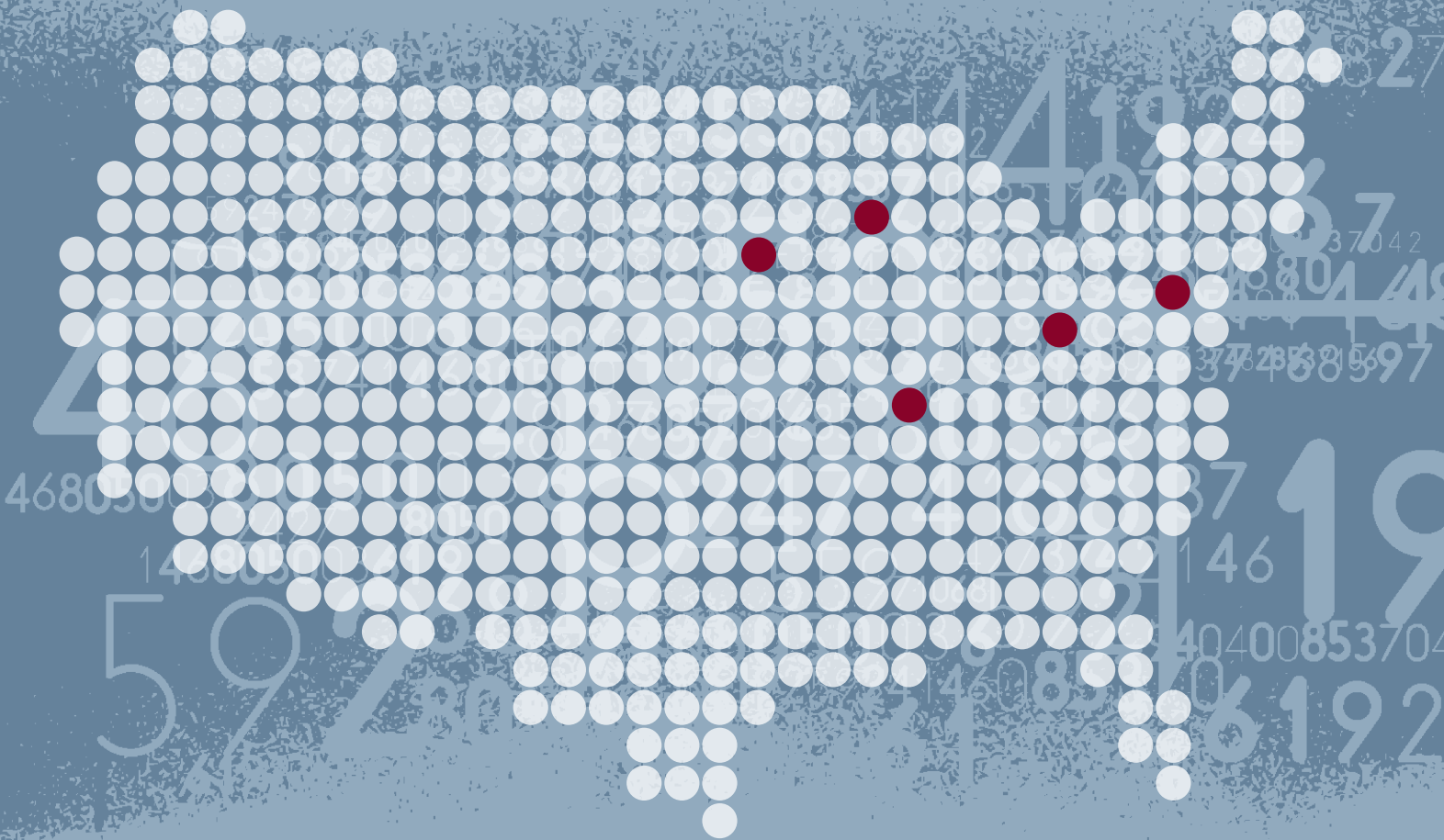


2008 Election Data Collection Grant Program Evaluation Report



A REPORT TO THE 111TH CONGRESS

June 30, 2009

2008 Election Data Collection Grant Program Evaluation Report



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Executive Summary

This report is based on research conducted by ICF International in response to an EAC task order requesting an evaluation of the Election Data Collection Grant Program that culminated in a final report to be submitted to Congress.

PROGRAM PURPOSE

The Election Data Collection Grant Program was established to enable five states to improve and enhance their election data collection systems. It focused on the following four goals:

- Develop and document a series of administrative and procedural best practices in election data collection that can be replicated by other States;
- Improve data collection processes;
- Enhance the capacity of States and their jurisdictions to collect accurate and complete election data; and
- Document and describe particular administrative and management data collection practices, as well as particular data collection policies and procedures.

The grants of \$2 million each were awarded to Illinois, Minnesota, Ohio, Pennsylvania, and Wisconsin in May 2008. The grant period was 13 months. A key requirement was to provide precinct¹-level election data on the November 2008 election to be delivered to the EAC's 2008 Election Administration & Voting Survey (also referred to as the Election Day Survey—EDS) contractor by March 2009. No-cost grant extensions of up to 12 months were approved for Illinois, Minnesota and Wisconsin to complete their programs.

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1 A precinct is the most basic unit of election administration. Voters are typically assigned to precincts for the purposes of administration and other basic election tasks, such as dividing areas into representation districts. A few states use different terms to refer to this most basic unit of election administration, such as "ward." ("Ward," however, is often used to describe a collection of precincts within a city.) In the interest of simplicity, we use the single term "precinct" to refer to the most basic unit of election administration, keeping in mind that some states use different terms.

APPROACH

ICF's overall approach to the evaluation was to assess each grantee's achievements against its program as described in its grant application and in progress reports, information collected during a site visit following the November election, and its reporting on the November 2008 election by responding to the 2008 EDS. The grantees were evaluated on four levels: individually, in comparison among the grantee states, in comparison with a similar set of states not receiving this assistance and finally in comparison to all 55 EDS reporting units. Data sources included grant applications and progress reports, information collected during one-day site visits and follow-up communication, the states' websites and other reports and the EAC's 2006 and 2008 Election Administration & Voting Survey databases, also known as The Election Day Survey (EDS) databases.

KEY FINDINGS

The grantees designed ambitious programs to achieve precinct-level election data reporting considering that the award came relatively late in the election preparation cycle and that the November 2008 Federal election promised to generate substantial interest and participation over what is typical. Their main focus was on improving or enhancing electronic transmission of election data through more efficient system design and upgraded technology. Each grantee used its Help America Vote Act (HAVA)-funded statewide voter registration database as a part of its election data reporting system.

The grantees frankly described their successes and the challenges they faced. Among the key findings are an indicator of success and four program design and strategy points.

- **Success:** The grantees' level of compliance with the 2008 EDS, in terms of percent of core data provided, was higher than non-grantees. Together the grantees reported well in excess of 80 percent of the core data in the 2008 EDS compared to less than half of the core

EDS data in 2006. Altogether the 55 EDS participants reported over 70 percent of core EDS data 2008 compared to just over half of the core data in 2006. Minnesota reported 100 percent of the data requested under the grant. The other four grantees had varying amounts of missing data, usually from a few precincts, although some did not report some data due to administrative procedures.²

- **Timing and Schedule:** Election schedules are typically crowded and stressful; therefore, a program to improve the election data collection and reporting system must accommodate the election schedule. States need to have the final list of required EDS data elements 12 to 18 months prior to an election. Program schedules vary based on the complexity of the tasks; up to 24 months is appropriate for the type of system improvements and enhancements planned under the grant, especially since such improvements involve coordinating with dozens or scores of local election officials and three to five vote tabulation vendors.
- **Involving Stakeholders:** Even in states with centralized election administration decision-making, local election officials are the key to success in election data collection and reporting endeavors. In addition, data users and good-governance organizations have a keen interest in election data and how they are reported. State officials, who actively engage their stakeholders in their plans for election data system improvements and stress a win-win approach by clarifying the benefits for all involved, can generate substantial enthusiasm for the project. Inclusive behavior and information sharing can translate into cooperation and collaboration where the initial reaction to proposed changes could adversarial.
- **Pilot Projects and Pretesting:** Pilot projects and system pretesting are two signs of carefully designed and developed systems. Even the most clearly specified changes to electronic data collection and reporting systems require refinements before being implemented statewide. Pilot projects allow system designers to observe how new systems will be used in a variety of circumstances. Participation in pilot projects involves stakeholders beyond just planning and enables them

2 For example Ohio made no distinction between absentee ballots cast by uniformed and overseas citizens and those cast by voters in Ohio; also 100 percent of Illinois precincts and 22 percent of Pennsylvania precincts did not report on provisional ballots.

to experience changes first-hand. Pretests of training materials and modes (online, in-person) similarly enable designers to make improvements based on users' direct experience, questions and concerns.

- **Training System Users:** Election data systems are used at state and local levels. Local officials may have limited resources for problem solving; therefore careful and effective training on the new system or enhancements is required for even the most user-friendly system. Effectively designed and pretested training builds confidence.

RECOMMENDATIONS

Among ICF's recommendations concerning the feasibility of collecting EDS data as part of a grant program and on the value of providing additional assistance to the states as they work towards improved election data reporting, are the following:

- **Heighten the EAC's profile among the state and local election officials:** increasing the EAC's visibility by establishing it as the national champion of effective and efficient election data collection and reporting, rather than becoming identified as another distant federal agency, would enhance election officials' cooperation with the EDS and other initiatives.
- **Support those states and local jurisdictions with less sophisticated systems:** judging by the responses to the 2008 EDS, some states that are currently unable to promise precinct-level election data reporting for the 2010 EDS would, nevertheless, benefit from grant-funded assistance in moving the state system closer to this goal, should the EAC request precinct-level reporting for 2010. Likewise, local election jurisdictions lacking the most fundamental components of an electronic data collection and reporting system, e.g. computers and information technology (IT) technicians to maintain them, would benefit from grant-funded assistance to make this step.
- **Facilitate dialogue:** The current grantees, their systems contractors or IT staff, and the EDS contractor are most interested in assisting other states with their election data collection and reporting issues and concerns. It is likely that the other states that were able to provide substantial 2008 EDS data would also be willing to work with the states with more significant challenges.
- **Address the need for national election data reporting standards:** There are no national standards for election data collection and reporting. This lack of specificity and clarity is found within states as local election

jurisdictions often have differing policies and procedures, as well as between states, and between the states and EDS questionnaire designers. As the national champion of election data collection and reporting, the EAC is uniquely positioned to take the lead in developing election data reporting standards.

- **Extend future grant periods:** The need for substantial stakeholder input and system testing plus the extraordinary demands of Federal elections suggest that at least doubling the grant period for future initiatives, plus starting them much earlier in the Federal election cycle, would be most efficient for the state grantees.

CHAPTER I

Introduction and Background

The United States Election Assistance Commission (EAC) is an independent, bipartisan commission created by the Help America Vote Act (HAVA) of 2002 to assist State and local election officials with the administration of Federal elections. Section 202 of HAVA requires EAC to serve as a national clearinghouse and resource for the compilation of information and review of procedures with respect to the administration of Federal elections. Section 202(3) authorizes EAC to conduct studies and to carry out other duties and activities to promote the effective administration of Federal elections.

In addition, HAVA transferred to EAC the responsibility of biannually administering a survey to the States and territories on the impact of the National Voter Registration Act of 1993 (NVRA). The NVRA requires the EAC to report to Congress in the year following a Federal election on the impact of the Act on the administration of elections and to include recommendations for improvements in procedures, forms, and other matters affected by the legislation. HAVA also mandates that the EAC collect information related to the processes and procedures used both to register voters and to serve uniformed and overseas citizens wishing to vote pursuant to the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) of 1986. For 2008 these surveys were combined into the *2008 Election Administration & Voting Survey*, also known as The Election Day Survey (EDS). The surveys were combined for the first time in 2006.

THE ELECTION DATA COLLECTION GRANT PROGRAM

In December 2007, the EAC was appropriated \$10,000,000 to establish and fund the Election Data Collection Grant program contained in the FY 2008 Omnibus Appropriations Act (Public Law 110-161, Title V). Pursuant to the appropriation, on May 28, 2008 the EAC awarded five competitive 13 month grants of \$2,000,000 each to Illinois, Minnesota, Ohio, Pennsylvania and Wisconsin to implement programs to improve the collection of data related to the 2008 Federal general election, with a specific emphasis on improving their ability to report election

data at the precinct-level for the 2008 general election. To this end the grant included a precinct-level reporting requirement for six survey topics on the 2008 Election Administration & Voting Survey.

In addition, grantees were expected to:

- Develop and document a series of administrative and procedural best practices in election data collection that could be replicated by other States;
- Improve data collection processes;
- Enhance the capacity of States and their jurisdictions to collect accurate and complete election data; and
- Document and describe particular administrative and management data collection practices, as well as particular data collection policies and procedures.

The grantee states were selected using six criteria:

1. Program strategy: a detailed plan for using grant funds to collect Federal election data.
2. Feasibility of the plan: methods, work plan and timetable that illustrate that goals will be met.
3. Innovation: a unique approach to collecting the data.
4. Readiness to proceed: a description of the state's ability to quickly begin data collection based on existing capacity.
5. Outcomes: processes to be used to measure progress towards goals.
6. Budget and budget justification: a realistic budget with costs allocated appropriately over components, sufficient to accomplish the plan and demonstrating awareness of accounting procedures necessary for Federal grant receipt.

Other selection criteria were included to ensure that a variety of states were represented among the grantees. These additional criteria included:

- **State size:** states were categorized as “large”, “medium,” or “small” based on voting age population size and number of electoral votes.

- **Region of the country:** North, South, East, West.
- **Voter registration database type:** “top-down” (hosted on a single, central platform) or “bottom-up (gathers data from local voter registration databases).
- **Multiple vendor versus single vote tabulation vendor:** States contracting with one or more than one voter tabulation vendor.
- **Political structure:** election authority and decision making organized centrally or decentralized.
- **Unit of government:** data collection reporting at the county, township, independent city and borough levels.
- **Election Day Registration states:** these are Idaho, Montana, Iowa, Minnesota, New Hampshire, Wisconsin, and Wyoming.

REPORTING EDS DATA

The purpose of the grant program was to improve the collection of election data at the precinct level. Very few states currently report election-related data at the precinct level. Instead, local jurisdictions (counties or municipalities³) usually aggregate election data from their own precinct reports and report the aggregates to the state. The state, in turn, reports election returns and statistics, usually disaggregated at the county level.

For purposes of this report, it is important to distinguish between *election returns* and *election statistics*. *Election returns* refer to reports of the number of votes received by candidates for public office. *Election statistics* refer to other data that describe aspects of election administration, such as the number of registered voters or the total number of people who cast a ballot in the election.

Election returns are naturally reported at the precinct level, since the precinct is the most basic election unit to which voters are assigned for the administration of elections. Although precincts may be split occasionally to create electoral districts (e.g. congressional districts or school board districts), most states build electoral districts through the aggregation of whole precincts. Therefore, local jurisdictions that administer elections typically assemble election returns by precinct before summing them to

produce the appropriate vote totals. Because voters are assigned to precincts for administrative purposes, it is common for local jurisdictions to maintain voter registration statistics at the precinct level.

Therefore, even when local jurisdictions do not report precinct-level election returns and election statistics to the state, they typically have this information as a byproduct of administering elections. However, because most states do not require these precinct-level returns and statistics to be reported to the state, they have not always been gathered or kept in formats that facilitate further dissemination.

