November 30, 2013

Gongzi Ndulue
Ohio Justice & Policy Center
215 E. 9th Street, Suite 601
Cincinnati, Ohio 45202

Dear Ms. Ndulue,

I provide the attached report titled “Analysis of the Number of Incarcerated Registered Voters who Could Not Vote During Their Incarceration on the Weekend and Monday Before the November 2012 General Election” in response for your request for such a study.

The report constitutes:

(i) a complete statement of all opinions and the basis and reasons for them;
(ii) the facts or data considered in forming them; and
(iii) exhibits that are used to summarize or support them.

In addition I have provided my curriculum vita, including publications, and a list of testimony, depositions, and affidavits for other court cases.

As you know, I have volunteered my time, free of charge, for this work. My normal fee for this work is $100 per hour.

Sincerely,

Mark J. Salling, Ph.D.
Senior Research Associate
Maxine Goodman Levin College of Urban Affairs
Cleveland State University
1717 Euclid Avenue
Cleveland Ohio 44115
Voice: (216) 687-3716
Facsimile: (216) 678-5068
email: m.salling@csuohio.edu
Analysis of the Number of Incarcerated Registered Voters who could not Vote During Their Incarceration on the Weekend and Monday before the November 2012 General Election

Mark Salling, PhD, GISP  
Senior Research Associate  
Maxine Goodman Levin College of Urban Affairs  
Cleveland State University

October 30, 2013

This study calculates the number of jailed persons, in nine Ohio counties, who were registered to vote and had not voted by absentee ballot, but could not exercise their voting rights during their confinement the three days before the election on November 6, 2012. The following nine counties are analyzed: Adams, Athens, Butler, Cuyahoga, Franklin, Hamilton, Lawrence, Montgomery, and Summit. These counties included the five most populous counties in Ohio, as well as four smaller counties – accounting for 42 percent of the state’s 2010 population.

Data and Methods

The study objective is to identify and count inmates who were registered to vote, had not voted absentee, and were incarcerated for the entire period from Saturday, November 3, 2012, through Tuesday, November 6, 2012, or later. This count does not include inmates if they were released on Election Day since such persons would have had the opportunity to vote if released before the polls closed. The calculation of the number of persons denied opportunity to vote just before the election is thus made more conservative by this exclusion, since some of these excluded persons may not have been able to vote that day.

The time frame used here for counting persons who could not vote due to incarceration also excludes persons jailed Friday evening, November 2, 2012, after close of the offices of the boards of elections (BOEs), even though persons entering jails that evening and not leaving until after Election Day would have been unable to vote.

Thus the time frame used in this study – entering jail after midnight on Friday the 2nd and not discharged until midnight Tuesday the 6th or later – provides a conservative window of time in which incarcerated persons would be prevented from voting.

All the 12 Hour, 12 Day, Minimum Security and Full Service Jails in the nine counties were subpoenaed for data on all inmates held between November 2, 2012 and November 6, 2012. The inmate information includes booking data from all these jails with the exclusion of four jails that did not

---

1 The analysis was requested by the Ohio Justice & Policy Center and data used in the analysis were supplied by that organization. See Appendix A.
2 The nine counties had 42.2 percent of the state’s adult (age 18 and older) 2010 population.

Incarcerated Registered Voters who could not Vote During Weekend and Monday before the November 2012 General Election
respond to the subpoena in time for this analysis - Euclid City Jail, Shaker Heights Jail, and North Randall Village Jail in Cuyahoga County, and Richfield Village Jail in Summit County.

The process of identifying such persons involves the following basic steps:

1) Identify the registered electorate who voted absentee.
2) Identify and count persons who were incarcerated in jails during the target period noted above, were registered to vote, and had not already voted absentee.

The boards of elections of the nine counties were subpoenaed for data on registered and absentee voters. Boards of Elections for Cuyahoga, Hamilton, Franklin, Lawrence, and Montgomery counties provided data files that enabled automated (computerized) matching of registered voters to those who voted with absentee ballots. These records were then matched to records of jailed persons. Those that were held in jails throughout the target period were flagged as to whether they were registered but had not voted with an absentee ballot. These records were then summed.

Files obtained from Adams, Athens, Butler, and Summit County BOEs were in PDF form and were not suitable for automated (computer) manipulation and calculation. For the last four counties, matching inmates to the absentee and registered voter records was performed manually and then summed to get counts of persons in jail during the target period, were registered to vote, and had not cast an absentee ballot.

