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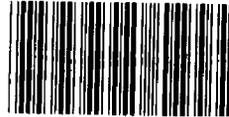
GENERAL GOVERNMENT
DIVISION

B-207140

The Honorable John E. Porter
House of Representatives

118348

Dear Mr. Porter:

      Subject: Limited Review of the District of Columbia
                Board of Elections and Ethics' Voter
                Registration System (GGD-82-70)

      This report is in response to your March 23, 1982, request
that we follow up on our recent study of the District of Columbia's
automatic data processing (ADP) operations 1/ with a review of the
District of Columbia Board of Elections and Ethics' voter regis-
tration system. Specifically, you asked us to determine to what
extent the problems we found with the voter registration system
might jeopardize voters' rights and to determine what immediate
steps the Board might take to secure normal election participa-
tion by registered, eligible voters. In order to report to you
by April 19, 1982, you requested that we not obtain formal agency
comments on this report.

      To carry out your request, we interviewed the Board's
Administrative Office officials, Elections Office and ADP unit
employees, an ADP expert hired by the Board to review its ADP
unit, and other Board officials. We reviewed available documents
and correspondence relating to the ADP problems and the election
preparations. We spent a considerable amount of time gathering
information, finding out how the registration process worked,
and cross-checking information obtained during interviews. We
reviewed transcripts of the District Council Government Operations
Committee's hearings on the November 1981 election problems. Our
review was made in accordance with GAO's current "Standards for
Audit of Governmental Organizations, Programs, Activities, and
Functions." Accordingly, we reviewed the general ADP controls to
determine whether (a) they have been designed according to manage-
ment direction and known requirements and (b) they are operating
effectively to provide reliability of, and security over, the
data being processed. We also reviewed the voter registration
system application controls to assess their reliability in process-
ing data in a timely, accurate, and complete manner.

1/"Better Management Would Improve the Effectiveness of the
District of Columbia's ADP Resources" (GGD-82-47, Mar. 12, 1982).

Because of time constraints, we did not make any detailed reviews, analyses, or comparisons of voter registration computer programs, computer files, printed lists, cards, duplicate records, or incomplete records. In addition, we did not make any detailed reviews, analyses, or comparisons of voter records, challenged ballots, absentee ballots, election day operations, or post election operations.

OVERALL OBSERVATIONS

The lack of good management practices over ADP and election preparation activities caused confusion and inconvenience at polling places on November 3, 1981. The confusion and inconvenience stemmed from inaccurate computer lists of registered voters and insufficient quantities of ballots at some precincts. The inaccurate voter registration lists resulted from an almost complete lack of internal controls over (1) the creation and maintenance of computerized voter registration records and (2) computer software development and maintenance activities. Ballot shortages occurred at some precincts but, because of time constraints, we were not able to determine the exact nature, causes, and extent of the ballot problem.

As far as we could determine, the inaccurate voter registration lists did not preclude anyone from voting in the election. In the District, voters whose names do not appear on the registration lists may cast challenged ballots. There were indications, however, that some voters left the polls without voting because there was a lack of ballots at some precincts.

The Board of Elections and Ethics has initiated action to correct its computer list of registered voters. An ADP expert and a Board computer programmer have been working on the list to insert missing voter information and remove duplicate records. The Government Employees Insurance Company (GEICO), a private firm, recently volunteered its resources to help the Board in its efforts to correct the voter registration list.

VOTER REGISTRATION LIST WAS INACCURATE BECAUSE ADP CONTROLS AND PROCEDURES WERE POOR

The Board of Elections and Ethics has not established internal controls over data input, computer processing, and computer output operations. Also, the Board has not used good software development and maintenance practices. There was no documentation for the computer software used to update the voter registration master file and prepare the registration list. Changes made to the software prior to the election were not accurate or reliable.

As a result, the computer list of registered voters used for the November 3, 1981, election was inaccurate. In addition, a list of registered voters was not made available for public inspection as required by D.C. Code §1-1311(h)(1981). Many registered voters were inconvenienced because they had to cast challenged ballots on election day since their names did not appear on the computer list of registered voters.

The Board has not established a system of internal controls to ensure the accurate and reliable maintenance of the computerized voter registration master file and processing of changes to the master file. The Board does not verify that all new voter registrations and changes to existing voter registration information (for example, changes of name, address, party affiliation, and zip code) are accurately converted to magnetic media, accurately processed by the computer hardware and software, or accurately printed on the output lists and files (tapes). Also, the Board does not reconcile its computerized voter registration master file with its manually maintained voter registration card file. As discussed below, the lack of controls led to inaccuracies in the voter registration master file.