Growing interest in “convenience voting” (e.g. early or absentee voting) and overseas voting has complicated gathering and reporting election data by local jurisdictions. For example, some states do not require local jurisdictions to report election returns for absentee ballots at the precinct level. Instead, many local jurisdictions create a central “absentee precinct” to record the ballots cast by absentee ballot. (Sometimes several absentee precincts will be used, each corresponding to a different “ballot style” used in the local jurisdiction.) When states follow this practice, it is often impossible to use existing election reports to learn how many voters assigned to any particular precinct voted in an election, since some voters will be accounted for in traditional precinct returns, while others will be accounted for in the absentee precinct returns. The same practice also occurs in states that allow provisional ballots to be accounted for in the vote tally by assigning them to a central “provisional ballot precinct.”

Therefore, assembling election returns and statistics at the precinct level may be a surprisingly difficult task for local jurisdictions to accomplish, particularly if these data are to be gathered in a uniform fashion.

Recognizing that there are often subtle complexities associated with gathering and reporting election data, the grant program focused on reporting a set of “core” returns and statistics. In particular, grantee states were required to report the following returns and statistics *at the precinct level*, as a condition of the grant:

1. What was the total number of registered voters for the 2008 Federal general election?
2. What was the total number of active and inactive registered voters for the 2008 Federal general election? (i.e., two counts)
3. What was the total number of persons who voted in the November 2008 Federal general election?
4. In the general election, how many provisional ballots were: cast, counted, and rejected? (i.e., three counts)

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 3 Most states delegate to their counties responsibility for administering elections. Some states, particularly in New England and the upper Midwest, delegate to the town or municipality level. Throughout this report, we refer to the basic unit of state delegation as the “local jurisdiction.”

5. For the November 2008 Federal general election, how many votes were cast: at polling places (i.e., with normal precinct voting device, disabled accessible device); via absentee ballot (i.e., mailed in, cast in-person in election office), at early vote centers, and via provisional ballots, total number of ballots cast (i.e., five counts).
6. What was the total number of votes cast for all Federal offices in the November 2008 general election? (i.e., President, Senators, members of the House of Representatives)

The first five data items can be considered election statistics, while the sixth is an election return.

INDEPENDENT EVALUATION OF THE GRANT PROGRAM

A report to Congress on the impact of the grant program is a key EAC grant reporting requirement. The report must be based on consultation with States receiving the grants and the EAC's Board of Advisors, and include recommendations to improve the collection of data relating to regularly scheduled general elections for Federal office in all States. Changes in Federal law or regulations and the EAC's estimate of the amount of funding necessary to carry out such changes could be among the recommendations.

To satisfy this requirement the EAC decided to award a competitive contract for an overall evaluation of the grant program. This evaluation would include:

- Program context and implementation
- Program efficiency and effectiveness
- Associated outcomes, successes or failures, and the reasons why

The evaluation would be a mechanism to solicit feedback and provide recommendations on the grant program, including evaluating the efficiency and effectiveness of the data collection process as experienced by the grantees, the efficiency and effectiveness of the technical assistance and training offered to the grantees by the technical assistance vendor, Research Triangle Institute (RTI), and the EAC to help grantees collect and submit the data elements information. The evaluation was viewed as enabling the EAC to fine-tune the program should Congress decide to extend it in the future.

This report is the result of an evaluation of the grantees' activities, includes direct and specific information from those states and the EAC's Board of Advisors. The following chapters describe the evaluation plan and method, detail program outcomes, and offer recommendations.

CHAPTER II

Evaluation Plan and Method

The primary goal of the Election Data Collection Grant Program evaluation was to determine what improvements could be made to the effectiveness and efficiency of the elections data collection process by awarding grants for this purpose to selected states. This includes assessing the efficacy of the technical assistance provided by an independent contractor as well as by EAC staff. Successful election data collection enables the states to report to the EAC, at the precinct-level, the data Congress have mandated to be compiled by the EAC. The secondary goal of the grant program evaluation was to provide information and recommendations for enhancing the program should Congress decide in the future to extend it to additional states.

OVERALL APPROACH

ICF's overall approach to the evaluation design was to determine each grantee state's achievements and to assess them on four levels:

- Individually
- Among the grantees as a group
- Compared to a comparison group of states not receiving this assistance, and
- Comparing the grantees to all 55 reporting units.⁴

Under this four-part design, each grantee's level of progress towards complete precinct-level reporting on the 2008 Federal election was compared to its ability as described in its grant application. Next, we made outcome comparisons among the five grantees. Third, we compared the outcomes for the five grantees with a set of states that had similar levels of EDS reporting as of March 27, 2008, the date the grant program application process opened. Finally, we compared each grantee's reporting within the 55 EDS participant units prior to grant award and following the 2008 elections based on percent of core data reported. In addition to this focus on the outcomes of the grant program, we documented and compared key steps in the process of implementing the grants.

This approach is described in our logic model, presented below in Part B. The data collection design is often called a "pre-post" approach. In this case we compared each grantee's ability to report on core EDS items at two points in time: before the grant award and then following the November 2008 election. Grantees had until March 2009 to report on the November 2008 election. To establish a set of non-grantee states for comparison group, we selected states using criteria that ensured comparability to the grantee states on key features such as ability to report on the November 2008 Federal election, whether the state is centralized or decentralized in terms of election data collection, whether it is an Election Day voter registration state, and level of complexity or scale in terms of election administration, based on the number of counties and municipalities and population size. The comparison group states were Iowa, Massachusetts, New York, Oklahoma, and Virginia. The comparison states were paired with the grantee states as shown in [Exhibit 1](#) below.

While improving reporting of precinct-level elections data was the main goal of the grants, the funding could be applied to any or all of three components of the elections system:

- Voter registration databases,
- Vote tallying technology, and
- Election returns databases.

Therefore, the evaluation included data on each grantee's status in each of these components at two points in time as well.

An important component of the process of improving the grantee's ability to report on Federal elections is the quality of the technical assistance it receives. During the grant period there were two significant sources of technical assistance available: that provided by the Technical Assistance contractor and by the EAC. In addition, we documented the technical assistance gained from other sources, such as consulting or collaboration among states, as it related to achieving the goals of the grant.

4 The 55 survey participants include the 50 states, the District of Columbia, Guam, Puerto Rico, American Samoa, and the U.S. Virgin Islands.

EXHIBIT 1 GRANTEE AND COMPARISON STATES

Grantee or Comparison	State	Non-missing data on 2006 EDS	Number of jurisdictions	Election Day Registration
Grantee	Illinois	55%	110	No
Comparison	Virginia	68%	135	No
Grantee	Minnesota	42%	87	Yes
Comparison	Iowa	44%	99	Yes
Grantee	Ohio	81%	88	No
Comparison	Oklahoma	63%	77	No
Grantee	Pennsylvania	34%	67	No
Comparison	New York	0%	62	No
Grantee	Wisconsin	0%	4,703	Yes
Comparison	Massachusetts	29%	365	No

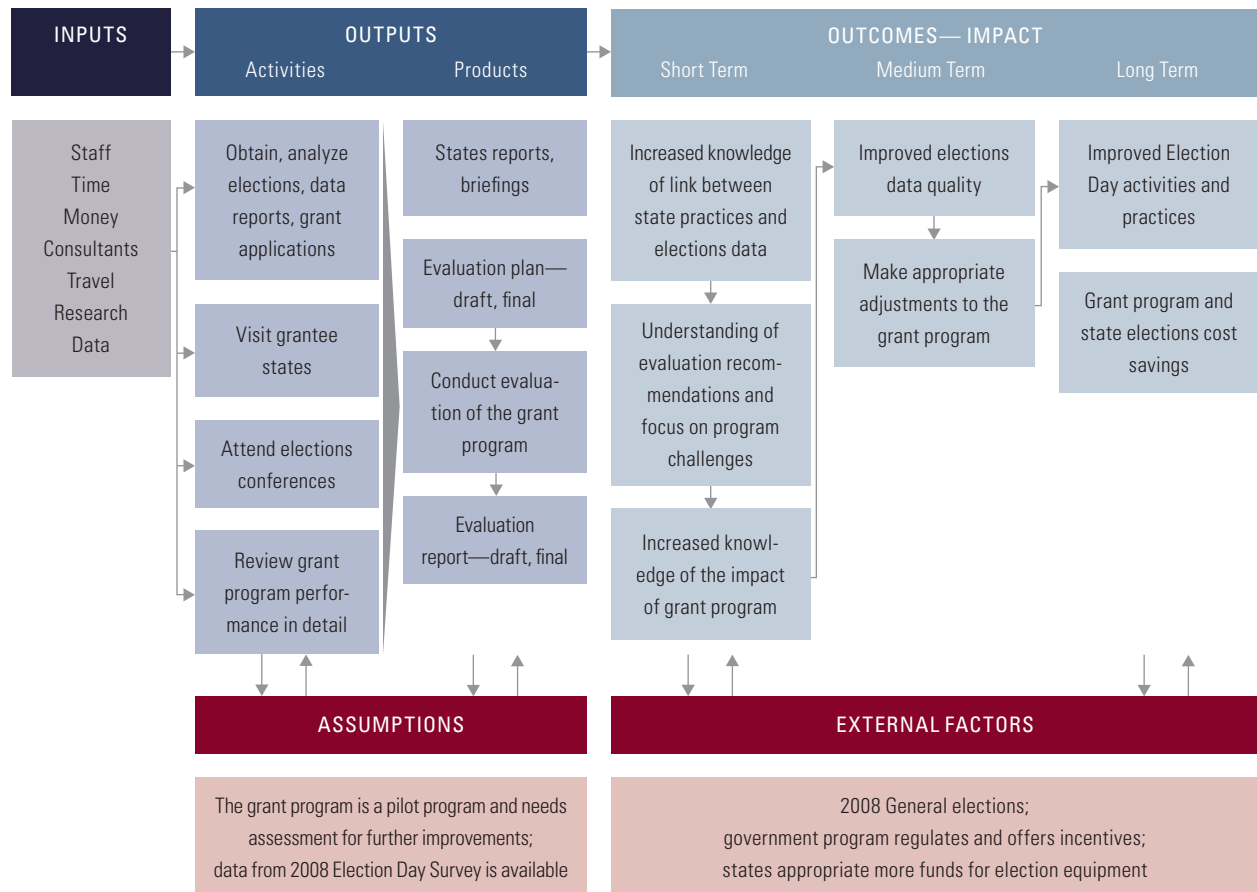
Finally, we developed a brief “snap shot” of each grantee’s progress to serve as concrete examples to the other states.

The majority of the necessary data was collected from current reports and a small number of simple forms, with telephone and e-mail follow-up. Since each grantee’s experience by its nature included significant unique aspects best understood by a site visit, we conducted one brief site visit to each grantee during the first two weeks of March 2009. This permitted a modest number of face-to-face individual and group meetings to learn more about the challenges encountered (anticipated and unanticipated), recommended best practices and lessons learned. The site visit interview guides for state, county or municipality, and local election officials and the technical assistance questionnaire are included in Appendix A.

LOGIC MODEL

The following schematic presents our logic model for the evaluation.

LOGIC MODEL



RESEARCH QUESTIONS

The following nine research questions guided the evaluation.

1. To what extent are states able to meet their goals given the resources available under the grant, i.e. time between grant award and Election Day, the amount of the award, other available funds to leverage, the states' level of readiness, and so forth?
2. What are states' key achievements and most significant challenges in meeting their goals under the grant?
3. What are the main lessons learned by the states during implementation of grant activities?
4. Do significant lessons learned differ by state or category of states (e.g. Election Day registration states versus those without Election Day registration)?
5. Are there lessons learned by the grantees in improving states' ability to report federal elections data at the precinct level that can be applied by other states or categories of states?
6. Under what conditions do the states find technical assistance most useful and least useful?
7. In what areas do the states need more guidance from the EAC?
8. From the grantees' perspective, how effective was their planned allocation of grant funds?
9. How does technology design of data collection vary across grantee states and do some data collection mechanisms illustrate comparative advantages independent of local settings?

DATA

ICF relied primarily on the grantees to provide the data for the evaluation, either through their websites or directly. The majority of the data required were collected by the grantees in the course of implementing their programs; however we requested a limited amount of information not included in their grant program plans, but routinely held. We also endeavored to avoid duplicating data requests made by the grantees' individual evaluation contractors.

Outcome data

Key outcome data were the amount of precinct-level federal election data reported for the November 2008 election. Five additional categories of outcome data included (1) reports on the specific outcomes of electronic systems enhanced or developed under the grant, (2) new or revised data collection policies, procedures and practices

that enhanced reporting effectiveness, (3) the cooperation level between state and local governmental units, (4) views of decision-makers at the state and local levels as well as the views of operations staff, such as system administration chiefs and their key staff, and (5) expenditures by category and the use or leverage of other resources specific to implementing the plan as described in each grantee's application (or as modified with EAC approval if necessary). More specifically these key outcomes were measured by:

- Amount of precinct-level Federal election data reported by March 21, 2009 compared to the amount of data reported for the most recent election (2006). The specific data items were described in the form attached to the grant application, which includes all of the data, exactly as worded, in the EAC's *2008 Election Administration & Voting Survey* form, part A except one item ("under- and over-votes").
- Extent of election data collection infrastructure improvements made as compared to those in place prior to March 2008 (the date the grant program applications process opened).
- New or revised data collection policies, procedures and practices enacted to support infrastructure improvements and precinct-level reporting.
- Training, technical assistance and support provided to local election officials enabling them to successfully use the improved infrastructure.
- Level of support for/satisfaction with the initiative from state and local election decision-makers.
- Level of support for/satisfaction with the initiative from election data administrators.

Other outcomes of interest included:

- Amount, quality, and success of technical assistance received from the *2008 Election Administration & Voting Survey* technical assistance vendor, Research Triangle Institute (RTI).
- Amount, quality, and success of technical assistance received from EAC.
- Plans for further enhancing the election data collection system, including state and local laws, regulations, policies and procedures, the infrastructure and providing training and technical support to local officials.
- Sustainability, to include plans to continue to collect the data and/or to improve the system.

Process data

The process data included the length of time between grant award and the achievement of the specific objectives in each grantee's plan, the timing, subject, and efficacy of technical assistance provided, especially as it related to system readiness on Election Day, November 4, 2008, the issues, concerns, successes and challenges encountered as the grantees implement their election data collection improvement plans, and the views and opinions of state and local decision-makers and operations staff as the projects unfolded.

Technical assistance

ICF collected information on formal requests for technical assistance made by the state to the technical assistance contractor (RTI), including the date of the request, the topic, the nature of the assistance sought, when the assistance was provided, the outcome(s) of the assistance and the

level of satisfaction with the outcomes as expressed by relevant state and local decision-makers and operations staff. Similar information was collected on technical assistance requested from the EAC and from other states.

Measures of Effectiveness

As a first step in the data collection plan, ICF developed specific measures of effectiveness for EAC review, presented below in **Figure II.1**. The measures of effectiveness were presented for 12 key areas: election data, infrastructure, policies, procedures and practices, training, technical assistance and support to local officials, opinions of state and local decision-makers, opinions of election data administrators, technical assistance from RTI, technical assistance from the EAC, expenditures, other funds, plans for further improvements, and sustainability. For each area we specified the condition that would be judged "most effective" followed by several indicators.

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FIGURE II.1 MEASURES OF EFFECTIVENESS

1. Election Data

Most effective: full reporting or reached application goal

- What levels of additional data were provided on the 2008 Federal election compared to the 2006 Federal election?
- What deficiencies exist in full reporting?
- Is there a plan for reaching full reporting?