Criteria used to match absentee and registered voter records, and well as jailed person records to the registration and absentee data, are indicated in Table 1.

A unique voter ID was found on both the automated voter registration and absentee files for Hamilton and Montgomery counties and was used to match those records. After a cursory examination of the files from both Cuyahoga and Franklin counties, it was determined that matching absentee records to the registered voter file could be achieved using first and last names, address fields (street address, city, and ZIP code), and birth date.

Automated matching of inmate records to the registered/absentee records required testing several alternative combinations of criteria. It was determined that including middle names would lead to many missed correct matches since the data sources frequently recorded these names differently or not at all. Street addresses, too, missed some correct matches due to differences (including errors) in street spelling. In addition, even city names and ZIP codes were at times recorded differently. This may be due to a number of possible causes, including the possibility that a jailed person had moved since being registered to vote. Postal codes for mailing purposes can, at times, be different from actual residential postal code areas.

---

3 These included CSV or delimited txt files that could be readily converted to Microsoft Excel files and then ultimately to SAS data files.

Incarcerated Registered Voters who could not Vote During Weekend and Monday before the November 2012 General Election
Therefore, automated matching the jailed population records to the registered/absentee records used first and last name and birth date.

These automated matching procedures can lead to both incorrect matches (false positives) and missed matches that should have been made because the person in both files is the same. In regard to incorrect matches, for example, it is possible that a jailed inmate, who is not registered to vote, is incorrectly matched to a record in the registered voter file with the same name and birth date in that county.

Another instance of possible error of a false positive could occur if there are two registered voters with the same first and last names and birth date (in the same county) and both matched an inmate with the same first and last names and birth date. An incorrect result would occur if the matching procedure matched the wrong voter record to the jailed person record. That could mean that an inmate was incorrectly classified as one who was registered and had not voted absentee. It would improperly inflate the calculation of registered persons who could not vote. However, our programming would have detected this occurrence. It would have produced a duplicate record for that inmate in the output file, but no such duplicates were found in this analysis.

The alternative error is that the count is less than the actual number of persons who were registered and had not voted absentee. A difference or error in how a person’s name is spelled between the inmate and registered voter files, though both spellings refer to the same person, would result in a missed correct match (false negative).

Meanwhile, manual matching, though more time consuming for such large databases, is generally more reliable in avoiding missed correct matches since the person can make interpretations of data with more intelligence than a computer operation.

One other caution is noted. A small proportion in the inmate database may have been ineligible to vote due to being sentenced for a felony. It is my understanding that such persons are ineligible to vote.

Nevertheless, based on the process used in this analysis it is highly likely that this calculation of the number of incarcerated registered voters, unable to vote during the weekend and day before the election in November 2012, is not much different than the actual number of such persons. Based on my professional experience and common sense, I believe that the exclusion of persons who could not vote because they entered jail Friday evening or left it on Election Day after the polls closed, together with the false negatives from differences in name spelling, is likely greater than the number of false positives from identical names in conjunction with identical birth dates.
Table 1: Matching Variables

<table>
<thead>
<tr>
<th>County</th>
<th>match absentee to registered voters</th>
<th>match registered voters to jailed inmates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>NA</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Athens</td>
<td>NA</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Butler</td>
<td>NA</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Cuyahoga</td>
<td>fn, ln, mn, street address, city, ZIP code, bd</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Franklin</td>
<td>fn, ln, mn, street address, city, ZIP code, bd</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Hamilton</td>
<td>fn, ln, mn, street address, city, ZIP code, bd</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Lawrence</td>
<td>fn, ln, city, ZIP code</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Montgomery</td>
<td>fn, ln, mn, street address, city, ZIP code, bd</td>
<td>fn, ln, bd</td>
</tr>
<tr>
<td>Summit</td>
<td>NA</td>
<td>fn, ln, bd</td>
</tr>
</tbody>
</table>

Note: Matching for Adams, Athens, Butler, and Summit counties was done manually; thus there was not automated matching of absentee to registered voter records.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>fn</td>
<td>first name</td>
</tr>
<tr>
<td>ln</td>
<td>last name</td>
</tr>
<tr>
<td>mn</td>
<td>middle name</td>
</tr>
<tr>
<td>bd</td>
<td>birth date</td>
</tr>
</tbody>
</table>

Results

The results are presented in Table 2.

