections.



## Chicago, Illinois

### JURISDICTION OVERVIEW

The City of Chicago operates precinct-based polling places on Election Day. There are approximately 1,500,000 registered voters in the city. The board of elections hires approximately 15,000 temporary poll workers for Election Day.

### COMMAND CENTER SYSTEM

The City of Chicago has used a vendor-provided product for its command center system since 2006. Although they have been happy with the system, they plan to transition to a system built in-house, which will allow them to better control modifications of the programming and provide for greater adaptability and integration into their existing systems.

### THE SYSTEM IN ACTION

The current system in Chicago uses proprietary software on standard, commercial off-the-shelf technology. The majority of users access the system via laptop computers set up in various call center, which are rooms divided between the downtown administrative office and the election warehouse.

**Collecting the information:** Issues are reported to the command center via a system of telephone hotlines, which allows the City of Chicago to triage calls appropriately. The 3-1-1 system handles the majority of calls from voters and the public regarding basic voting information. This frees up resources for administrative issues which have dedicated hotlines for absentee voting, election judges, administration of polling places, registration, verification of registration status, and precinct polling place look-up. Additional lines are available the day before the election and on Election Day for equipment and supply issues. On Election Day, an “election central line” handles legal, investigative, language assistance, and disability matters. All lines have access to the reporting system.

**Compiling data:** Staff enter issues into the system by ward and precinct. Caller information is captured to identify if they are an election judge, field technician, voter, member of the media, etc. Precinct and facility information is presented based on the ward and precinct entered including contact information for all election judges and other relevant staff. Users select an issue type from a drop-down and are then offered standard problems to choose from.

**Identifying the problem:** Once basic issue information is entered; users click on a “Find Solution” button. The screen splits between the entry form for logging the call on the left, and on the right, solutions and instructions are provided depending on what problem is selected. This capability facilitates the communication of uniform information to callers regardless of which hotline number was called or the expertise of the staff answering the call. Many issues are resolved over the phone, but some require dispatch of field personnel.

**Assigning responsibility:** Calls that cannot be answered over the phone, can be escalated and assigned to field staff. Each of Chicago’s 50 wards has field rovers who can be dispatched to resolve problems, replace equipment, and provide additional supplies.

**Tracking resolution:** If a call is resolved over the phone, the record can be marked as such and the user can either clear the call screen for another caller or enter another issue for the caller they are currently assisting. If an issue is not resolved over the phone, certain categories describing the status of the issue’s resolution can be selected. Once resolved, the issue can be marked to reflect that in the system.

The system has a reporting summary screen that can be sorted by category of issue, status of issue resolution, and location of issue. This allows management to monitor ongoing issues and make determinations about where additional attention or resources may be needed.

This summary screen is also made available to the media in a designated media room within the Chicago Elections Department. This enables them to also sort through the reports and monitor what is going on throughout the election. Journalists have expressed appreciation for this act of transparency and suggested all elections offices should provide this sort of access.

**Follow up:** After each election, the Elections Department regularly reviews data regarding issues reported on Election Day to inform future planning and improvements.

From time to time, issues on Election Day cause polling locations to open late or other similar disruptions which prevent voters from casting their ballot. For voters who leave the polls unable to do so, the City of Chicago uses a standard form to capture and record their contact information so that they may reach out to them when the situation is resolved, if voting hours are extended, or to try and otherwise facilitate their voting.

## Orange County, California

### JURISDICTION OVERVIEW

Orange County has approximately 1,800,000 registered voters. California passed the Voter’s Choice Act in 2017 and Orange County adopted it in 2019 for implementation in 2020. Under the new system they will mail all registered voters a ballot and then have vote centers available for in person service.