2. Infrastructure

Most effective: on time, functioning as intended, trouble-free

- Were improvements made on time?
- Were the improvements successful?
- Are local election officials able to use the system with ease?
- Are state data staff satisfied with the data?
- Were questions, problems, and issues resolved in a timely fashion?

3. Policies, procedures, practices

Most effective: support complete reporting

- Do new or revised policies, procedures and practices support more complete reporting?
- Do election officials at all levels understand the new regulations?
- Have significant gaps in policies procedures and practices that disenchant local cooperation with statewide data collection been identified and addressed?

4. Training, technical assistance, support to local officials

Most effective: local officials can comfortably use the election data collection system

...continued on next page

Figure II.1. continued...

- Did local officials receive sufficient training, technical assistance, and support to confidently collect and report the election data?
- Are gaps in knowledge, training, functionality and support identified and addressed?

5. Opinions of state and local elections decision-makers

Most effective: decision-makers support the system

- Do election decision-makers approve of and support the new system?
- Are their questions and concerns identified and addressed?

6. Opinions of election data administrators

Most effective: data administrators support the system

- Are data administrators satisfied with the new system?
- Are their questions and concerns identified and addressed?

7. Technical assistance from RTI

Most effective: TA appropriate, on time, acceptable

- Was RTI consulted as needed?
- Did RTI's assistance address the identified problem and any related challenges?
- Would the state request assistance from RTI in the future if it was made available?

8. Technical assistance from EAC

Most effective: TA appropriate, on time, acceptable

- Was the EAC consulted as needed?
- Did the EAC's assistance address the identified problem and any related challenges?
- Would the state request assistance from the EAC in the future if it was made available?

9. Expenditures

Most effective: project director or manager and state officials have a good understanding of the cost elements in their program and how the budget might be better allocated if the project were to be implemented in a similar state

- How would the grantee restructure the budget if advising a state with a similar project and plan?

10. Other funds

Most effective: successful efforts were made to bring together additional resources as needed

- What efforts were made to locate other sources of funds or other resources to augment the EAC grant, if additional resources were needed?

11. Plans for further improvements

Most effective: if not fully functional, the state has plans to continue to develop its system

- Are there plans for further improvements if the system is not fully functional?

12. Sustainability

Most effective: as modifications are made to the system, staffing and budget are shifted to offer continuing support

- What has been done to ensure that the modifications made under the grant continue through time to support the next Federal election?
- What gaps have been identified in terms of continuing to maintain the system or to continuing to develop it?

CHAPTER III

Program Implementation

While the evaluation plan presented above is heavily focused on the outcomes of the states' grant programs, the evaluation of the grant program was also charged with providing insights into the process of implementing them. In this chapter we present a discussion of key features in the process of implementing the grantees' election data system programs. This includes a discussion of the program implementation overall, a brief description of highlights of program implementation for each grantee and a discussion of significant challenges the grantees addressed. This is followed by a series of lessons learned during program implementation.

PROGRAM IMPLEMENTATION PROCESS

The grantees were notified of their grant awards in May 2008. Each had demonstrated in its application that the planned program was prepared to proceed upon award, however there were no program schedules included in the applications. Progress reporting requirements included semi-annual reports, a final report, and participation in an unspecified number of teleconferences or online meetings. Thus the grantees had considerable latitude in implementing their programs.

Overall Implementation Process

The grantees' implementation efforts focused on four categories of activities. These were: technical election data collection systems development; training, education and technical assistance; program monitoring and evaluation, and project administration and management. Each of these is described below:

Technical Systems Development

The grantees used the program to expand and improve statewide voter registration and election reporting systems; in particular they began to:

- Develop procedural and system enhancements to improve voter registration data collection and reporting.
- Improve tracking and collection of UOCAVA data.

- Improve polling place data collection (e.g., recording the number of election judges for each election).
- Improve collecting and reporting on election data at the precinct level.
- Support Election Day data collection by planning for improving recording and reporting on absentee ballots, precinct voting equipment, and electronic poll books.
- Support collecting and reporting on over-votes and under-votes.
- Document precinct-level best practices for system design.
- Develop election data warehouse design and data collection standards.

Training, Education, and Technical Assistance

The grantees developed system user training, training manuals, and other methods to enhance system accessibility and participation in their programs.

To ensure consistency of data reporting across precincts, the training materials included specific data elements that election staff would be asked to report and specified the sources for these data. Training local elections officials was an integral part of the grant program in the four states where system enhancements would change their tasks or the appearance and functionality of the data collection system. States also devoted resources to developing self-help and online technical assistance manuals.

Program Monitoring and Evaluation

The grantees conducted periodic assessments of progress on program components, budget, and schedule. Some contracted with external independent evaluators. Sometimes the role of independent evaluator was assumed by subcontractors who also managed other aspects of the grant program. This monitoring and evaluation was conducted to measure overall progress, as well as to assess:

- Data collection system infrastructure development
- Ability to meet milestones during the program implementation

- Appropriateness of system designs,
- Adequacy of feedback and reporting mechanisms, and
- Plans versus actual progress on work done during project implementation.
- Some of the states also conducted extensive post-election data analysis to evaluate the effectiveness of the data collection effort statewide.

Program Administration and Management

The grantees adopted diverse approaches toward project administration and management. Some outsourced project management completely or in part to consultants. Others took full responsibility for all aspects of the program management, including software design and development. Managing grant expenditures is a key component of effective program administration. While all were confident that their programs as planned would apply grant funds according to their schedules, unforeseen events caused some delays for some grantees.

As their programs unfolded, some grantees fell behind schedule in using or committing their funds. In several cases this was related to the challenging grant timeline which became more problematic than anticipated during implementation. Others found that the timelines they had projected for their programs were unrealistic. For example, one grantee planned to hire two additional staff to work on grant-funded tasks. When this process was delayed substantially, the grantee revised the plan and assigned more responsibility to the consulting contractor. Other states experienced several small delays that compounded as the months passed. For example, training could not be delivered when planned because the system prototype required more refining than planned. Finally, some grantees initially focused their energies entirely on system modifications to ensure submitting the 2008 EDS data on time, and planned to turn to other tasks and activities after that. However, once the 2008 EDS data deliverable was submitted, only three months remained, raising concerns about completing their program hastily as well as effectively using remaining funds.

Other reasons for falling behind the planned expenditure schedule included initial delays in acting on the award at the state legislature level and required shifts from one type of expenditure to another as tasks evolved or priorities changed.

The grantees provided some insights into future fund management. One suggested ensuring that the distribution of time between staff and contractors made the best use of staff time. This grantee felt that it had not recognized

the extent to which staff could and would contribute to the program, reducing the need for contractor time and enhancing staff commitment and expertise. Another recommended that staff hours for contractor oversight be estimated more liberally; in their experience more oversight time was needed than anticipated. Other suggestions included making better, i.e. more realistic estimates of hardware and software costs. This state made “high-level” estimates that were unrealistic.

Overall budget structure recommendations followed two models: self-reliance and outsourcing. In the self-reliance model, state staff were tasked to perform all program activities. This budget focused on three roughly equal cost components: staffing, system development, and training. The outsourcing model focused on system design with staff oversight. This budget suggested 75 percent for contracting (system design and testing) and 25 percent for state staff and all other activities. As of their June 1, 2009 progress reports grantee expenditures were allocated as shown in [Table 1](#) below.

The Implementation Process for Each Grantee

Illinois: Illinois uses a decentralized (bottom up) election administration approach encompassing 110 jurisdictions. Its program focused on developing and testing a prototype of an integrated data collection system (The EAC Data Hub). The EAC Hub would receive election data from the tabulation systems installed at the election authorities and registration data from the voter registration database the Illinois Voter Registration System (IVRS) and consolidate it into an elections information database.

Illinois program planners prepared to address two concerns. These were: (1) accessing personnel resources to manage the program as well as to provide technical

TABLE 1. GRANTEE EXPENDITURES BY CATEGORY
(as of June 1, 2009)

Category	Percent of Expenditures
Contractor fees (system management, data mapping/collection, prototyping, reporting)	48
System enhancements, upgrades to hardware, software	37
Staffing/personnel	11
Other (training, incentives, travel, etc.)	4
Total	100

staffing and (2) ensuring system functionality before full implementation. They addressed these anticipated challenges by employing an external consulting firm, Catalyst Consulting Group, Inc. to manage the program and provide technical staff. This firm was well known to Illinois election officials as they had played a similar role in the development of the statewide voter registration system a few years previously. Concerns about ensuring system functionality were met by planning to first develop a system prototype and pilot test it in seven different sites statewide prior to full implementation.

An unanticipated challenge arose after the grant was awarded. Through no fault of its own, the Illinois State Board of Elections was forced to delay the implementation of this project for three months and, in order to meet the EAC's data submission deadlines, was forced to forgo developing portions of the originally envisioned technical solutions prior to the November 4th General Election. Spending authority for the grant was amendatory vetoed by former Governor Blagojevich requiring Illinois to request and receive (August 29, 2008) unique non-appropriated spending authority from the State Comptroller and Treasurer. The solution to this delay was to increase the contractor's responsibility and the level of effort to perform additional technical tasks. However, several tasks, including refining technical solutions, implementing automatic data conversion mechanisms, and training for local election authorities, will require additional time beyond the original grant period which has lead Illinois to request a no cost extension beyond the project period ending June 30, 2009. This request was approved giving Illinois up to 12 months to complete these activities.

The unanticipated challenges hindered grant program implementation beyond the stage of testing the prototype of the integrated data collection system. As a result, Illinois was not able to provide the EAC with complete 2008 EDS data as of April 2009.

Minnesota: Minnesota administers elections following a centralized, or "top-down," model in which the State defines the procedures, formats, and systems counties must use to collect, record, and submit election data to the State. Under its grant program, Minnesota initiated a multi-faceted project targeting five areas of election data collection improvements:

- Voter registration data collection improvements
- Improved UOCAVA data-capturing for the statewide central database, including new electronic ballot delivery methods

- Enhancement of polling place and election judge data collection
- Improvement of absentee ballot data collection and absentee ballot data systems
- Election Day data collection and reporting improvements

Minnesota had met no major unanticipated challenges during program implementation as of April 2009. Part of its success resulted from careful planning. Minnesota has been following an election data collection system development blueprint since 2003. It also has the necessary legislation and support from the Office of the Secretary of State to use appropriations expeditiously. The 2003 blueprint helps to determine in advance how such a grant can be effectively used for system development purposes. Minnesota was approved for a no-cost extension of up to 12 months to complete proposed activities such as additional training and rollout of a new absentee balloting function within its Statewide Voter Registration System.

Ohio: Ohio's program focused on streamlining and automating a set of complex manual data collection and processing procedures. It involved three different mechanisms depending on data type.

1. Each of the 88 counties collects voter registration data by precinct using one of three vendor voter registration systems (VRS) and maintains its own voter registration database in a decentralized or "bottom-up" approach.
2. County voter registration databases are linked electronically to the Office of the Secretary of State's (SOS) statewide voter registration database (SWVRD). All new voter registration records and updates are transmitted and synchronized with the Office of the Secretary of State in near-real-time, creating a centralized statewide database.
3. Election results are gathered through a Web-based system which allows counties to input them directly into the Secretary of State's Election Night Reporting System. Election administration and activity data of the kind required for NVRA reporting, the EDS, the precinct-level reporting identified in the grant, and that mandated by State of Ohio Revised Code and Ohio Secretary-of-State directive is largely manual.

As the program began it became apparent that the grant timing as it related to the November 2008 Federal election was problematic. Election officials were concerned about managing substantially increased voter turnout, conducting an efficient and valid and uncontested election, and protecting Ohio's historical status as a predictor state.

Therefore, they decided to forgo substantial changes in existing data collection procedures and, instead, to focus on improvements in data storage, processing and reporting. This somewhat narrowed the focus of the grant implementation to the technology and data processing domain, for example:

- Three vendor VRSs were commissioned to extend their applications to capture, manage, and transfer required EAC-required precinct-level data for voter and voting statistics to the Office of Ohio’s Secretary of State via established telecommunication links. These application modifications were tested for compliance, pilot tested, and implemented with 86 of 88 counties, and introduced in a training session to Board-of-Elections staff
- Database improvements were designed and implemented to capture new data collected from the counties via both the voter registration system, and traditional survey collection instruments
- A suite of analytical and reporting tools was installed and configured to provide predefined and ad-hoc reports for Federal and State election results and voter statistics for all counties, with drill-down capabilities to their respective precincts
- The statewide data-collection database was extended with the addition of new features to support the comparison of election data with political jurisdictions and districts for web-based data display.

Ohio’s goal is to integrate system capabilities for accurately and reliably recording, evaluating, and displaying 2008 and future election data in timely and informative ways.

Pennsylvania: Pennsylvania has a decentralized election administration structure with 67 counties. Its program focused on creating an integrated statewide election management system, and, in particular, joining the data collection and reporting functions of the current election data collection application, the Statewide Uniform Registry of Electors (SURE), the SURE portals, and the internal Elections Database (ED).

Another aspect of the grant program implementation included moving the system to a new system database (“re-hosting”), scheduled for December 2008. The re-hosting proved to have a number of unanticipated consequences. First, the December timeline meant that county elections administrators were in the process of conducting post-election history updates. The changeover caused interruptions that resulted in a three-week delay in finalizing the vote history for 15 counties (22 percent) statewide. In addition, the re-hosting activity required additional

work to ensure that data verification processes were working accurately.

The strong tradition of political autonomy at the county and municipal level determined by the decentralized character of Pennsylvania’s election data collection system shifted grant program implementation almost exclusively toward technology solutions and away from streamlining and integrating the data collection process at state, county, and precinct levels. In fact, the project team construed any immediate process changes as politically unpalatable. As the remaining phases of the program are completed, the lessons learned during the 2008 data collection effort will be applied to specific database enhancements to simplify and streamline data collection efforts.

Wisconsin: Wisconsin also uses a decentralized approach to election administration with 72 counties with elections administered by 1850 municipal clerks. Its program also focused on technology solutions: designing and implementing the prototype of the Wisconsin Election Data Collection System (WEDCS). The WEDCS was to be a queryable⁵ data warehouse, enabling the state to provide responses to the 2008 EDS, as well as to produce a number of other ad-hoc and system reports, and to observe trends over time. One concern about the magnitude of such an undertaking was how to ensure a smooth implementation when inaugurated statewide. Wisconsin’s solution to ensuring a smooth transition was to first design a system prototype and to pilot test it. In addition, the system was to be inaugurated statewide for the April 7, 2009 election, one with less external attention than the November 2008 Federal election.

A second critical concern for Wisconsin was training on the enhanced system for 72 county clerks and over 1850 municipal clerks. For this training, Wisconsin took advantage of the University of Wisconsin-Madison and its Extension Services, Division of Continuing Education, Outreach and E-Learning, a comprehensive adult education program, and sub-contracted with the Online Learning Division for training design. Election staff provided oversight for the training, including facilitating in-person sessions throughout the state, as needed.

Wisconsin focused grant program implementation in two areas, technology upgrades and training, to replace

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5 If a dataset or system is “queryable,” this indicates that it has been programmed to manipulate the data and a user can request original reports, for example, the total number of registered voters in five local jurisdictions that comprise a geographical area of interest, in addition to pre-programmed or standard reports.

an outdated business process that was heavy on manual data transfer.