Among the eleven persons in the inmates file in Adams County, three were recorded as booked sometime after midnight, Friday, November 2\textsuperscript{nd} and kept in jail until at least the end of the day (midnight) on Election Day, November 6, 2012. Of those, two were registered and had not voted absentee and one was not registered to vote. Among inmates in Athens County, six of the possible 19 jailed persons in that period were unable to vote though they were registered to do so. Butler County jails had 12, Cuyahoga 70, Franklin 36, Hamilton 26, Lawrence 3, Montgomery 21, and Summit County 20 such electors who were unable to exercise their voting rights while in jail that weekend and day before the election.

Because the methods of this analysis may have missed some such persons, it can be stated with some certainty that at least, but probably more than, 202 persons in the nine county study area were unable to vote due to these circumstances. It should also be noted that data on inmates in four jails in

Incarcerated Registered Voters who could not Vote During Weekend and Monday before the November 2012 General Election
Cuyahoga County were not included in this study and may have increased the total had they been included.

A note is worth stating concerning what the totals for all 88 counties in the state would be. While there are other and possibly more accurate methods of determining the statewide total of such cases, a simple extrapolation using the relative portion of the state’s 2010 adult (18+) population in the nine counties in the study counties would result in an estimate of 479 persons statewide who were in jails and unable to vote.

And finally, the issue of the possible disparate racial impact of the inability of registered jail inmates to vote in the final three days before the election could be addressed with the inmate data since race is included in the file. Without undertaking that full analysis, it is worth noting that 46 percent of all the inmates in the database are Black, while there are 20 percent of the adult 2010 Ohio population that are Black (1 race category only).

Table 2: Results

<table>
<thead>
<tr>
<th>County</th>
<th>Total in inmates database</th>
<th>Total</th>
<th>Registered</th>
<th>Voted absentee</th>
<th>Not registered</th>
<th>Total registered voters</th>
<th>Total absentee voters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Athens</td>
<td>45</td>
<td>19</td>
<td>6</td>
<td>0</td>
<td>13</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Butler</td>
<td>162</td>
<td>62</td>
<td>18</td>
<td>1</td>
<td>43</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cuyahoga</td>
<td>477</td>
<td>136</td>
<td>70</td>
<td>5</td>
<td>3</td>
<td>927,999</td>
<td>267,114</td>
</tr>
<tr>
<td>Franklin</td>
<td>271</td>
<td>108</td>
<td>36</td>
<td>5</td>
<td>67</td>
<td>814,246</td>
<td>201,227</td>
</tr>
<tr>
<td>Hamilton</td>
<td>152</td>
<td>92</td>
<td>26</td>
<td>2</td>
<td>64</td>
<td>546,693</td>
<td>173,459</td>
</tr>
<tr>
<td>Lawrence</td>
<td>22</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>54,021</td>
<td>7,670</td>
</tr>
<tr>
<td>Montgomery</td>
<td>125</td>
<td>48</td>
<td>21</td>
<td>0</td>
<td>27</td>
<td>656,797</td>
<td>52,831</td>
</tr>
<tr>
<td>Summit</td>
<td>111</td>
<td>67</td>
<td>20</td>
<td>3</td>
<td>44</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Total</td>
<td>1,376</td>
<td>543</td>
<td>202</td>
<td>19</td>
<td>322</td>
<td>3,239,973</td>
<td>753,474</td>
</tr>
</tbody>
</table>

Note: Counts on inmates were done manually for Adams, Athens, Butler, and Summit so no automated counts of those counties' registered and absentee voters are available. Column totals do not include counts of registered and absentee voters for those four counties.
Incarcerated Registered Voters who could not Vote During Weekend and Monday before the November 2012 General Election