The Board also has not established software development and maintenance policies, standards, or procedures and its existing practices are weak. There was no documentation for the computer software developed by the Board which was used to process the voter registration master files and voter registration transactions for the November 1980 and the November 1981 elections. Although changes were made to the software between the 1980 and 1981 elections, there is no documentation which (1) shows who authorized the changes, (2) explains the changes made, and (3) records the testing and validation of the changes. Although information is scarce, on the basis of our discussions with the ADP expert and review of the registration lists, it appears that software changes made after the November 1980 election were not adequately tested and thus caused errors on the voter registration master file.

The voter registration master file used for the November 3, 1981, election was inaccurate. We scanned the computer list of registered voters and found many voter records with partially missing registration numbers, missing quadrants and zip codes, missing advisory neighborhood council/single member district designations, and missing voter registration dates. We also observed voter records which appeared as many as three times with identical names, registration numbers, house numbers, street addresses, apartment numbers, etc. While we were not able to document the extent of the inaccuracies, we were able to piece together the following information which provides some indication of the overall voter registration master file inaccuracies.

--An ADP expert, hired after the November 1981 election to review the ADP operations, was able to provide information from his analysis of the master file used for the November 3, 1981, election. According to him, of the 273,185 records (voters) listed on the master file and printed lists, 27,899 records did not contain zip codes, advisory neighborhood council/single member district information, party designation, etc., and 6,518 records were duplicates.

--There was an unexplained decrease of 15,652 registered voters between the November 1980 and November 1981 elections. There were 288,837 registered voters on the November 1980 election master file and 273,185 (including duplicates) on the November 1981 election master file. According to the Administrative Office and ADP employees, inactive voters were not removed from the voter registration master file as required by law between the 1980 and the 1981 elections. Also, Board employees believed that the number of valid deletions to the master file would not account for such a drop, especially since new registrations were added between the November 1980 and 1981 elections.

--The Board did not accumulate information on the number of new registrations, changes of voter registration information, or deletions received and processed between the 1980 and 1981 elections. Therefore, it was not possible to reconcile these numbers or determine the extent of the inaccuracies.

The Board does not have an accurate count of the number of manually maintained voter registration cards. Also, the Board does not reconcile the computer master file with the card file. Although the number of voter registration cards is not known, it seems to be much higher than the number of voters listed on the computer master file. The Special Assistant to the Board estimated that there are over 500,000 manually maintained voter registration cards, including about 20,000 duplicate cards. The Administrative Officer told us her estimate would be closer to 900,000. Elections Office and ADP employees told us that as of April 6, 1982, all 999,999 voter registration numbers were assigned to registered voters.

The Board did not, as required under D.C. Code §1-1311(h) (1981), place copies of the voter registration list in public libraries 14 days before the election so the public could inspect them. Although, according to Board employees, efforts to correct the inaccuracies on the master file began in the summer of 1981, they were not able to complete this work as well as update the master file (add new registrations and process changes) before the November 1981 election. The correction and update processing

continued until just before the election and Board employees said they were not able to produce and deliver voter registration lists 14 days before the election as required by law. According to the Special Assistant to the Board, on November 2, 1981, a copy of the voter registration list was placed in the Elections Office at the District Building for public inspection.

Many voters whose names did not appear on the computer lists of registered voters cast challenged ballots under D.C. Code §1-1313 (d),(e). The challenged ballot process requires the voter to sign a blank voter card, fill out and sign a special envelope (name, address, etc.), and vote. The voted ballots are placed in the special envelope and are hand counted later if the person is found to be a qualified voter based on the Board's voter registration card file. Voters cast 3,469 challenged ballots on November 3, 1981, 2,635 of which were approved and counted.

INSUFFICIENT BALLOTS AT PRECINCTS
AND OTHER ELECTION PREPARATION DIFFICULTIES
CAUSED PROBLEMS ON ELECTION DAY

Some precincts had an insufficient number of ballots for their voters, and certain other management problems affected preparations for the November 3, 1981, election. Information we obtained suggested that the lack of ballots prevented some people from voting; however, we were not able to determine the extent to which it occurred or why it occurred. The combination of personnel vacancies, lack of written procedures for election preparation, and the computer related voter registration problems appear to have made the task of preparing for the November 1981 election difficult and frustrating.