Wisconsin was permitted a no-cost extension of up to 12 months to complete program tasks such as the local evaluation of the program.

Implementation Challenges

The implementation efforts of the grantee states faced some challenges as well. These concern the overall program and the key grant requirement to provide 2008 EDS data by March 2009, and include:

Overall Grant Program:

- Program timing and scheduling were persistent challenges throughout. As programs unfolded, the grantees found that administrative procedures, such as releasing grant funds and hiring needed staff, took longer than anticipated.
- Planning, designing, testing and training election officials on system enhancements were often more lengthy tasks than anticipated.
- Establishing quality measures for effective election data collection along with streamlining the data collection process has sometimes proven to be difficult, depending on the nature of the state election data collection system. For example, Ohio and Pennsylvania's decentralized election administration systems led them to the deliberate decision to forgo substantial changes in existing data collection procedures at this time. The strong tradition of political autonomy at the county and municipal level in these states made implementing such measures particularly complex.
- Standardizing data definitions and data management have been challenges. For example in Illinois the names of candidates and offices on the ballot vary across local jurisdictions and the names of precincts can change from one election to the next. The distributed nature of the election system in such states as Ohio and Pennsylvania also raised issues with respect to standardization and governance, volume of data and transactions, and complexity of operations. A significant amount of time and effort was spent at the state level in manual compilation, verification, and validation for most categories of information. All this contributed to systematic differences which presented significant standardizing and data management challenges.
- Standardizing data formats at municipal and county levels and developing a uniform data collection methodology while simultaneously enhancing the

elections data collection system user experience was another significant challenge. The raw data are difficult to manage because it is collected from more than one database in more than one format. For example, every tabulation vendor in Ohio had its own data format and standards which was an obstacle to creating a standard data collection format at the state level. Pennsylvania's separate data sources also presented a challenge to collecting and collating 2008 EDS data.

- Transitioning from paper to an all-electronic election data system in some states such as Wisconsin, Illinois, and some municipalities in Pennsylvania is still a challenge. For example, in Illinois the transition from paper to electronic data transfer was not funded.

Providing 2008 EDS Data by March 2009:

- Vote tabulation providers for some local jurisdictions begin programming and testing their programs for Federal elections two years to 12 months in advance. The draft⁶ 2008 EDS questionnaire was distributed to the grantees in August 2008 (no more than nine weeks prior to the November 2008 election) and the supporting manual from RTI was available at the project website in October 2008 (four weeks prior to the election), well after tabulation machinery had been programmed and tested.
- Integrating multiple data sources, such as municipal and county voter registration databases and election reporting systems and connecting them to a user-friendly, web-based multifunctional interface is a continuing challenge for all grantees. Such a system, which integrates seamlessly and collects automatically the necessary data for reporting, is a strategic goal for states like Minnesota and Pennsylvania while these states are at very different stages of building such a system.
- Some local authorities did not report data with the needed detail.

PROGRAM IMPLEMENTATION LESSONS LEARNED

Among the lessons learned from the implementation of the grant program in the five grantee states, the following are key:

1. State election officials need greater authority to collect election data. Clarifying who "owns" the data would be beneficial. County, municipal and state election administrators need to view themselves as "all on the

⁶ The questionnaire was undergoing Office of Management and Budget clearance at this time.

same team” to foster efficient election data collection and reporting.

2. Multiple measures require consistency across data collection which ultimately results in improved accuracy.
3. Stakeholder input and buy-in are critical to election data system improvement and success. For example, stakeholders, including state and local elections officials and tabulation equipment vendors, can provide operational detail and realism to system analysis and redesign discussions and plans. They can make concrete recommendations and ask important substantive and operational questions, contributing to a more nuanced approach to system design.
4. Stakeholder participation in system redesign and enhancement is especially important for decentralized election administration states where there may be some tension between the state and the local elections administrators concerning local autonomy.
5. Automated voter registration systems, as required under HAVA, are a good foundation for developing a state-level electronic election data system. Furthermore, if the registration and election reporting systems are compatible it is easier to prepare the EDS response.
6. On the local level automated systems reduce some of the burden on staff around elections, especially if the system accommodates their tabulation systems.
7. It can be difficult for a state to receive and distribute Federal grant funds in a timely fashion. In states where the legislature approves receipt of the grant, the process can consume many weeks of the grant period. Election officials are urged to work actively with appropriate legislative staff to smooth the way for approval.
8. Increased collaboration between EDS questionnaire designers and state election administrators can address important concerns such as data definitions and the timing of election reports.
9. System designers need as much data and reporting specification as possible for efficient and effective design. These are part of the blueprint for system designers.

CHAPTER IV

Program Outcomes

In this chapter we present a discussion of the outcomes of the grant program evaluation in five sections. The first section presents an analysis of the improvements in election data collection systems resulting from grant-funded activities. The second section presents an assessment of the technical assistance provided to the grantees by the survey and technical assistance contractor Research Triangle Institute International (RTI) and the EAC, including the EAC's contractor for administrative, financial and audit reporting, Laurel Consulting Group (LCG). The third section presents the grantees' notable successes and the fourth section presents their ongoing challenges. Finally, the fifth section discusses the grantees' future plans for their election data collection systems.

IMPROVEMENTS ON ELECTION DATA COLLECTION SYSTEMS

The grantees' achievements were analyzed on four levels. First each grantee's program achievements were evaluated based on their grant application plan. Next the grantees' achievements were assessed within the group of five grantees. The third level of analysis compares the achievements of the grantees with those of a comparison group of similar states. Finally the grantees' achievements in providing data for the 2008 Election Administration & Voting Survey compared to their reporting for the 2006 survey were evaluated against the 50 other election data survey reporting units.

Individual Grantee Program Outcomes

In this section we present brief summaries of each grantee's program and a discussion of their performance on reporting EDS data. A logic model for each grantee is included in Appendix B.

Each grantee developed an ambitious plan to improve or enhance its election data collection and reporting system with a key goal of providing precinct-level election information on core questions for the 2008 EDS. To reach that goal and to address a variety of system needs particular to each grantee's system, each plan included many tasks, steps, and phases. In this section we present a brief summary of each grantee's progress with their grant program

as of May 15, 2009. Note that the grant period did not conclude until June 30, 2009.

Illinois focused grant activities on developing and testing a system prototype. The pilot test was conducted in seven sites, chosen to represent the range of local jurisdiction conditions within the state, geographically and in terms of tabulation vendor and type of system (optical scan, direct recording electronic, auto-mark), to help determine how best to program tabulation systems and to design and conduct training. The system was developed and is hosted by a Chicago-based consulting firm, Catalyst Consulting Group, Inc.

Illinois developed and tested the prototype of their system (The EAC Data Hub) to accept election data (tabulation data) from the 110 election authorities and registration data from the voter registration database (Illinois Voter Registration System-IVRS) into a query-able elections information database for internal State use. This database was used to prepare the state's response to the 2008 EDS and will be used to prepare a variety of reports for stakeholders statewide.

Elections data are now more accessible for multiple customers (General Assembly, candidates, political parties, academia, and ordinary citizens). The flexibility of the system enables state staff to evaluate the quality of election data and to develop many different reports.

In developing the new system, Illinois faced a series of challenges including:

- Ensuring system sufficient flexibility to accept reporting from multiple tabulation vendors
- Mapping Illinois ballot categories to those required by the EDS
- Obtaining needed election information detail from local election authorities
- Managing paper and other non-electronic reporting from local election authorities
- Meeting the compressed grant reporting schedule when local elections authorities had begun their programming some 12 months in advance of the grant award

Future plans include extending the system beyond the pilot test jurisdictions to all 110 election authorities. Grant-funded activities have improved system capabilities enabling the state to provide precinct-level vote totals at its website in future.

Minnesota updated its elections administrative policies, practices and procedures, and made significant improvements to its Statewide Voter Registration System (SVRS) and its Election Reporting System (ERS). Among the eleven subtasks in the Minnesota plan it created new processes in the ERS to collect statewide recount and post-election review auditing data, extended absentee ballot (AB) administration to local elections officials in SVRS and began development of an election data warehouse (EDW) beginning with the prototype of a data analysis tool. Other subtasks added voter registration sources and added capacity for statistical reporting of voter registration transactions, collected absentee ballot, election judge, over vote and under vote data, collected equipment vendor and version information (requested in the 2008 EDS), and enabled tracking of electronically-delivered UOCAVA ballots. Finally, work is underway on the two best practices subtasks.

For UOCAVA records management, Minnesota created and implemented a system module to centralize the data for statewide and county users and automatically generate statistics for Federal UOCAVA reporting. A new AB module permits counties and municipalities to process domestic civilian absentee records in a central statewide system and makes it possible to sort the data at any level, including by precinct.

During the development and testing of these enhancements Minnesota faced several challenges for key personnel. These included activities supporting the September Primary and 2008 Federal election, plus the unexpected resource requirements of the statewide recount for the U.S. Senate race.

Future plans include expansion and rollout of the SVRS municipal AB module, modifying the ERS to support additional data import and export capabilities, expanding voting equipment tracking, expansion and development work on the Election Data Warehouse, and developing a set of data standards and practices for the standardization of election data formats to support precinct-level election reporting including: (1) candidate, offices, districts, precincts, (2) ballot order and format, (3) election results, and (4) media file reporting at the precinct level.

Ohio focused grant-funded efforts on modifications to the core infrastructure for storing, processing and reporting on collected data for quality management. It established

a middle-tier of applications services such as analytical capabilities and reporting and data storage, with a supporting systems infrastructure. For example, the core database infrastructure was upgraded for reliability and improved vendor support. Server hardware and platform software were installed and configured for reliable application services and databases were extended with fact and dimension tables to support analytical reporting. This included a data warehouse and business intelligence (BI) reporting infrastructure to unite voter registration data, election results, and election administration and activity reports at all levels—local, county, and statewide.

Ohio chose not to attempt major changes to its established data collection methods prior to the 2008 Federal election, due to concerns specific to that election. In short, State and local election officials felt that there was not enough time between grant award and the November 2008 election to design and test system enhancements and did not want to risk system failure in such a high profile election. Enhancements were subsequently made to voter registration systems (VRS) and the statewide voter registration database (SWVRD) to handle precinct-level data transfer for future elections. These modifications have been tested, documented and deployed to Ohio Boards of Elections.

In developing its storage, processing and reporting enhancements, Ohio faced a series of challenges including:

- Streamlining data collection processes given the “bottom-up” nature of the elections data collection system
- Standardizing and operationalizing data definitions and data management
- Systems integration/data interchange
- Establishing quality measures for effective election data collection

Future plans include building on the efficiencies of the new system capabilities to address these challenges, especially as they apply to data collection and data quality.

Pennsylvania created an integrated statewide election management system combining the data compilation and reporting functions of its Statewide Uniform Registry of Electors (SURE), the SURE portals, and the internal Elections Database (ED). The integrated system will be completed in three phases. During the grant period Pennsylvania also decided to migrate to a new system database.

During the first phase, Pennsylvania created the EAC Survey Interface, which enabled system designers to better understand and coordinate database support. For example, under Phase 1 they established a knowledge base encompassing the flow of transactions within the SURE database

backend. As a result of grant-funded activities all 67 counties are using the same software system (SURE) to collect election data. This has substantially increased the volume of raw data that can be collected by county elections and voter registration databases, and created a data repository which is used to formulate responses to survey questions. Counties now have an expanded capability to conduct vote tallying and reporting using SURE portal software.

During design of the EAC Survey Interface Pennsylvania faced a series of challenges:

- Raw data collected from more than one database in more than one format;
- Integrating several data sources and related software to work seamlessly and automatically to collect the 2008 EDS data;
- Improving data accuracy and employing a uniform data collection methodology while enhancing the county user experience;
- Migrating data to the new SURE database also introduced risks to the data verification process and required queries to be retooled
- The December deployment of the new database interrupted county post-election vote history updates, which resulted in a three week delay in the finalization of vote history for some counties

Future plans include improving the timeliness of over and under vote data, which is currently gathered through the various voting systems and further enhancements such as enabling the system to more readily accommodate data from independent sources (e.g., voting systems and third-party databases maintained by counties in parallel with SURE). Pennsylvania also plans to enhance SURE's newly developed data warehouse to collect precinct-level voter registration and election data for the purpose of improving ad-hoc reporting at the state, county, legislative district and precinct levels.

Wisconsin focused its efforts on developing an election data warehouse to provide the capability to prepare a variety of reports for its many stakeholders. The system was developed in partnership with the Government Accountability Board and the Department of Administration's Division of Enterprise Technology. The state contracted with the University of Wisconsin for an elections administrator training package and for grant program evaluation services.

Wisconsin designed and began implementation of the prototype of the Wisconsin Election Data Collection System (WEDCS), a queryable data warehouse. This structure enables the state to provide responses to the EAC's 2008 EDS as well as to produce a number of other

reports in response to stakeholder data requests and to observe trends in election activity over time. An additional benefit of the new system is that county and municipal clerks can use the data for their annual budgets.

WEDCS was pilot-tested early in February 2009, after clerks had completed wrap-up of the November 4, 2008 election and was implemented for all jurisdictions for the April 7, 2009 spring primary election.

In-person and online training materials were prepared, and usability tested by some 150 clerks. This package was used to provide in-person training to some 520 county and municipal clerks, with the online training made available to the remaining clerks.

In developing the new system, Wisconsin faced a series of challenges including:

- Precinct-level reporting increased the workload at the County/Municipal clerk level by as much as a factor of six or seven.
- Some local, sub-county jurisdictions with limited resources remain without electronic reporting, primarily due to a lack of access to the Internet. Wisconsin addressed this by using its established system of clerk-"providers" who enter the data for these jurisdictions (clerk-"reliers") from their paper reports. These are the only paper reports that remain in the Wisconsin election data system.
- Some local elections officials do not trust electronic transmission of election data.
- Reporting on the UOCAVA vote and absentee ballots remains a challenge due to differing tracking mechanisms at the local level and a more complex process than represented in the EDS questions.

Future plans include completing the local evaluation of the grant program.

Grantee 2008 EDS Precinct-Level Reporting

The data required to be reported at the precinct level by the grant can be thought of as "core data," because these are the most prominent measures of election activity released to the public and discussed in election improvement efforts. They are a subset of the EDS survey items administered following the elections of 2004, 2006, and 2008. We chose to focus the analysis of grantee reporting capability as a result of grant funded activities on the core data, rather than all of the EDS data, for two reasons. First, questions on the EDS have changed over the three survey years, so we could not do one-to-one matching and comparisons on all data items. Second, the 2006 EDS

suffered from a low reporting rate and there were difficulties associated with using the resulting public use dataset.⁷ However, it was possible to make one-to-one comparisons for the grantees and between the grantees and all other reporting units for the core data from the 2006 and 2008 EDS.

For the 2008 EDS data, precinct-level data were received

7 For example, there was confusion as to whether some data were missing (available in the state but not reported on the EDS) or not collected at all.

in an analyzable form by RTI from all five grantee states. The 2006 EDS data used in this analysis are from the public use dataset. Since RTI is currently processing the 2008 EDS data the following analysis should be treated as preliminary.

Among the five grantee states, three (Minnesota, Ohio, and Wisconsin) had at least some of the EDS core data available at the precinct level for download on their election division web sites, although no state reported all of the required data at the precinct level.