APPENDIX A: Documents Provided by Plaintiffs’ Counsel

- Adams County Registered Voter List
- Adams County Absentee Voter List
- Athens County Registered Voter List
- Athens County Absentee Voter List
- Butler County Registered Voter Lists
- Butler County Absentee Voter List
- Cuyahoga County Registered Voter List
- Cuyahoga County Absentee Voter List
- Franklin County Registered Voter List
- Franklin County Absentee Voter List
- Hamilton County Registered Voter List
- Hamilton County Absentee Voter List
- Lawrence County Registered Voter List
- Lawrence County Absentee Voter List
- Montgomery County Registered Voter List
- Montgomery County Absentee Voter List
- Summit County Registered Voter List
- Summit County Absentee Voter List
- Lists of Ohio jails
- List of Ohio hospitals
- Spreadsheet of inmates in jail on 11/6/2012 who had been jailed after 11/1/2012
- Spreadsheet of Annual Data Sheet Information from jail inspection records
- Spreadsheet of Bureau of Adult Detention 2010 Survey results
- Spreadsheets of Bureau of Adult Detention database contents
- Ohio Department of Rehabilitation and Correction jail inspection records
- Booking records from jails in Adams, Athens, Butler, Cuyahoga, Franklin, Hamilton, Montgomery, and Summit counties
- Pleadings in the Fair Elections Ohio v. Husted Case
Dear Ms. Ndulue,

I provide the attached report titled “Analysis of the Proximity of Jails to Hospitals in Ohio” in response for your request for such a study.

The report constitutes:

(i) a complete statement of all opinions and the basis and reasons for them;
(ii) the facts or data considered in forming them; and
(iii) exhibits that are used to summarize or support them.

In addition I have provided my curriculum vita, including publications, and a list of testimony, depositions, and affidavits for other court cases.

As you know, I have volunteered my time, free of charge, for this work. My normal fee for this work is $100 per hour.

Sincerely,

Mark J. Salling, Ph.D.
Senior Research Associate
Maxine Goodman Levin College of Urban Affairs
Cleveland State University
1717 Euclid Avenue
Cleveland Ohio 44115
Voice: (216) 687-3716
Facsimile: (216) 678-5068
email: m.salling@csuohio.edu
Analysis of the Proximity of Jails to Hospitals in Ohio¹

Mark Salling, PhD, GISP
Senior Research Associate
Maxine Goodman Levin College of Urban Affairs
Cleveland State University

October 30, 2013

This study maps the geographic distributions of hospitals and jails in the State of Ohio and calculates the average distance between jails and their nearest hospital. The purpose is to assess how close the jails are to hospitals.

Data and Methods

Geographic Information Systems (GIS) software is used to geocode and map two Excel files, one containing the address of hospitals and the other the addresses of jails in the state. The U.S. Census Bureau’s 2010 TIGER data were used as the street reference file for geocoding addresses (i.e., locating them on the reference or base map). In GIS terms, once the addresses have been geocoded the software, if requested, provides the distance between each jail and its nearest hospital when the jail layer is spatially joined by hospital layer. An average distance between the jails and their nearest hospitals is then calculated.

Since temporary holding facilities (THFs) hold persons for less than six hours, we exclude them in a second part of the analysis.

Results

Map 1 shows the geographic distributions of both the hospitals and the jails. It also reports the average distance between jails and their nearest hospital, which is 3.77 miles.

Among the 320 jails, more than three quarters (77%) are within five miles of a hospital and almost half (48%) are within 2 miles.

Map 2 shows the type of jail, with THF facilities excluded. The average distance to the closest hospital for these jails is 3.67 miles.

¹ The analysis was requested by the Ohio Justice & Policy Center and data used in the analysis were supplied by that organization.
Map 1: Geographic Distribution of Jails and Hospitals
Ma0 2: Geographic Distribution of Non-THF Jails and Hospitals
Hello Holly,

Attached are two supplements Dr. Salling’s earlier reports.

Ngozi Ndulue  
OHI0 JUSTICE & POLICY CENTER  
Staff Attorney  
215 East Ninth Street, Suite 601  
Cincinnati, OH 45202  
513-421-1108 ext. 34  
513-562-3200 fax
Supplement to

Analysis of the Number of Incarcerated Registered Voters who Could Not Vote During Their Incarceration on the Weekend and Monday Before the November 2012 General Election\(^1\)

February 20, 2014

Mark Salling, PhD, GISp
Senior Research Associate
Maxine Goodman Levin College of Urban Affairs
Cleveland State University

This supplemental report offers a revised estimate of the number of jailed persons in Ohio who were registered to vote and had not voted by absentee ballot, but could not exercise their voting rights during their confinement the three days before the election on November 6, 2012. The report, dated October 30, 2013, used the proportion of adult population in the state that was in the nine counties in which sampled jails revealed the number of incarcerated registered voters in those counties the weekend and Monday before the 2012 general election. That initial method assumed that the number of such registered voters statewide would be proportionate to population share of the state’s population in the sampled nine counties.