### COMMAND CENTER SYSTEM

The Orange County Registrar of Voters developed its command center in-house. Previously, the county operated call centers and recorded Election Day issues on paper. As it sought to upgrade this system, the county considered adopting the sheriff’s department’s 9-1-1 system. Although the architecture of the system was readily adaptable for elections use, it was cost prohibitive. Instead, the registrar’s office identified the features of the 9-1-1 system that would be most useful for elections and developed their own web-based system relying on Microsoft Access database software. This centralized their operations and enables better management of issues that arise at the polls. Initial creation was incorporated into the staff’s existing workload over a period of about one year. The system continues to evolve based on the office’s needs.

### THE SYSTEM IN ACTION

The Orange County system has multiple channels for reporting problems on Election Day.

**Collecting the information:** Orange County operates separate phone banks for receiving calls from the public, advocacy and stakeholder groups, and poll workers. When an issue occurs, poll workers call into the phone bank or report the issue via text message on the smart phone provided to each polling location. Phone bank operators record standard information into the database such as the name of the caller, polling location, and a description of the issue.

Precinct information auto-populates based on the polling location entered. The process of entering information is streamlined and made uniform by virtue of drop-down menus. There are free-form fields for one-off or unique situations not captured by the drop-down menus. Records are also date and timestamped throughout the process. Field rovers have the added ability to enter information about issues directly into the database. Information from public calls can also be entered into the system when appropriate. In 2016, Orange County experimented with expanding the public's ability to report issues by integrating social media platforms into their system.

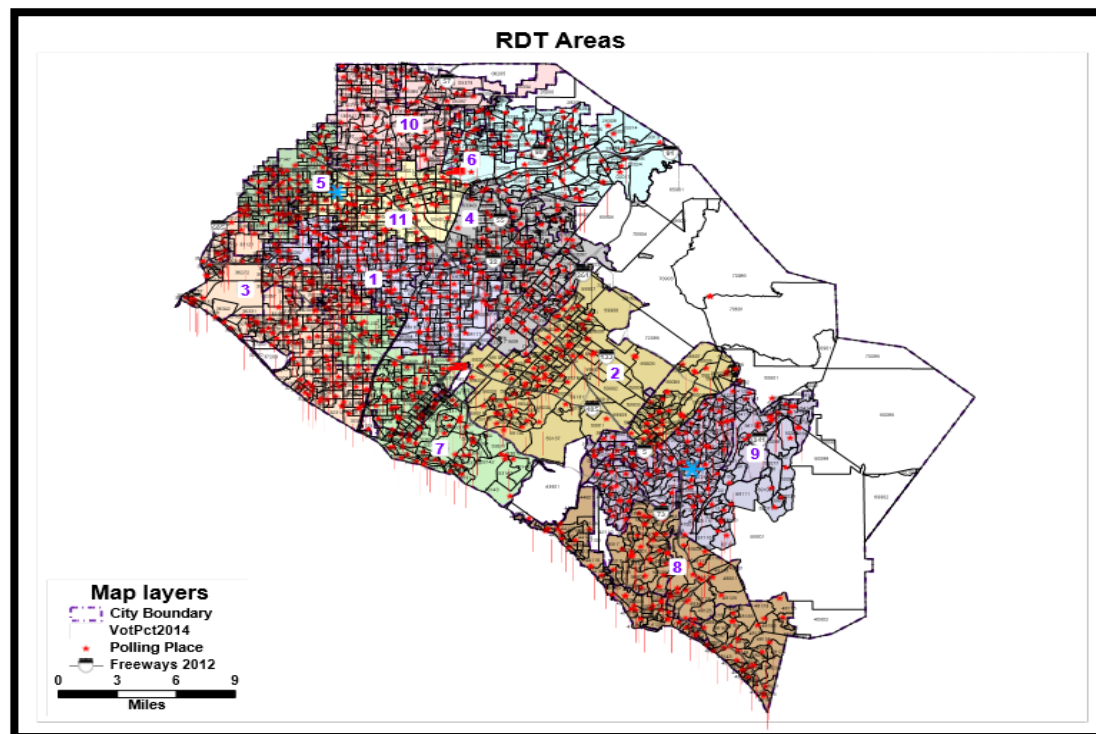
**Compiling data:** Each record of a reported issue is entered into the command center database. The system provides one, centralized location where all issues can be monitored throughout Election Day. The county also has a media room where the database can be viewed by the press.