Table 2 below reports the percentage of *precincts* for which the required data was received by RTI. We see that

TABLE 2. DATA REPORTING RATES FOR ELECTION STATISTICS AT THE PRECINCT LEVEL

Question	Questionnaire location		State				
	Sub-item	Question number	Ill.	Minn.	Ohio	Penn.	Wisc.
What was the total number of registered voters for the 2008 Federal general election?							
		A1	96%	100%	100%	100%	99.9%
What was the total number of active and inactive registered voters for the 2008 Federal general election?							
	Active	A3a	98%	100%	100%	100%	96%
	Inactive	A3b	96%	NA	86%	100%	NA
What was the total number of persons who voted in the November 2008 Federal general election?							
		F1a	78%	100%	100%	100%	99.9%
In the general election, how many provisional ballots were: cast, counted, and rejected?							
	Cast	E1	0%	NA	99.6%	78%	100%
		E2a ^a	0%	NA	99.9%	95%	100%
	Counted	E2b ^a	0%	NA	^c	78%	100%
		E2c	0%	NA	99.6%	78%	99.6%
For the November 2008 Federal general election, how many votes were cast: at polling places (i.e., with normal precinct voting device, disabled accessible device), via absentee ballot (i.e., mailed in, cast in-person in election office), at early vote centers, via provisional ballots, total number of ballots cast.							
	Polling places	F1b	^f	100%	99.6%	100%	96%
		F1c ^b		100%	99.7%	100%	99.9%
	Absentee	F1d ^b	^f	100%	^d	100%	99.9%
	Early	F1f	^f	NA	0% ^e	100%	NA
	Provisional	F1e	^f	NA	99.9%	100%	99.9%
	Total	F1a	78%	100%	100%	100%	99.9%

^a E2a = full ballot counted; E2b = partial ballot counted

^b F1c = UOCAVA voters; F1d = domestic absentee voters

^c No distinction between partial and full count

^d No distinction between UOCAVA and domestic absentee ballots.

^e Early voting turnout not reported, although Ohio has early voting

^f Data in process by RTI

NA = Not applicable. State does not use the indicated electoral procedure.

100 percent of precincts in Minnesota, Ohio and Pennsylvania provided data for questionnaire item A1 (total number of registered voters), while 12,781 of 13,426 precincts (96 percent) in Illinois and 3,583 of 3,585 precincts (99.94 percent) in Wisconsin provided data for the same item.

Only Minnesota reported 100 percent of the data requested under the grant. The missing data for other states did not follow any obvious pattern. In most cases, the missing data came from a few precincts in each state:

- Ohio and Pennsylvania each had some data elements missing from more than five percent of precincts
- Illinois did not report precinct data for provisional ballots.⁸
- Ohio made no distinction between absentee ballots cast by UOCAVA voters and domestic absentee voters, and did not report the total number of voters who voted early and
- Twenty-two percent of Pennsylvania precincts did not report the number of provisional ballots cast or the number of provisional ballots that were partially counted.

Comparing Grantees' 2006 and 2008 EDS Reporting

Since the grantees were required to report at the precinct level for the first time for the 2008 EDS, there was no precinct-level 2006 EDS data for comparison. However they reported at the county level for both survey years. Under the assumption that a program that is intended to improve gathering election data at the *precinct level* should also improve data gathering at the *county level*, we can determine whether grantee states improved their county-level data gathering compared to the 2006 EDS.

To construct this comparison, we identified the 2006 EDS questions corresponding to the core 2008 EDS items.⁹ Next, we developed two approaches to measuring data completeness for each county. These are a more stringent and a less stringent approach. The more stringent criterion is to consider a county that has any precinct level data missing to have not reported that data element at the county level. The less stringent criterion is to consider a county that had at least one precinct report data to have reported at the county level. Using the more stringent criterion is

the most conservative approach when considering data completeness. The less stringent criterion is useful because it is likely that many counties did not have data from all precincts, but reported county-level data based on what they could collect, in effect using the less stringent method. The less stringent criterion is most likely a better approach for making comparisons with the data completeness of the states that did not participate in the grant program.

Table 3 below provides a summary of the completeness of the grantees' county-level core EDS data for 2006 and 2008. We see that 81 percent of the core data elements were reported by Ohio in 2006. For 2008, using the more stringent criterion 90 percent of the core data were reported by Ohio at the county level; using the less stringent criterion Ohio's rate rises to 92 percent.

Regardless of the level of stringency, four of the five grantees reported substantially more data at the county level in 2008 than in 2006. The exception is Illinois. At the time this report was written, turnout data from Illinois were still being processed; for the items that had already been processed from Illinois, the missing value rate was roughly the same as for 2006. Overall, the grantee states reported approximately 50 percent more county-level data in 2008 than in 2006.

Comparing Grantee Outcomes with Comparison Group States

As noted above, the second level of analysis in considering the outcomes of the grant program is to compare the grantees' 2008 EDS reporting to a group of similar non-grantee states. These are Iowa, Massachusetts, New York, Oklahoma, and Virginia.¹⁰

Because only the grantees were required to report data at the precinct level for 2008, it was not possible to determine the degree to which receipt of the grant helped them gather and report precinct-level election data compared to states that did not receive grant assistance and, consequently, were not required to report 2008 EDS data at the precinct level. However, efforts to gather election data at the precinct level are part of efforts to gather data under the EDS, which asks all states to report similar information at the *county level*.

8 Illinois provided election canvass files to RTI, from which items f1a to f1f will be constructed. As of the writing of this report, the construction of these items was still in progress.

9 The table in Appendix C identifies the corresponding items and provides detailed data about the completeness of the data reports at the county level in 2006 and 2008.

10 As noted in Chapter II. Evaluation Plan and Method, the selection criteria for the comparison group included 2006 EDS reporting levels, whether the state is centralized or decentralized in terms of election data collection, whether it is an Election Day voter registration state, and level of complexity or scale in terms of election administration, based on the number of counties and municipalities and population size.

TABLE 3. CORE DATA* REPORTED BY GRANTEE STATES, 2006 and 2008

Grantee state	Percentage of county level core data elements reported		
	2006	2008	
	All counties	More stringent ^a	Less stringent ^b
Illinois	55%	43% ^c	48% ^c
Minnesota	54%	100%	100%
Ohio	81%	90%	92%
Pennsylvania	34%	99%	99%
Wisconsin	0%	94%	100%
Average	45%	85%	88%

*Thirteen unique data items identified in Table 1, along with corresponding items drawn from the 2006 EDS.

^a More stringent = county data considered to be complete only if all precincts report data.

^b Less stringent = county data considered to be complete if any precinct reports data

^c Excluding items f1a, f1b, f1c, f1d, f1e, and f1f, which are being processed by RTI

Under the assumption that a program that is intended to improve gathering election data at the *precinct level* should also improve data gathering at the *county level*, we can determine whether grantee states improved their county-level data gathering, compared to the 2006 EDS, and compared to states that did not participate in the grant program.

Table 4 below provides the comparison of the amount of county-level EDS data reported for the 2006 and 2008 surveys between the grantee states and comparison group states. This comparison uses the less stringent criterion approach to measure county reporting for the grantee states.

By design, the five comparison states reported a similar percentage of core data elements in 2006 as did the grantee states. Both sets of states improved the amount of county-level core data they reported in 2008, although the grantee states improved more. The grantees overall improved by 43 percentage points and the comparison states improved by 30 percentage points.¹¹

Comparing Grantee Outcomes with all States

The final analysis considered all states, comparing the grantee states with all remaining states and territories. The grant program was designed to create (or improve) the ability of the grantee states to gather and report election statistics at the precinct level. Because precinct data can be aggregated-up to produce county data, it is reasonable to assume that if the ability of the grantee states

to report data at the precinct level has improved, then the ability to report county-level data should improve also. This final analysis tests this assumption by observing whether the grantee states improved the thorough-

TABLE 4. COMPARISON OF STATES REPORTING CORE DATA ELEMENTS, 2006 and 2008

Grantee states	Percent of county level core data elements reported	
	2006	2008 ^a
Illinois	55%	48% ^b
Minnesota	54%	100%
Ohio	81%	92%
Pennsylvania	34%	99%
Wisconsin	0%	100%
Overall average	45%	88%
Comparison states	2006	2008
Iowa	44%	100%
Massachusetts	29%	62%
New York	0%	0%
Oklahoma	63%	100%
Virginia	68%	92%
Overall average	41%	71%

^a From "less stringent" column in Table 2.

^b Excluding items f1a, f1b, f1c, f1d, f1e, and f1f, which are being processed by RTI

11 It is important to note that we do not know what efforts were made by the comparison group states to improve their level of reporting for the 2008 EDS.

ness of their county-level¹² election data reporting, compared to non-grantee states.

To draw this comparison, we used the data reported by all states in the 2006 EDS, relying on the public-use data set available on the EAC’s web site.¹³ As with the previous analysis, we chose the items in the 2006 EDS that corresponded to the core data in the 2008 EDS (those data items required to be reported at the precinct level by the grantee states as a condition of receiving the grant.). We then calculated the percentage of data elements from the 2006 county-level core data that each state reported for publication in the public-use data set and conducted a parallel analysis using the county-level reports submitted by all states to RTI for the 2008 EDS.

Table 5 below presents the percentages of core data reported for the five grantee states. On average, the five grantee states reported less county-level data in the 2006 EDS than the remaining states. For the 2008 EDS, both grantee and non-grantee states increased the amount of core data reported, however, the grantee states increased the amount of county-level data reported at a much higher rate. The grantee states increased their data coverage by 46 percentage points, compared to an increase of 24 percentage points by the non-grantee states.

ASSESSMENT OF TECHNICAL ASSISTANCE PROVIDED TO THE GRANTEEES

Technical assistance was available throughout the grant period from the EDS contractor, Research Triangle Institute (RTI), and from EAC staff. The EAC’s contractor for administrative services, Laurel Consulting Group (LCG) was also available to provide assistance to the grantees.

Technical Assistance Summaries

RTI

RTI implemented a customized approach to providing technical assistance based on the understanding that every state had its specific technical assistance needs.

12 Note a subtle difference in the comparison in this section, relative to the previous section. In the previous section, we used precinct returns in 2008 from grantee states to generate our own estimates of the implied county statistics. In this section, we use the county returns as provided by the states to RTI. These numbers vary slightly, but not enough to affect the substance of the findings presented here. However, it should be reiterated that the data provided to RTI are still subject to verification.

13 The URL for the 2006 data sets is at the following: http://www.eac.gov/program-areas/research-resources-and-reports/copy_of_docs/eds-2006/data-files-and-survey-chapters.

For example, some states would need little assistance in providing the 2008 EDS data, while for others the need for technical assistance would be substantial. This proved to be an accurate assessment as the amount of technical assistance provided to the grantees varied widely between states.

RTI initiated its technical assistance services by identifying a technical point of contact (POC) for each state as well as establishing communication with state election directors and with the offices of the Secretary of State. The technical point of contact was the person to whom RTI distributed questionnaires, templates and notices of approaching deadlines. RTI’s project website offered detailed instructions for every question in the questionnaire, additional support for the survey data template (in Excel), as well as useful links. The website also served as the portal through which the majority of states delivered their EDS data files.

To deliver technical assistance RTI relied primarily on a team of three staff members, each of whom was assigned a specific group of states, and individual contact with staff from RTI’s subcontractor, Election Data Services. The project director oversaw the technical assistance effort for the five grantee states and several others. A second team member assisted the states with township (or equivalent) local jurisdictions and states with known “bottom-up” data collection systems.¹⁴ The third team member assisted the

14 In their grant applications such states described their election administration as “decentralized.”

TABLE 5. COMPARISON OF STATES REPORTING COUNTY LEVEL CORE DATA ELEMENTS, 2006 and 2008

Grantee states	Percent of county level core data elements reported	
	2006	2008 ^a
Illinois	55%	77%
Minnesota	54%	100%
Ohio	81%	92%
Pennsylvania	34%	100%
Wisconsin	0%	86%
Grantee average	45%	91%
Non-grantee average	55%	79%
Overall average	53%	80%

^a EDS county data are being processed and verified by RTI.

states known to be primarily “top-down” states, those with strong central databases and in which procedures, formats, and systems to collect, record, and submit election data are determined centrally at the state level.¹⁵

In planning their services to the 55 EDS reporting units, RTI decided to provide the grantees with a more tailored approach than the other states, focusing on a one-to-one relationship with each POC and communicating either individually or via conference telephone calls. They further decided to relax the requirement, as noted in the grant application, for the grantees to report their EDS data using an Excel spreadsheet, and to accept the data in “any standard format.” They reasoned that this would remove one difficulty for the grantees in reaching their March 31, 2009 deadline for submission of 2008 EDS data.

EAC and LCG.

EAC and LCG provided administrative technical assistance to the grantees throughout the grant period, following up to remind them of scheduled deliverables and discuss issues and concerns concerning administrative requirements.

Initially, the EAC sent the grantees the award notification, materials and a plan for the technical assistance to be provided followed by information on the various contractors that would be assisting them. During the grant period the EAC reviewed the grantees progress reports and communicated with them when progress reports were missing or incomplete. The EAC also fielded requests for information on extending the grant period and assisted with questions on financial reporting.

The EAC participated in telephone conference calls as requested by the grantees and the contractors. In June, October, and November 2008 the EAC participated in conference calls convened by RTI concerning data formats and deadlines.

LCG managed the administrative details for the grants and fielded questions mainly about completing forms and reimbursement procedures.

The Grantees’ Perspectives.

To obtain the grantees’ views on the technical assistance they were provided, ICF developed a questionnaire, which was sent via e-mail in advance of the ICF site visits and discussed during the visits. The purpose of the technical assistance questionnaire was to gather some detail on the most recent technical assistance provided to each

grantee, to hear about their unmet technical assistance needs and to have their overall evaluation of the technical assistance provided between grant award in May 2008 and the ICF site visits in March 2009.

While they were most willing to discuss the technical assistance they received, none of the grantees completed the technical assistance questionnaire. The reasons for this were twofold. First, each grantee focused on providing a comprehensive review of their election data system enhancements for the ICF site visit. Second, the nature of the technical assistance provided, especially by RTI, was so specialized that particular technical assistance activities were not especially memorable. The grantees commented only on the technical assistance they received only from RTI. As a group they described contact with RTI as minimal and lacking in direction. Their concerns with RTI’s assistance were also confounded with other issues, such as timing – for example, receiving the final EDS questionnaire months after vote tabulation vendors had completed programming voting machines and receiving the supplemental instruction manual only a few days before the November 2008 election.

Technical Assistance Lessons Learned

Accepting 2008 EDS data in any standard format is a two-edged sword.

After consulting with the grantee states and with third-party experts,¹⁶ and after some consideration, RTI chose not to require that the grantees submit their EDS precinct-level data in a pre-defined standard data format, nor to use the Excel template provided at the website. Instead, it decided to accept data in any standard format. Although RTI’s intention was to accommodate the grantee states’ need to focus on system design, this decision proved to be a two-edged sword. Leaving the grantees without a standard for reporting the EDS data meant that they spent resources with system designers deciding on an appropriate format. Further, some grantee data files submitted to RTI on deadline in March proved to be difficult to use and at least two grantees had to re-submit their data in an alternative format. Since the EDS data were needed for several reports in April, including this one, there were unnecessary delays in making the EDS data available due to file difficulties.

Tailored technical assistance can be too “hands off”. Technical assistance to the grantees was limited in a

¹⁵ In their grant applications these states described their election administration as “centralized.”