The revised estimate offered here incorporates an additional database - annual jail inventories of the Department of Rehabilitation and Correction. It also includes the addition of inmate data for the Euclid City and Shaker Heights jails, which were not received in time to be included in the previous analysis. Thus the Results section of the earlier report is revised to include these data.

The previous analysis noted the higher percentage among African Americans who were registered voters unable to vote during the few days before the election – 46 percent versus 20 percent for non-African Americans. The supplemental analysis of additional data from the annual inventories of jails presented here also provides further support for the fact that there is a disproportionate impact on African American voters who were not allowed to vote.

Additional Data on Inmates in the Nine Sampled Counties

The study identifies and counts inmates who were registered to vote, had not voted absentee, and were incarcerated for the entire period from Saturday, November 3, 2012, through Tuesday, November 6, 2012, or later. As with the earlier analysis, the count does not include inmates if they were released on Election Day since such persons would have had the opportunity to vote if released before the polls closed. The calculation of the number of persons denied opportunity to vote just before the election is

\(^{1}\) The analysis was requested by the Ohio Justice & Policy Center and data used in the analysis were supplied by that organization. See Appendix A.

Supplemental Report with Revised Estimate of Incarcerated Registered Voters who Could Not Vote During Weekend and Monday before the November 2012 General Election

Case No. 1:12cv979

Defendants' Emergency Motion to Exclude
Exhibit D, p|1
thus made more conservative by this exclusion, since some of these excluded persons may not have been able to vote that day.

The time frame used here for counting persons who could not vote due to incarceration also excludes persons jailed Friday evening, November 2, 2012, after close of the offices of the boards of elections (BOEs), even though persons entering jails that evening and not leaving until after Election Day would have been unable to vote.

All the 12 Hour, 12 Day, Minimum Security and Full Service Jails in the nine counties were subpoenaed for data on all inmates held between November 2, 2012 and November 6, 2012. Since the initial analysis, data for Shaker Heights and Euclid City jails was received and included in this supplemental report. The exclusion of these jails (and several others) was noted in the earlier report.

For these additional two jails the process of identifying such persons (again) involves the following basic steps:

1) Identify the registered electorate who voted absentee.
2) Identify and count persons who were incarcerated in jails during the target period noted above, were registered to vote, and had not already voted absentee.

Data on incarcerated inmates were provided by the plaintiffs; data on registered voters and whether they had voted absentee in the election were from the boards of elections. Inmate records were manually matched to the registered voter data by the author based on a combination of names, addresses, and birth dates in the two sources.

Results of Counts in the Sampled Jails

The earlier analysis presented a table of results for each of the nine sampled counties. Table 2 is repeated here, but includes the additional data for the Shaker Heights and Euclid City jails.
Table 2: Results: Revised from the October 30th report (changes in red and italicized)

<table>
<thead>
<tr>
<th></th>
<th>Total in</th>
<th>Registered,</th>
<th>Voted</th>
<th>Not</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>database</td>
<td>Total</td>
<td>did not</td>
<td>absentee</td>
<td>registered</td>
<td>registered</td>
</tr>
<tr>
<td>Adams</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>Athens</td>
<td>45</td>
<td>19</td>
<td>6</td>
<td>0</td>
<td>13</td>
<td>NA</td>
</tr>
<tr>
<td>Butler</td>
<td>162</td>
<td>62</td>
<td>18</td>
<td>1</td>
<td>43</td>
<td>240,217</td>
</tr>
<tr>
<td>Cuyahoga</td>
<td>488</td>
<td>147</td>
<td>75</td>
<td>7</td>
<td>65</td>
<td>927,999</td>
</tr>
<tr>
<td>Franklin</td>
<td>271</td>
<td>108</td>
<td>36</td>
<td>5</td>
<td>67</td>
<td>814,246</td>
</tr>
<tr>
<td>Hamilton</td>
<td>152</td>
<td>92</td>
<td>26</td>
<td>2</td>
<td>64</td>
<td>546,693</td>
</tr>
<tr>
<td>Lawrence</td>
<td>22</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>54,021</td>
</tr>
<tr>
<td>Montgomery</td>
<td>125</td>
<td>48</td>
<td>21</td>
<td>0</td>
<td>27</td>
<td>656,797</td>
</tr>
<tr>
<td>Summit</td>
<td>111</td>
<td>67</td>
<td>20</td>
<td>3</td>
<td>44</td>
<td>NA</td>
</tr>
<tr>
<td>Total</td>
<td>1,387</td>
<td>554</td>
<td>207</td>
<td>19</td>
<td>328</td>
<td>3,239,973</td>
</tr>
</tbody>
</table>