**Identifying the problem:** When issues are entered into the system, they are assigned a level of severity based on a color-coding system. Green, yellow, and red are used to highlight problems in increasing order of need of attention. This allows administrators to easily identify the most pressing situations. Incidents that completely halt or might completely halt the ability to cast ballots receive special designation that elevates the need for response in the system.

**Assigning responsibility:** Orange County has a large field staff of approximately 300 individuals to provide Election Day support. There are 20 Rapid Deployment Teams (RDTs) who have the capacity to fully turnover three polling locations each. Fifty lead field rovers have access to the sheriff's department's radio network to monitor activities that could impact the election.

Dispatchers monitoring the command center database communicate with field rovers and the RDTs to assign responsibility for issues. The dispatch team has the capability to track RDTs movement throughout the county and can assign them to respond to polling place issues based on proximity using technology similar to that employed by law enforcement.

**Tracking resolution:** A unique feature, Orange County's system includes a mapping function which provides a visualization of the location of reports and their level of severity. Hovering over icons that represent issues on the map provides a synopsis of that particular issue including its resolution status, polling locations where voting is disrupted or has stopped:



**Follow up:** All reported issues and their resolutions are reviewed in development of after-action plans for continuous improvement.



Orange County has created an effective communication network that allows for rapid deployment of staff and resources when issues occur, all the while allowing for optimal transparency and oversight. Integrating data-visualization tools into the consumption of the system information enables election officials to maximize efficiencies and serve their voters well.

## ADDITIONAL BEST PRACTICES

### Weber County, UT

The ability to quickly receive and respond to incoming communication from the polls is a key function of any command center. Problems can arise when poll workers call their designated contact person in the elections office and that person is unavailable or on the phone with another poll worker. Voicemail messages are left, which staff have to listen to and make return calls.

Meanwhile, more calls come in and a vicious cycle ensues, frustrating all involved and creating more issues than it solves. Some jurisdictions have moved to text messaging to expand their communication channels, but have found limitations in how quickly texts can be responded to based on speed of texting by staff. Weber County, Utah has leveraged Google Talk, which transforms voice and text messages into email format. This allows for more efficient response by staff.

### Richland County, SC

A common issue on Election Day for administrators is determining whether poll workers were able to access their assigned facility and open the polls on time. For jurisdictions using electronic pollbooks with Internet access, officials can easily check whether the EPBs are ready and, therefore, make a determination of whether the polling place was accessed. Jurisdictions with EPBs that are not connected to the Internet or who are using paper registers and rosters struggle with this problem. Richland County, South Carolina has an ingenious solution: a designated phone number for poll workers to send a text message to with their precinct number and either the word “OPEN” to reflect that they are ready to begin voting or “ISSUE” to signify that they are experiencing a problem. Administrators are then able to quickly identify sites that are operational and contact ones with an issue to begin resolving it. By using this text message-based system, poll workers do not waste time on the phone and/or on hold waiting for an operator to answer their call to simply let them know that everything is fine.

### Mecklenburg, NC

Election officials in the Mecklenburg office took this concept and built upon it with the creation of an application that pollworkers can use to provide more information than simply that they were open or had an issue. This type of collection of the status of polling place operations, in the absence of electronic poll book data feeds, can be invaluable.

## Conclusion

No matter what solution is in place, the training – and gaining of buy-in – of staff is imperative to the value of using a command center system. There may be hesitancy that such a change will require additional time or that the capturing of information regarding issues will be weaponized against the jurisdiction. While resistance to take on additional tasks is real, but the benefits gained by having real time information to improve the voting experience are far greater and valuable for the system as a whole.