¹⁶ These included John McCarthy with Verified Voting, Neil McClure of Hart/Interactive and their colleagues.

deliberate attempt to tailor it to each state's needs and avoid unnecessary contacts during this very busy time. Further, key materials were available at the project website. However, some of the grantees felt "adrift" and believed they would have benefitted from more inclusion in the technical assistance activities for the other states, or from more grantee-specific conference calls and other facilitated communication among the grantees. Generally, looking back over their program implementation efforts, some grantees felt that they confronted more "unknowns and guesswork" than expected. They believed they would have benefitted from more guidance on issues that may have seemed too trivial to warrant contacting RTI, but that accumulated over time.

Documents and survey materials should be as user-friendly as possible.

Some of the documents distributed via the project website, such as the MS Word document that was circulated as the approved instrument for the EDS, while graphically well-designed were difficult to use as electronic forms. If the EDS questionnaire had been available in Adobe Acrobat, a format commonly used in Federal data collection, it would have offered more control for data validation, forms distribution, completion rate monitoring, and data extraction.

EDS data elements need clear and timely definitions.

The states would have appreciated more specificity in the definition of some of the EDS data elements, since these are part of the blueprint for system designers. Some of the states described the data as "somewhat vague," i.e., no standard specified, and the wording of questions as "tolerant." While flexibility in data definitions accommodates multiple state systems it makes programming any particular state system a challenge. While RTI posted the Supplemental Instructions Manual at the website in late October 2008 a few days before the November 4, 2008 election, the grantees either did not know of its existence or found that using it was moot due to the late release date. By late October 2008 the grantees' system designs were well underway for the November 2008 election and their vote tabulation vendors had completed programming for the 2008 election several months before the manual was made available.

NOTABLE SUCCESSES

Identified among the grantees' successes were key achievements, lessons learned, and best practices, including procedures and approaches applicable to other states.

Key Achievements

Although the grant period continued until June 30, 2009, the grantees met grant requirements and documented a number of achievements. Key among these were the following:

Submitting the 2008 survey data.

All five grantees reached their main goal and were able to submit election data at the precinct level. As a group, they provided a higher percentage of the data elements on the 2008 EDS than they were able to provide for the 2006 survey. As noted above, four of the five submitted over 95 percent of the 2008 EDS core data at the precinct level. The fifth state submitted its 2008 EDS data in several formats and only partial core data were available at the time of this report.

Improving election data collection and reporting technology.

All five grantees advanced the efficiency and effectiveness of election data management within their states. Despite a myriad of challenges, each state made significant progress in improving or enhancing its statewide electronic election data collection and reporting system, demonstrating substantial improvements in data availability for all stakeholders.

Training local election officials.

Four of the five grantees' system improvements or enhancements required some level of user updating or training. These included sophisticated and easy-to-use online training developed by state university faculty specializing in adult education, developing or updating system user "portals" online and "piggy-backing" training on voter registration system training.

Developing a "win-win-win-win" vision.

The grantees were able to demonstrate to all involved the efficacy of improved or enhanced electronic election data collection systems. For some grantees, experiences with vote tally challenges, such as recounts, dramatically illustrated the efficacy of a fully electronic election data collection system. For some local election officials, simply the nature of electronic reporting freed staff from tedious and time-consuming manual report preparation, itself a substantial reward.

To some extent, state experiences in developing statewide voter registration systems after HAVA served as a positive precedent for the election data collection improvement projects. Grantees were often able to build

on the example set by successful, efficient and effective implementation of the voter registration systems to develop stakeholder support for their election data collection improvement or enhancement program.

The states developed working groups and used other mechanisms to include stakeholders in program plans, testing, and implementation.

Lessons Learned

Among the suggestions grantees offered other states considering election data collection system improvements or enhancements the following were key themes:

Timing and scheduling.

There are four important timing and scheduling considerations when planning election data collection system improvements. First, the state bureaucracy must be able to accept and manage federal grant funds in a timely fashion. If possible, when planning a grant application, election officials should initiate a dialogue with the relevant state agency, alerting it to expect federal grant money for elections officials and determining how best to prepare the state to efficiently accept and manage such an award.

Second, the schedule for system improvements or enhancements must be generous enough to accommodate significant periods for design and testing. This includes stakeholder input as well as their review of planned system functions and participation in pilot testing. Following pilot testing, system designers make design refinements which are tested again before final implementation. The final step in adopting the new or re-designed system includes training local election officials. The volume of training and follow-up depends on the extent to which the new or re-designed system departs from the previous version. Depending on where each state is in the system design process when special funding is made available, an appropriate schedule for a federal grant-funded system improvement or enhancement program can range from 12 to 24 months.

Next, system improvements or enhancements must be planned well in advance of elections for which they will be required to accommodate vote tabulation vendors' programming and local election jurisdiction testing schedules. While advance periods differ by state and local jurisdiction, vote tallying vendors may begin programming and testing their machines for major elections 12 to 24 months in advance. Vendor testing is followed by local election jurisdiction testing. When state system improvements or enhancements require certain information from vote tabulation equipment, system designers

must consider this synchronization when the vendors are planning their programming.

Finally, the calendar of elections itself imposes timing and scheduling constraints on election data system improvements or enhancements. During busy election periods election officials may have limited time to commit to the system design or re-design effort, risking delays and/or limiting stakeholder input, reducing the overall efficiency and effectiveness of the program. Several grantees used the pilot test process to ensure that system improvements and user training were thoroughly tested before involving all local jurisdictions. Also, due to the very high profile for presidential elections and the concomitant testing and review associated with them, plus the potential for large numbers of new voter registrations close to the election, several grantees avoided full implementation of the new system for the 2008 election. These grantees opted instead to use pilot testing reach "proof of concept" and then scheduled full implementation for the next scheduled election, e.g. 2009 primary elections.

Stakeholder involvement.

This is critical in a decentralized state where election administration decisions reside with county or municipal officials, but it is also essential in a centralized one. Stakeholders, local election officials as well as election data users and vote tabulation vendors, can provide critical detailed information for system planners and designers. They can provide system designers with various perspectives on current system functioning, gaps, limitations and shortcomings as they experience them.

Involving local election officials in pilot tests of training materials as well as in testing the functionality and usability of a new system or system enhancements not only highlights needed refinements, but also increases the likelihood that stakeholders will support and endorse the new system.

Have a clear understanding of data reporting needs and system design goals.

System designers and stakeholders make the most effective contributions to system design when they have a heightened and specific understanding of the expectations for it. Especially when resources are limited, system designers can plan to develop improvements or enhancements in phases and/or stages, making the most effective use of resources while producing the needed products or outcomes for each phase. Stakeholders, especially system users, can help to prioritize the functions to be developed in each phase. Two critical sets of data specifications

that support efficient and effective system design include standardized election information definitions and terms (currently these may vary for local jurisdictions in states with decentralized election administration) and specific operational definitions for EDS data items. The 2008 EDS Supplemental Instructions Manual will provide an important part of the specifications for future system development to the extent that the 2010 EDS questionnaire follows it.

Best Practices

The grantees made a number of suggestions for other states planning election data system enhancements. All were more than willing to consult with other states directly. They supported especially the following six practices.

Establish formal state government support for centralized election data reporting via state law or regulation.

The law or regulation should mandate electronic transmission of election data to the state. For states where election administration decisions are made at the local level, a legal requirement provides a positive foundation for statewide efforts to develop, improve, or enhance centralized election data collection and reporting.

Establish a substantial lead time for the program and be generous in establishing the post election reporting schedule.

Technological improvements require a multi-step design and testing phase followed by thorough formal user training before implementation. Election official input is critical to program success, however regular election functions must be conducted uninterrupted while the program is underway. Therefore the program schedule must accommodate not only the specific tasks and activities required for the program but also the election schedule at the local level. Finally, it is important to note that reporting on November elections is complicated by other end of calendar-year reporting and data gathering activities for local election officials.

Use experienced system and database programmers. System designers must not only be experts in developing complex systems that include substantial flexibility to accept reporting from multiple voter tabulation systems, but also expert at developing a simple and clear user-interface.

Keep stakeholders “in the loop”.

As noted above, stakeholder acceptance and satisfaction will be increased and system efficiency will be ensured with stakeholder involvement. Those who work with election

data collection and reporting and who use election data are most familiar with system gaps and shortcomings, especially those that may not be obvious to system designers and senior election officials. Stakeholders can also help to prioritize improvements and enhancements. Receiving input, disseminating progress reports, and providing demonstrations can be accomplished through various formal means such as working groups, advisory boards, user-groups and newsletters and informally via user portals.

Pilot test system enhancements.

Designing an election data collection and reporting system requires coordinating complex operations, yet a simple façade must be presented to system users. Testing not only involves ensuring that every manipulation and feature is performing as planned, but also that users can become proficient with it and use it during a demanding election cycle. Pilot testing the system enables designers to perform the fine-tuning that makes it available and acceptable to the greatest number of local users.

Train and support system users.

The most elegant system design will not be effective if users are not confident. Users need thorough formal training and timely support. The grantees recommended multi-modal training (online, in-person), the use of “frequently asked questions” (FAQ) lists online, online customer portals and other approaches to readily-available assistance. They noted that this training can be related to training provided recently on voter registration system enhancements.

ONGOING CHALLENGES

The feedback from grantees and the site visits highlighted a number of challenges for the election data collection systems in those states. The ongoing challenges singled out by the grantees are:

1. The need to streamline the data collection process remains a challenge, especially for states with a decentralized or “bottom-up” organization for election administration.
2. The lack of standardized and/or operationalized data definitions for elections data and for the EDS is a continuing challenge for system design efforts.
3. The use of multiple vote tabulation vendors makes data standardization and uploading of voting information from vendors to the state systems complex and burdensome.

4. Securing the “buy-in” of local election officials for electronic reporting at the precinct level is a continuing challenge.
5. Lack of specificity in file format for the 2008 EDS. This resulted in the 2008 EDS contractor receiving not only differing, but in some cases unusable data files.
6. Manual input of election results in some states. Manual input is a practice that needs to be minimized for two reasons: (1) it is conducive to inaccuracies, and (2) there are always security concerns when a manual activity is required to transfer election results between systems.
7. Some local jurisdictions are unable and/or unwilling to use electronic transmission for election data because of distrust of the Internet and resist putting election information online. This lack of trust disrupts election data system integration and data interchange between the levels of the system.
8. Reporting on the UOCAVA vote remains a challenge for some of the grantees.
9. There is some opposition to precinct-level reporting at municipal and even county levels because reporting at that level greatly increases the workload for county and municipal clerks.

GRANTEE FUTURE PLANS FOR THEIR ELECTION DATA COLLECTION SYSTEMS

The grantees consider their election data systems to be works-in-progress and each has a series of priorities for future development. Among these are:

1. Integrate election data systems: grantees using two or more independent election information systems plan to integrate them so that recordkeeping and reporting will be more timely, accurate,¹⁷ and efficient. For some grantees this means improving the links between the statewide voter registration system and the election data system.
2. Move to the data warehouse concept. Data warehouses are substantial databases that not only store many years of election data, but are also extraordinarily flexible in enabling users to tailor reports. The data warehouse concept is a natural outgrowth of successful implementation of statewide integrated election data

collection and reporting systems—providing more functionality to data users.

3. Develop reports and make election data more readily available in near real-time for the media and other election data users. This includes adding precinct-level vote totals to state elections websites. Each grantee has a variety of election data available to the public via its website. Several see expanding the data available and online reporting functions to be an important next step.
4. Eliminate manual data reporting. For a variety of reasons some local jurisdictions continue to depend on non-electronic (manual) reporting. For some states there continues to be a considerable manual effort involved in election data compilation, verification and validation.
5. Improve UOCAVA and absentee ballot data management. Especially among those states with decentralized election administration, jurisdictions may have differing categories for UOCAVA and absentee voters making it difficult to produce consistent reports. In some states elections procedures for these voters are more complex than the EDS questionnaire permits. For example, in Illinois there are several classes of absentee voters and each is handled differently. These states plan to work on revising and rationalizing UOCAVA and absentee ballot data management procedures and practices to provide more uniformity across the state and to improve the quality of reports to the EAC and other data users.
6. Ensure that all users are thoroughly trained. Especially for those grantees whose systems were designed through a pilot program, next steps involve implementing the system statewide based on completing statewide election administrator training.

¹⁷ One of the several sources of inaccuracy in election reporting is the fluid nature of some data elements. For example, voters may move to a different precinct or county and UOCAVA voters may return from abroad.

CHAPTER V.

Recommendations for Program Enhancements

The grantees' experiences and opinions support a series of recommendations regarding the feasibility of collecting the EDS data as part of the grant program and on the value of providing greater assistance to states in their attempt to comply with Congressional mandates for additional election data collection.

HEIGHTEN THE EAC'S PROFILE AMONG STATE AND LOCAL ELECTION OFFICIALS

The EAC can serve as the national champion of effective and efficient election data collection and reporting. Election officials with only occasional contact with the EAC, which could be as infrequent as the administration of the EDS on even years, may feel little connection with it and electronic reporting overall, and be less willing to put effort into EDS reporting, regardless of mandates. More visibility for the EAC, especially in terms of demonstrating the benefits of electronic election data collection and reporting to state and local election officials for internal state and local uses, would further the process of moving election data from many disparate repositories to a comprehensive electronic model. A more visible EAC with a specific focus on disseminating the lessons learned by grantees and other high performers on the EDS would help to engage those states with low levels of EDS reporting on the core items (see [Table 4](#), above).

SUPPORT THOSE STATES AND LOCAL JURISDICTIONS WITH LESS SOPHISTICATED SYSTEMS

Applicants for the current grants had to be reasonably sure that they could produce precinct-level election data some four months after the November 2008 election. This eliminated from the competition those states with less advanced systems and/or a larger proportion of local election jurisdictions that were less accommodating and/or less technologically advanced or for whom gathering and disseminating data about election administration may not be a priority.

These states perhaps need to explore or further explore the benefits of an electronic data collection system and

establish reporting goals. Those with decentralized election administration should begin or continue the process of fostering collaborative relationships with local election officials to move towards an improved ability to collect and report election data. Since resource availability, e.g. basic technological capabilities, such as desktop computers, training in basic computer applications such as spreadsheets, and access to Internet connections, can be critical for moving local jurisdictions towards electronic reporting, Congress and the EAC may wish to consider a grant program to assist local election officials to make such improvements.

At the state level there may be states willing to participate in a program to improve the depth of their data collection efforts that are currently several stages away from reporting precinct-level data. The EAC and Congress may consider a phased program to increase these states' reporting level for the 2010 EDS with precinct-level reporting an ultimate goal for 2012 and beyond. Eventually, Congress and the EAC may want to consider making a condition of participation in future grant programs a state's ability to report core election data at the precinct level.

FACILITATE DIALOGUE

The EAC can enable current grantees to exchange information and solutions among themselves and with potential future grantees and include other states with high EDS response rates in the dialogue as well. The current grantees would like to share their experiences and suggestions with other states. In addition, there are eleven other states with 100 percent reporting on the 2008 EDS core data, many of which should be willing to support and encourage their peers, especially if this were formally established and funded. The current grantees, their systems contractors (where relevant), RTI (the EDS technical assistance contractor) and other high performing states are a substantial resource to be tapped in this regard.