Revised State Estimate

The previous estimate for the state total used a simple extrapolation based on the relative portion of the state’s 2010 adult (18+) population in the nine counties to the state’s total adult population, which was 42.2 percent. Since there were 202 (now 207) found registered voters who were incarcerated and were prevented from voting during the relevant weekend period in counties that constituted 42.2 percent of the state’s population, it was assumed that another 57.8 percent of such persons in the state were in the other counties. The resulting estimate for the state was 479 registered persons were in jails and unable to vote.

Here we use an alternative method of estimating the state total (and we add 5 additional inmates not able to vote to the Cuyahoga and total sampled counties).

We acquired data from annual jail inventories by the Department of Rehabilitation and Correction on average daily number of prisoners in all jails in the state (excluding temporary holding facilities, i.e., those of less than 6 hours) and found that the sampled jails constituted 40.8 percent of the 201 jails and 47.3 percent of the state total average daily prisoner count. We used the ratio of the prisoner count in the state to that of the sampled jails (2.115) to estimate the number of incarcerated persons who were likely to be unable to vote because they were in jail the weekend and Monday before the election. That estimate is 438 persons (i.e., 2.115*207).

---

2 Collected annual jail inventory data covered years from 2004-2013, with some jails inventoried in multiple years. For this analysis we used only the latest year of data available for each jail. There was one jail inventory in 2013; 118 (58.7%) had data for 2012; there were 51 (25.4%) for which 2009 was the last year of available data; 30 (14.9%) jails had its latest inventory data in 2008; and one jail had an inventory with a missing year. Among the 82 sampled jails, 53 (64.6%) were last inventoried in 2012, 21 (25.6%) in 2009, and 7 (8.5%) in 2008.

Supplemental Report with Revised Estimate of Incarcerated Registered Voters who Could Not Vote During Weekend and Monday before the November 2012 General Election
Racial Impact
The issue of the possible disparate racial impact of the inability of registered jail inmates to vote in the final three days before the election can be addressed with the inmate data since race is included in the file. Forty-six percent (46%) of all the inmates in the database were Black, while there was 20 percent of the adult 2010 Ohio population that were Black (1 race category only).

The inventory of jails noted above also provides data on the racial composition of inmates statewide. Again using the latest inventories available, we find that 38.4 percent of adults in those jails were African American. Though this percentage is smaller than for the sampled inmate population, it supports the conclusion that denial of voting opportunity for inmates is likely to have a disparate impact on African American voters.³

Analysis of the Proximity of Jails and Hospitals to County Boards of Elections

Mark Salling, PhD, GISP
Senior Research Associate
Maxine Goodman Levin College of Urban Affairs
Cleveland State University

February 20, 2014

This study maps the geographic distributions of county boards of elections (BOEs), hospitals, and jails in the State of Ohio and calculates the distances from jails and hospitals to the county’s BOE. These distances are compared. This analysis is meant to address the issue of whether travel by BOE staff to jails in order to acquire election ballots of eligible inmates is more or less burdensome than travel to hospitals in the county to acquire such ballots from hospital patients.

Data and Methods

Geographic Information Systems (GIS) software is used to geocode and map three Excel files, one containing the address of BOEs, a second of hospitals, and a third of jails in the state. The U.S. Census Bureau’s 2010 TIGER data were used as the street reference file for geocoding addresses (i.e., locating them on the reference or base map). In GIS terms, once the addresses have been geocoded, the software, if requested, provides the distance between each jail and hospital and the county’s BOE. An average distance between the BOEs and both jails and hospitals in the county is then calculated.

Since temporary holding facilities (THFs) hold persons for less than six hours, we exclude them in the analysis of jail distances.

