



MEMORANDUM

Date: September 3, 2010

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

A handwritten signature in black ink, appearing to read "CHH", is written over the printed name "C.H. Huckelberry".

Re: 2010 Primary Election Results

As the Board knows, the Primary Election was canvassed on August 31, 2010. The election process was conducted without any significant issues.

As a result of previous litigation, we now provide copies of the election databases to the political parties following the canvass. The database turnover process occurred on September 1, 2010. All information in the database stored through the vote counting process precisely matched the baseline database, indicating integrity of data and results. More detailed information regarding the database analysis is contained in the attached memorandum from Dr. John Moffatt.

We will also be producing a report regarding various election information tasks completed by election poll workers to determine the performance of the poll workers in meeting the process requirements for conducting the election. We have been conducting these reviews for three years and have sufficient data upon which to evaluate the long-term performance improvement of poll workers. It would appear that such improvement is occurring through a combination of training and instructions to poll workers regarding the importance of process integrity.

I will be providing an historical performance improvement report to the Board in the near future.

CHH/mjk

Attachment

c: Dr. John Moffatt, Office of Strategic Technology Planning
Brad Nelson, Elections Director



MEMORANDUM

Office of Strategic Technology Planning

Date: September 1, 2010

To: Chuck Huckelberry

From: John H. Moffatt, Ph.D. 

Subject: Database Turnover for 2010 Primary Election

Following the Canvass of the 2010 Primary Election in Pima County by the Board of Supervisors, the steps to copy, validate, and distribute the GEMS databases for the Political Parties was executed by staff from the Information Technology Department and Elections. I attended for oversight. The political parties were invited but nobody chose to attend. The event took place in the Elections Counting Center under the observation of Streaming Video.

As the Election progresses, the beginning database (zero counts), the ending database for each day, and the final databases are all copied to an MDB folder in the transfer section in .mdb (Microsoft Access) format. Additionally, the .gbf (GEMS Backup Files) for all of the database backups from the zero to the final version were also copied to the GBF folder in the transfer section. Finally, a "Miscellaneous" Directory containing copies of the GEMS Audit Log from each day, System Directory printouts from each day to identify any change in data files, standard reports generated during the election counting process, and the final Summary of Votes Cast (SOVC) reports was placed in the transfer section.

All of this material was double checked, then copied to a portable memory device and placed onto a laptop for the rest of the steps. The GEMS server was again secured. On the laptop, all of the directories were processed through a "Hash" routine to provide an authentication signature for every file to be transferred. The hash values were also transferred to the portable storage devices for each the Parties along with the actual transferred data described above.

Finally, the Elections Database Archives Comparison program written by the IT Department to compare the critical parameters of all of the transferred .mdb files was run. All parameters in the databases stored through the vote counting process matched exactly to the baseline Zero (begin early count) database. The resulting report documenting this process is attached as Attachment 1.

We continue to streamline this process to make sure we are thorough, but not take all day as it has in the past. This process took approximately 30 staff hours for the 2010 Primary Election.

The only Political Party that expressed interest in the databases or the report was the Democratic Party. As of close of business today, they are the only ones that have picked up their copy. A copy will be stored with the permanent 2010 Primary Election results. The Elections Department will also have a copy in case there is a need for the information in the near future. All will be destroyed at the appropriate time in accordance with State Records Retention regulations.

Cc: Brad Nelson, Director of Elections



Elections Database Archives Comparison

Version: 1.0 Copyright 2008 Pima County
 Report Run Date: 08/31/2010 15:48:10
 Licensed Name: Pima County Elections

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Reference key of DATABASE FILES used

- db0 = 100824pimaprimary1008180817postbeginEarlycount.mdb <----- L & A Database
- db1 = 100824pimaprimary.mdb
- db2 = 100824pimaprimary1008181618postPostEarlyCountDay1.mdb
- db3 = 100824pimaprimary1008191625postPostEarlyCountDay2.mdb
- db4 = 100824pimaprimary1008201142postpostcountEarlyDay3.mdb
- db5 = 100824pimaprimary1008231528postpostcountEarlyDay4.mdb
- db6 = 100824pimaprimary1008241600postpostcountEarlyDay5.mdb
- db7 = 100824pimaprimary1008250216postFinalElectionNight.mdb
- db8 = 100824pimaprimary1008251643postpostcountTSXandEarlyDay6.mdb
- db9 = 100824pimaprimary1008261552postpostcountEarlyDay7.mdb
- db10 = 100824pimaprimary1008271456postpostcountearlyday8.mdb
- db11 = 100824pimaprimary1008281230postpostcountearlyday9andPROV.mdb
- db12 = 100824pimaprimarypostLandA.mdb

KEY DATA ELEMENTS to be compared

- | | |
|--|---|
| K0 = Ballot | K1 = BallotRot |
| K2 = BallotRotCardRotPlateRot | K3 = BallotRotRaceRot |
| K4 = BaseunitBallotRot | K5 = Candidate |
| K6 = CandVGroup | K7 = Card |
| K8 = CardRot | K9 = District |
| K10 = Plate | K11 = PlateHeader |
| K12 = PlateRace | K13 = PlateRot |
| K14 = Race | K15 = VGroup |
| K16 = Preference/KeyID/20/card layout | K17 = Preference/KeyID/21/card suto layout |
| K18 = Preference/KeyID/25/margins | K19 = Preference/KeyID/50/AccuVote parameters |
| K20 = Preference/KeyID/55/ABasic report name | K21 = Preference/KeyID/60/card precinct ID |
| K22 = Preference/KeyID/140/card precinct ID | |

Comparison Results

	K0	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18	K19	K20	K21	K22	Result	
db0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
db1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match

db8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db11	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match
db12	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Match