ADDRESS THE NEED FOR NATIONAL ELECTION DATA REPORTING STANDARDS

Nationwide data-gathering efforts are most effective

when there are common definitions of terms and agreement about what is being measured. Currently, the lack of standardization about vocabulary, data formats, and other technical aspects of data collection, is a hindrance to the efficient gathering and dissemination of data concerning election administration nationwide. Election administration is not the only government service that is provided locally and is subject to local norms, vocabularies, practices, and procedures. Other federal programs that gather information about the activities of local governments (e.g., the Census of Governments) have overcome the challenges produced by the lack of a common vocabulary to create data-gathering efforts that adhere to national standards. Finally, the lack of data reporting standards can inhibit establishing a robust national market to support tabulation vendors who would develop more technologically advanced products to help local officials tabulate and disseminate election data.

As noted above, there are three sources of confusion and conflicting data definitions in the election data community. First, not every state has a set of standard definitions or uniform practices for collecting and compiling election data. For example, the same contest may be named differently in each local election dataset. Second, tabulation vendors do not use a uniform set of conventions, and there may be several tabulation vendors within a state. Last, EDS data items change over time and the final EDS questionnaire may be released to the states quite late in the election preparation schedule, after tabulation vendors have completed their programming.

As a first step toward establishing nationwide standards in reporting election data, the EAC should consider developing a working group on election data reporting, comprised of the principal stakeholders, including local and state election officials, election system vendors, political consultants, and academic experts. Such a group could help to bring terminology into closer agreement nationwide, establish common data formatting standards, and help to guide the future evolution of the Election Day Survey.

EXTEND FUTURE GRANT PERIODS

Due to the need for substantial design and testing for these critical systems coupled with the sensitivity of reporting on election returns, especially for Federal elections, future grantees would be well served by lengthening the grant period to 18 to 24 months as well as initiating it 12 to 18 months prior to a major election. Testing system changes in off years is one of several useful recommendations provided by the grantees.

APPENDIX A

Site Visit Guides and Technical Assistance Questionnaire

STATE LEVEL QUESTIONS

Election Data Collection Grant Program Activities

1. Big picture *(over all three components of the elections system: voter registration and election returns databases and vote tallying technology)*

- Overall, what is the best thing you can say about your election data collection system today—what is its greatest strength?

- Overall, what is the worst thing you can say about your election data collection system today—what is the most significant challenge?

2. Goals: Were you able to meet your goals given the resources available under the grant, i.e. time between grant award and Election Day, the amount of the award, other available funds to leverage, the state's level of readiness, and so forth?

If you were not, what remains to be done to make this possible?

3. Major outcomes: What were/are your main achievements and significant challenges in meeting your goals under the grant?

- Main achievements

- Biggest challenges

4. Reactions—Satisfaction

- A. How do state level elections people feel about the project?
(Success; made their life more difficult; want something more/better)

...continued on next page

State Level Questions continued....

B. How do local level elections people feel about the project?
(Success; made their life more difficult; want something more/better)

C. How do the people responsible for entering the data/reporting the data feel about the project?
(Success; made their life more difficult; want something more/better)

5. **Lessons Learned:** What are the main lessons you learned during implementation of grant activities?

6. **Wishful Thinking 1.:** If you could have any election data collection system what would that be? *(Knowing what you know today, what would be ideal?)*

- Ideal election data collection system

7. **Wishful Thinking 2.:** If you could make changes to your current system, what would they be?

- Changes I would make

8. **Shared wisdom:** What wisdom can you share with other states about improving or increasing election data collection and reporting to the EAC/federal government?

COUNTY LEVEL QUESTIONS

Election Data Collection Grant Program Activities

1. Big picture (over all three components of the elections system: voter registration and election returns databases and vote tallying technology)

- Overall, what is the best thing you can say about your state's election data collection system today—what is its greatest strength?

- Overall, what is the worst thing you can say about your state's election data collection system today—what is the most significant challenge?

2. Goals:

- What were your county's goals regarding election data collection for the 2008 election and the 2008 Election Day Survey?

- Were you able to report all data at the precinct level on the 2008 election to the state for inclusion in the state's response to the Election Day Survey?

If you could not report all precinct-level data, what remains to be done to make this possible?

3. Major outcomes: What were/are your main achievements and significant challenges in meeting your goals for reporting on the 2008 election?

- Main achievements

- Biggest challenges

4. Reactions—Satisfaction

A. How do your staff feel about the enhancements the state is making to the election data collection system?

B. How do the people responsible for entering the data or reporting the data feel about the enhancements the state is making to the election data collection system?

...continued on next page

County Level Questions continued...

5. Lessons Learned: What are the main lessons you learned during the election data collection system enhancement activities?

6. Wishful Thinking 1.: If you could have any election data collection system what would that be? *(Knowing what you know today, what would be ideal?)*

- Ideal election data collection system

7. Wishful Thinking 2.: If you could make changes to your current system, what would they be?

- Changes I would make

8. Shared wisdom: What wisdom can you share with other counties or states about improving or increasing election data collection and reporting to the EAC/federal government?

LOCAL LEVEL QUESTIONS

Election Data Collection Grant Program Activities

1. Big picture (*over all three components of the elections system: voter registration and election returns databases and vote tallying technology*)

- Overall, what is the best thing you can say about your state's election data collection system today—what is its greatest strength?

- Overall, what is the worst thing you can say about your state's election data collection system today—what is the most significant challenge?

2. Goals:

- What were your goals regarding election data collection for the 2008 election and the 2008 Election Day Survey?

- Were you able to report all data at the precinct level on the 2008 election to the state for inclusion in the state's response to the Election Day Survey?

If you could not report all precinct-level data, what remains to be done to make this possible?

3. Major outcomes: What were/are your main achievements and significant challenges in meeting your goals for reporting on the 2008 election?

- Main achievements:

- Biggest challenges in reporting on the 2008 election:

4. Reactions—Satisfaction

A. How do your staff feel about the enhancements the state is making to the election data collection system?

B. How do the people responsible for entering the data or reporting the data feel about the enhancements the state is making to the election data collection system?

...continued on next page

Local Level Questions continued...

5. Lessons Learned: What are the main lessons you learned during the election data collection system enhancement activities?

6. Wishful Thinking 1.: If you could have any election data collection system what would that be? *(Knowing what you know today, what would be ideal?)*

- Ideal election data collection system

7. Wishful Thinking 2.: If you could make changes to your current system, what would they be?

- Changes I would make

8. Shared wisdom: What wisdom can you share with other local elections administrators, counties or states about improving or increasing election data collection and reporting to the EAC/federal government?

TECHNICAL ASSISTANCE EVALUATION QUESTIONNAIRE

The purpose of this form is to collect information on any technical assistance your state received concerning election data collection activities and your state's system to enable you to provide data for the Election Day Survey. This includes technical assistance (TA) from Research Triangle Institute (RTI), the Election Assistance Commission (EAC), and any other sources.

Most recent RTI technical assistance (TA) episode

1. When did you most recently request TA from RTI?

____ / ____ / ____
month day year

Never (*Skip to Question 10*)

2. What contact method did you use?

E-mail Telephone Both

3. When did they reply?

____ / ____ / ____
month day year

4. What was the TA topic?

5. What was your question, concern or need?

6. Did the TA answer your question or address your need?

Yes Partially No

7. How satisfied were you with the TA—what letter grade would you give it on a scale from A (excellent), B, C, D, to F (failure)?

A B C D F

8. Pros and Cons:

A. What was the best part of the TA?

B. What was the worst part of the TA?

9. Would you recommend that another state ask RTI for this type of help?

Yes No

...continued on next page

Most recent EAC technical assistance (TA) episode

10. When did you most recently request TA from EAC?

____ / ____ / ____
month day year

Never (Skip to Question 19)

11. What contact method did you use?

E-mail Telephone Both

12. When did they reply?

____ / ____ / ____
month day year

13. What was the TA topic?

14. What was your question, concern or need?

15. Did the TA answer your question or address your need?

Yes Partially No

16. How satisfied were you with the TA—what letter grade would you give it on a scale from A (excellent), B, C, D, to F (failure)?

A B C D F

17. Pros and Cons:

A. What was the best part of the TA?

B. What was the worst part of the TA?

18. Would you recommend that another state ask EAC for this type of help?

Yes No

Technical Assistance from Other Sources

19. Between May, 2008 and February, 2009, did you request or obtain technical assistance (TA) on your election data collection system from any other source, for example, another state?

Yes No (Skip to Question 28)

20. When was that?

____ / ____ / ____
month day year

21. Who provided the most recent TA? (Mark ALL that apply)

Another state(s) → Which one(s)? _____

A system vendor → Which one? _____

A consultant hired by the state → Who? _____

22. What was the TA topic?

23. What was the question, concern or need?

24. Did the TA answer your question or address your need?

Yes Partially No

25. How satisfied were you with the TA- what letter grade would you give it on a scale from A (excellent), B, C, D, to F (failure)?

A B C D F

26. Pros and Cons:

A. What was the best part of the TA?

B. What was the worst part of the TA?

27. Would you recommend that another state use this source for this sort of TA?

Yes No

...continued on next page

Unmet Technical Assistance Needs

28. Do you have any current unmet need for technical assistance?

- Yes No (Skip to Question 32)

29. What is the TA topic?

30. What is the question, concern or need?

31. Do you expect to get the assistance you need?

- Yes → Where? From whom? _____
 No → Why not? _____

Overall Technical Assistance Evaluation

32. Overall, what was the best aspect of the technical assistance you received?

33. Overall, what was the most critical failing in technical assistance?

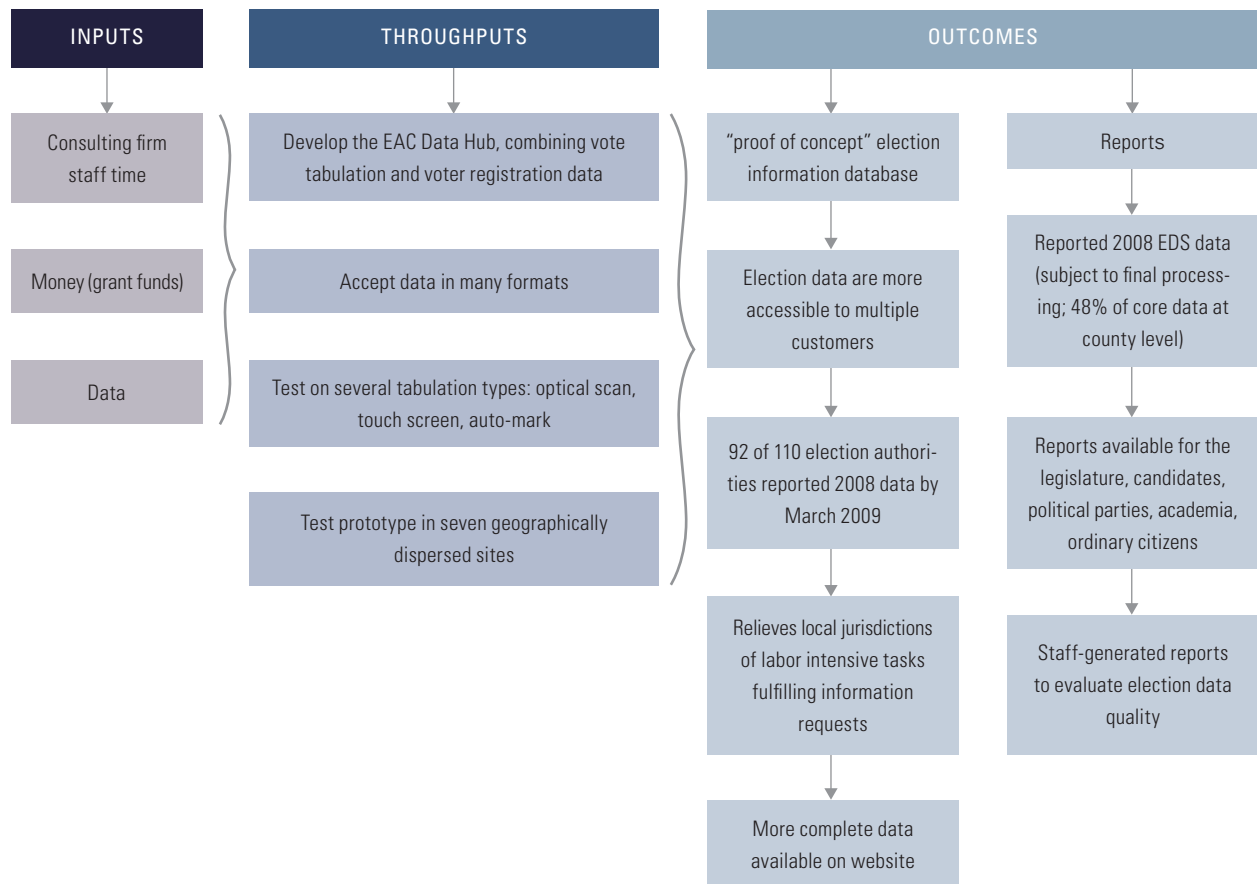
34. What recommendations do you have for providing assistance to the states to enable them to collect election data and respond to the Election Day Survey?

35. Do you have any other comments about your state's ability to collect election data and respond to the Election Day Survey? (If you need more space, please use the back of this page)

APPENDIX B

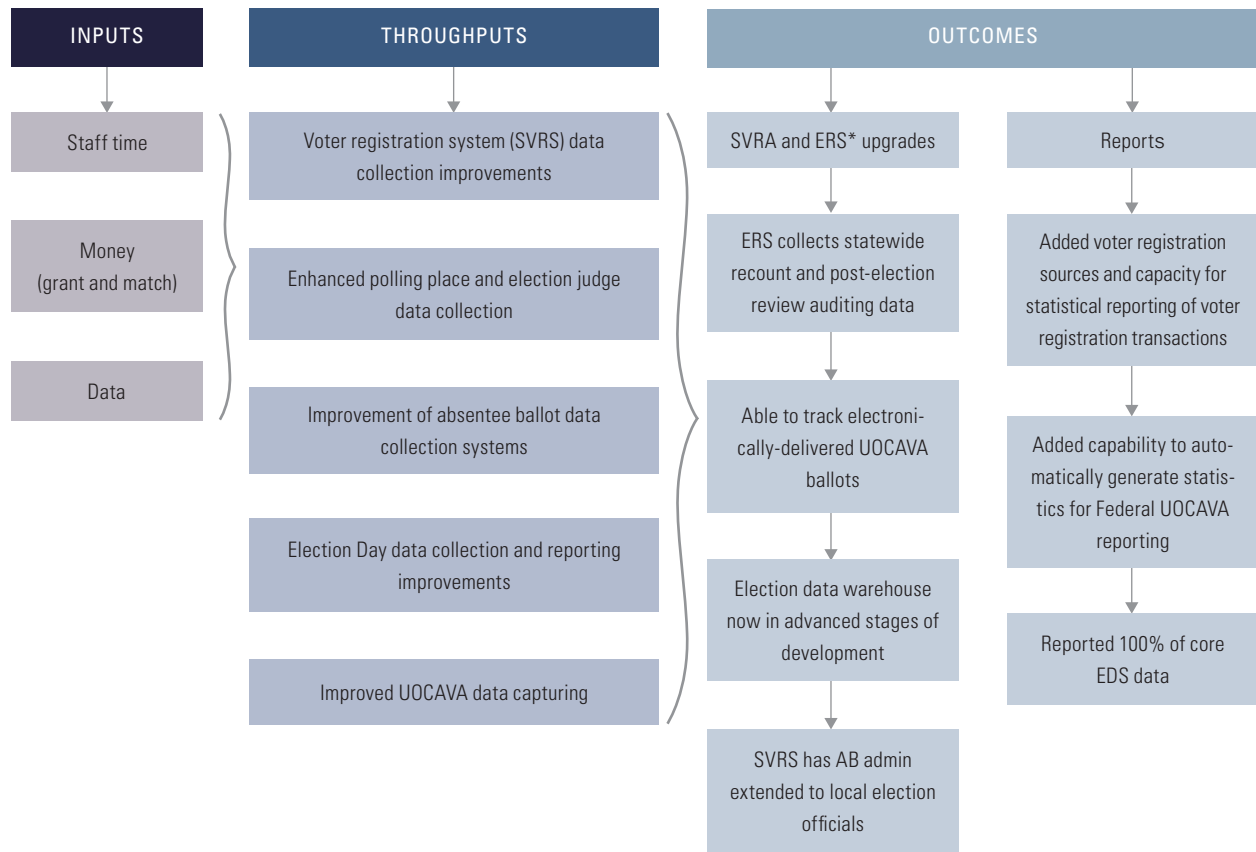
Grantee Logic Models

ILLINOIS ELECTIONS DATA COLLECTION GRANT PROGRAM



Future plans include seeking funds for an electronic canvass to eliminate paper reporting.