One problem that arose on election day 1981 was that some precincts did not have enough ballots for the single member district elections. Testimony given by a precinct captain before the District Council's Government Operations Committee showed that the precinct did not have enough ballots for voters. The precinct captain said some people came in to vote but could not because there were no ballots. According to the precinct captain, these people did not vote. The precinct captain could not recall having run out of advisory neighborhood council ballots in prior elections. We found a few pieces of correspondence from voters indicating that precincts had run out of single member district ballots. According to available records, the Board had to send a total of 3,777 additional ballots to 23 precincts on election day. The Administrative Office employee who ordered the ballots and allocated them among the 137 precincts said the allocation process was difficult because some single member district ballots had to be placed in as many as five separate precincts. Because of the

limited time for this review, we were not able to determine the full extent of this problem, its causes, or its effects. We did note, however, that information from the computerized voter registration list was used to allocate ballots to the precincts. As we discuss on page 3, information on the voter registration list was inaccurate.

Management problems affected the Board's preparations for the November 3, 1981, election. On August 10, 1981, the Board assigned the Elections Administrator to the position of Special Assistant to the Board. On August 11, 1981, the Board directed the Administrative Officer to assume the duties and responsibilities of the Elections Administrator in addition to her normal duties and responsibilities. According to the Administrative Officer, all supervisory positions in the Elections Office were vacant. She told us the Elections Administrator, Deputy Elections Administrator, Records Supervisor, and Records Assistant positions were vacant. In addition, the Administrative Officer said she had no election preparation experience and there were no written directives or operating procedures to guide her through the process. She said she hired intermittent employees and used Administrative Office staff to accomplish the work required to prepare for and conduct the November 1981 election. The Administrative Officer said her lack of experience in conducting elections as well as vacancies, the lack of written procedures, and the continuing ADP problems (as previously discussed) made the election preparation very difficult and frustrating.

OTHER SERIOUS INTERNAL CONTROL PROBLEMS JEOPARDIZE THE INTEGRITY OF THE BOARD'S ADP OPERATIONS

During the course of our review of ADP operations, we observed other serious internal control problems which, in combination, jeopardize the ability of the ADP system to function.

--There are no procedures to keep track of computer tape files. As a result, the Board could not identify the contents of 136 computer tapes stored at the District's SHARE computer facility. As discussed on page 8, these files and others were turned over to GEICO for identification and other analysis.

--There are no controls over the custody of critical production software, such as the computer programs which update the voter registration file and prepare voter lists. Computer programs are kept by the systems analyst in card form in his office instead of on magnetic media in the computer room where access to them can be recorded and controlled.

--There are no computer file and software backup procedures.
   As a result, crucial files such as the voter registration
   master file cannot be reconstructed if lost, destroyed,
   or damaged.

--The Board has not determined the specific actions, computer
   files, and computer programs which would be needed to recover
   from a disaster, such as fire, and resume normal operations.

--There are no clear lines of management authority over and
   responsibility for the operation of the Board's ADP unit.
   The ADP unit reports to the Administrative Officer except
   during elections when it reports to the Elections Office.

--After the November 1982 election, the Board is planning
   to implement an online voter registration system which
   was procured in 1979; but procedures to do so have not
   been prepared. An online system can be an effective
   management tool for handling data, but it requires very
   strict internal controls over access to terminals, access
   to the files and programs which manipulate them, trans-
   action validations, error handling, output balancing and
   reconciliations, etc. Given the Board's poor performance
   in controlling a simple batch-oriented voter registration
   system, we question its ability to operate a more sophis-
   ticated online system which requires even stricter internal
   controls.

STATUS OF EFFORTS TO CORRECT
THE VOTER REGISTRATION LIST

The Board has initiated action to correct its computer list
of registered voters. Correction efforts thus far have cost about
$38,000. Much more will be needed to resolve the inaccuracies,
duplications, and incomplete voter registration records on the
list.

The Board initiated an inhouse effort to determine the
magnitude of the problems and correct the voter registration
master file. The Board hired an ADP expert and reassigned Board
employees to the correction effort. According to the ADP expert,
as of March 15, 1982, these efforts have resulted in the removal
of 6,518 duplicate voter records and the correction of 21,122
inaccurate voter records. He added that the corrected master file
had 259,890 records; inaccurate records still totaled 6,777; and
records of voters presumed dropped had not been found. According

to information developed for us by the Administrative Office, efforts to determine and correct the voter registration list problems have cost at least $38,000 as detailed below.