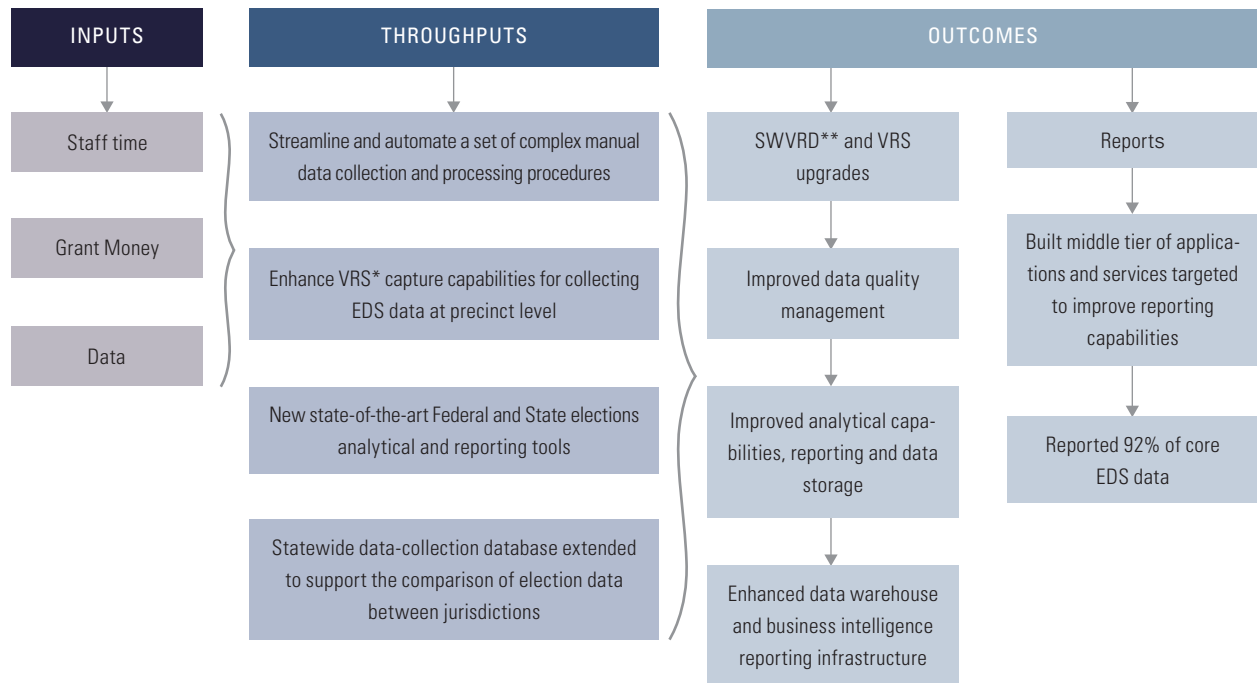
MINNESOTA ELECTIONS DATA COLLECTION GRANT PROGRAM



Future plans include expansion of the SVRS municipal AB module, modifying the ERS to support additional data import and export capabilities, expanding voting equipment tracking, expansion and development work on the Election Data Warehouse, and developing a set of data standards and practices for the standardization of election data formats to support precinct-level election reporting including: (1) candidate, offices, districts, precincts, (2) ballot order and format, (3) election results, and (4) media file reporting at the precinct level.

* Election Reporting System

OHIO ELECTIONS DATA COLLECTION GRANT PROGRAM

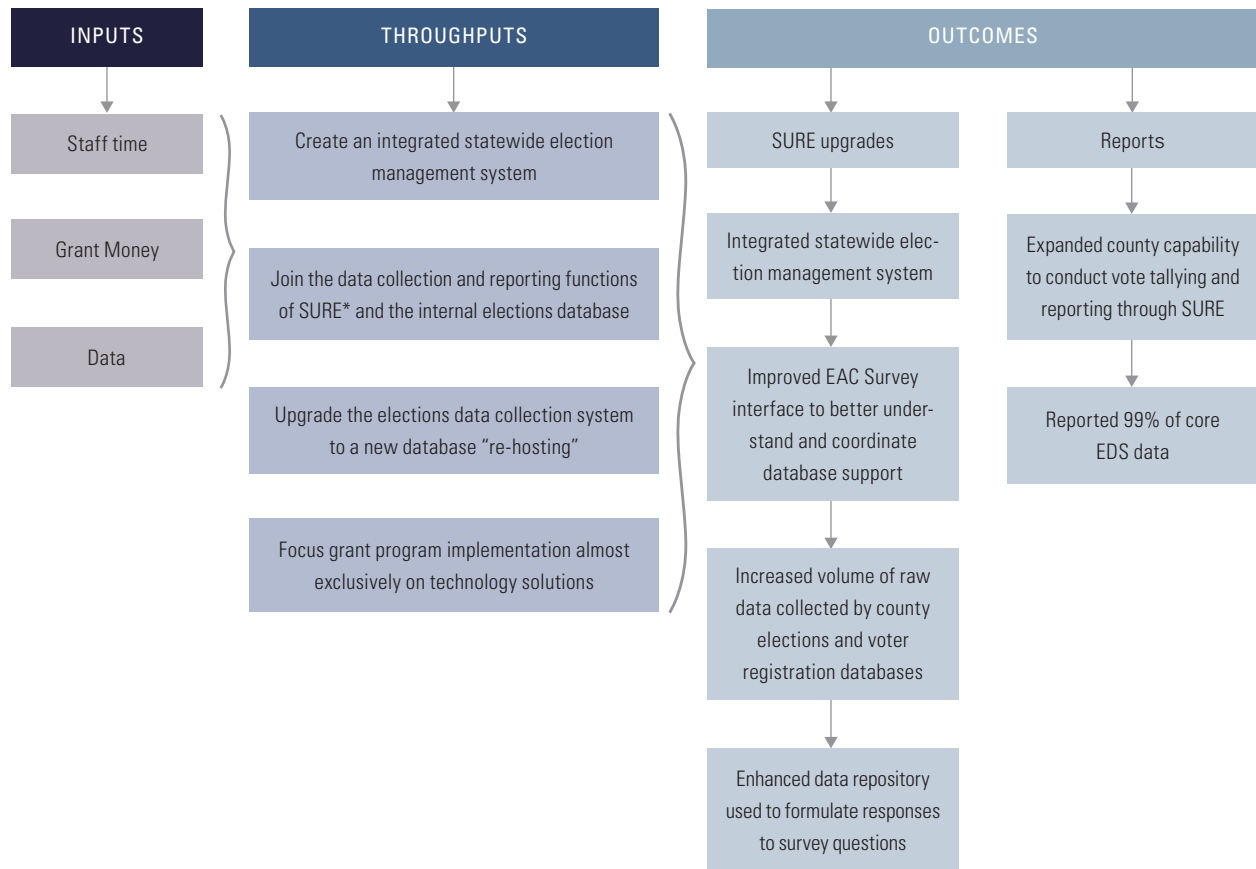


Future plans include building on the efficiencies of the new system capabilities to address current challenges, especially those applying to data collection and data quality.

* Voter Registration System

** Statewide Voter Registration Database

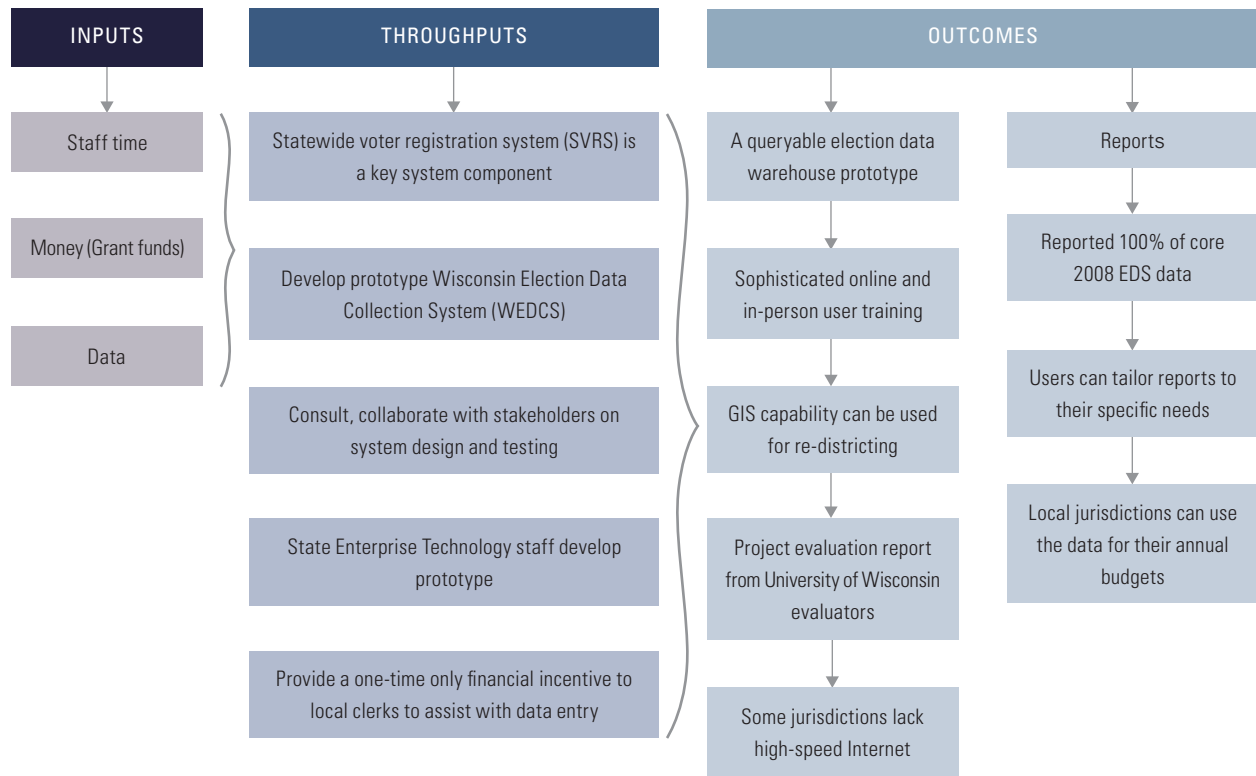
PENNSYLVANIA ELECTIONS DATA COLLECTION GRANT PROGRAM



Future plans include an effort to improve the timeliness of over/under vote data, which is currently gathered through the various voting systems and further enhancements such as enabling the system to more readily accommodate data from independent sources (e.g., voting systems and third-party databases maintained by counties in parallel with SURE). Pennsylvania also plans to enhance the newly developed data warehouse to collect precinct-level voter registration and election data for the purpose of improving ad-hoc reporting at the state, county, legislative district, and precinct levels.

* Statewide Uniform Registry of Electors

WISCONSIN ELECTIONS DATA COLLECTION GRANT PROGRAM



Future plans include encouraging local jurisdictions to use the absentee ballot tracking functionality present in the Statewide Voter Registration System (SVRS) and to develop procedures to attempt greater uniformity in tracking UOCAVA ballots.

APPENDIX C

Summary Response Rates for Grantee States, 2006 and 2008

SUMMARY RESPONSE RATES FOR GRANTEE STATES, 2006 and 2008

Reporting rates								
Item	Var # for 2008	Var # for 2006	Illinois			Minnesota		
			2008		2006	2008		2006
			County-level	Precinct-level	County-level	County-level	Precinct-level	County-level
Total registered	A1	q022004total	85%	94%	96%	100%	100%	100%
Total active	A3a	q022004a	90%	100%	98%	100%	100%	100%
Total inactive	A3b	q022004i	85%	94%	85%	NA	NA	NA
Votes cast	F1a	q33total	86%	96%	100%	100%	100%	100%
Provisional cast	E1a	q33p	0%	0%	63%	NA	NA	0%
Provisional counted	E2a	q34p	0%	0%	46%	NA	NA	0%
	E2b	(partial ballot)	0%	0%		NA	NA	
Provisional rejected	E2c	q36total	^d	^d	57%	NA	NA	NA
Turnout: polling places	F1b	q33a	^d	^d	89%	100%	100%	100%
Turnout: absentee	F1c	q33dc	^d	^d	3%	100%	100%	0%
	(UOCAVA voters)	(domestic civilian)	^d	^d	4%	100%	100%	0%
	F1d	q33dm			27%			94%
	(domestic absentee)	(domestic military)			2%			84%
		q33om			0%			11%
		(overseas military)						
	q33oc							
	(overseas civilian)							
	q33f (FWAB)							
Turnout: early	F1f	q33e	^d	^d	97%	NA	NA	NA
Turnout: provisional	F1e	q33p (repeat)	^d	^d	63%	NA	NA	0%
Turnout: total	F1a (repeat)	q33total (repeat)	86%	96%	100%	100%	100%	100%
Average			43%	48%	54%	100%	100%	66%

^a No distinction between full and partial counts.

^b No distinction between UOCAVA and domestic absentee ballots.

^c Early voting turnout not reported, although Ohio has early voting.

^d Data being processed by RTI

Reporting rates								
Pennsylvania			Wisconsin			Ohio		
2008		2006	2008		2006	2008		2006
Stringent	Less stringent	County-level	Stringent	Less stringent	County-level	Stringent	Less stringent	County-level
100%	100%	100%	99%	100%	0%	100%	100%	100%
100%	100%	100%	71%	100%	0%	100%	100%	100%
100%	100%	97%	NA	NA	NA	95%	98%	52%
100%	100%	91%	99%	100%	0%	100%	100%	100%
97%	99%	1%	99%	100%	0%	97%	99%	100%
99%	99%	0%	99%	100%	0%	97% ^a	100%	100%
97%	100%		100%	100%				
97%	97%	0%	99%	100%	0%	95%	100%	100%
100%	100%	82%	71%	100%	0%	97%	99%	100%
100%	100%	0%	99%	100%	0%	97% ^b	99% ^b	100%
100%	100%	0%	99%	100%	0%			93%
		0%			0%			84%
		0%			0%			78%
		0%			0%			19%
NA	NA	NA	NA	NA	NA	0% ^c	0% ^c	0%
100%	100%	1%	99%	100%	0%	98%	100%	100%
100%	100%	91%	99%	100%	0%	100%	100%	100%
99%	99%	36%	94%	100%	0%	90%	92%	81%

^a No distinction between full and partial counts.

^b No distinction between UOCAVA and domestic absentee ballots.

^c Early voting turnout not reported, although Ohio has early voting.

^d Data being processed by RTI

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