Personnel costs (Dec. 29, 1981 to Apr. 3, 1982)

ADP expert	$12,510
ADP staff	16,744
Records office staff	6,074
Subtotal	$35,328

Computer usage (Jan. and Feb. 1982)	$ 2,623
Total	$37,951

According to an Administrative Office official, the Board also plans to spend an additional $33,000 for postage to mail information verification requests to all voters on the computer list once it has been corrected. Furthermore, the Board has asked the District Council for $100,000 of supplemental funds, most of which appear to be intended to help finance the correction effort.

GEICO recently volunteered its resources to help the Board in its correction efforts. GEICO is attempting to identify the contents of about 140 computer tapes, arrange them in chronological order, perform various analyses, and attempt to find out what happened and how it happened. On April 9, 1982, the Chairman of the Board of Elections and Ethics said GEICO will analyze the tapes to decide whether the tapes may be useful in correcting the voter registration master file.

CONCLUSIONS

The Board's internal controls over its computerized voter registration process as well as its software development and maintenance practices are totally inadequate. The voter registration list used for the November 3, 1981, election was inaccurate because the Board did not check the accuracy of updates or maintain control over the computer software used to update and produce the master file. Voter master file inaccuracies were discovered in the summer of 1981, but were not corrected before the November 1981 election. The computer master file and the manually maintained voter registration card file have not been reconciled and are not identical. Many voters were inconvenienced because they had to cast challenged ballots.

The absence of a full-time Elections Administrator, other Elections Office vacancies, and a lack of written procedures all adversely affected preparations for the November 3, 1981, election. At least a few people could not vote because ballots were not available for them to use.

RECOMMENDATIONS TO THE MAYOR

In order to be properly prepared for the next election, we recommend that the Board of Elections and Ethics:

1. Develop a complete and accurate list of qualified registered voters.

2. Verify that the computer software used to produce, update, and print the voter registration list is accurate and reliable.

3. Establish strict control and accountability over custody of the computer software, use of the software, and changes to and testing of the software.

4. Establish strict internal controls over the entire voter registration process (manual and automated) to ensure that all additions, changes, and deletions are handled accurately.

5. Adequately staff the Elections Office to prepare for and conduct the upcoming election.

To obtain adequate and reliable ADP support on a continuing basis, we recommend that the Board of Elections and Ethics: (1) establish policies, standards, and procedures for all aspects of ADP operations such as long-range planning, software development and maintenance, computer processing, computer file library, and computer file backup and disaster recovery; (2) establish written procedures for election preparations; (3) establish clear lines of authority and responsibility over the ADP unit; and (4) prepare conversion and implementation procedures for the new online voter registration system including strict internal controls over operation of the system.

AGENCY COMMENTS AND OUR EVALUATION

On April 12, 1982, we met with the Chairman of the Board of Elections and Ethics to obtain his oral comments on our report. The Chairman fully agreed with our description of the ADP and other problems associated with the voter registration system. He also concurred with our conclusions and recommendations.

In commenting on our recommendation to develop a complete and accurate voter list for the next election, the Chairman said that the Board, in addition to actions already underway, has requested permission from the Council of the District of Columbia

to re-register all voters. The Council has not yet acted on this request. In our opinion, re-registration of voters would be an enormous undertaking fraught with the same systems problems which plague the current system and should be undertaken only as a last resort if the current efforts do not appear workable.

In commenting on our other recommendations, the Chairman said that the Board was actively recruiting an Executive Director and candidates were currently being interviewed. He added that the Board is planning to reorganize its operations shortly to have the ADP unit report directly to the new Executive Director. In our discussion with him, the Chairman agreed that the new Executive Director should be charged with establishing a system of internal controls over the system to ensure the integrity of the files, the transactions, and the software which handles them. In our opinion, these proposed actions, if vigorously carried out, should solve the problems we identified.

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Your office requested that we make no further distribution of the report prior to subcommittee hearings on the District of Columbia's fiscal year 1983 appropriations. These hearings are scheduled to begin about April 26, 1982.

Sincerely yours,
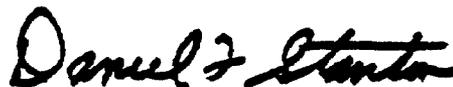
For William J. Anderson
Director

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