Results

Map 1 shows the geographic distributions of BOEs, hospitals, and jails. It also reports the average distance between jails and hospitals in that county’s BOE, which are 5.77 and 5.07 miles, respectively. While the average distance to jails is greater than to hospitals, statistically there is no difference in these means at the 95 percent confidence level.

---

1 The analysis was requested by the Ohio Justice & Policy Center and data used in the analysis were supplied by that organization.

2 Nine jails and three hospitals were not able to be geocoded and are excluded from this analysis.

3 The null hypothesis, that there is no difference, cannot be rejected with 95 percent confidence (p = 0.0716).
Figure 1 shows the distribution of hospitals and jails within each mile from the county's BOE. While 14 percent of hospitals are within a mile of the BOE, 24 percent of jails are within that distance (see Figure 2). Thirty-five (35.2) percent of hospitals and 32.8 percent of jails are within two miles of the BOE, a difference of 2.4 percent. This last percentage difference grows as distance from BOEs increases, but it reaches only 8.6 percent at 10 miles from BOEs, i.e., 85.2 percent of hospitals are within that distance, while 76.6 percent of jails are within 10 miles.

It should also be noted that there are significantly fewer jails than hospitals to which BOE staff might have to travel to at various distance from the BOE office. See Figures 1 and 3. The aggregate distance from BOEs to hospitals is 1,269 miles; the aggregate distance to jails is 1,108 miles.

**Conclusion**

Distances from BOEs to jails in the same county in Ohio are not significantly different from distances to hospitals in those counties. Indeed, assuming that all hospitals and jails in this study have equal chances of having eligible voters who have not voted, the relative burden of travel to these facilities is likely less for jails since there are many fewer of them and the aggregate distance to be covered is less.
Map 1: Geographic Distribution of BOEs, Jails, and Hospitals

Locations of Hospitals, Jails, and County Boards of Elections

Prepared by
The Northern Ohio Data & Information Service
NOVIS
Maxine Goodman Levin College of Urban Affairs
Cleveland State University
February 8, 2014

Average distance between a hospital and the county Board of Elections in that county = 5.06 miles
Average distance between a jail and the county Board of Elections in that county = 5.77 miles
Figure 1: Number of Hospitals and Jails within Distances to Board of Elections in Same County

Figure 2: Percentage of Hospitals and Jails within Various Distances of the County Board of Elections in the Same County

Analysis of the Proximity of Jails and Hospitals to County Boards of Election
Figure 3: Number of Hospitals and Jails within Various Distances of the County Board of Elections in the Same County
A. No. No, no.

Q. When did you begin drafting the report?

A. The written part? Hard to say. Probably sometime after February 8th. It could have been a week after. It could have been the next day. I don't remember when I started.

Q. So if you began discussing the prospect of doing a new analysis back in January, why did you wait until February 8th to produce the report -- or to produce the map?

A. I have other things to do.

Q. Did you at any point in time between January and February 8th prepare other versions of this map, or drafts of the map?

A. I don't think so. I don't remember.

Q. So is it your testimony that February 8th is the first time that you actually put a map similar to what we see on page 3 here down on paper?

A. Yes.

Q. Did you do anything towards this project between when you first discussed it with Ngozi back in approximately January until February 8th?

A. Sorry, could you repeat the question?

Q. Did you do any work on this report or the map that's reflected in it between January, when you first discussed this issue with Ngozi, and February 8th, the date that's reflected on this map?

A. I don't remember. But I may have been also doing these graphs and sort of looking at the data to see what it could tell me about the issue of comparisons of travel distances, and summarizing the data in various ways in a spreadsheet and then making some graphs, such as the ones I produced for this report. So that could have been -- it's probably after the 8th, is my guess. I probably made the map first, and then did more sort of analysis of the data and the spreadsheet, exploring ways to visualize it and see what it's telling me, and produce the graphs, and then wrote the report based on the map and the graphs. That's how I work.

Q. And you're aware that you were initially supposed to be deposed on, I believe February 5th, but definitely a couple of weeks ago; is that correct?

A. Yes.

Q. We had to postpone because of the lovely winter weather we've been having, right?

A. Yeah.

Q. Had your deposition gone forward on that date, were you prepared to talk about the supplemental analysis?

A. Again, I can't remember the time frame, but I think I was thinking about doing this report back in late January as the date was approaching. And when it got -- when this meeting got delayed -- I'm just trying to reconstruct my thinking -- I decided I had more time, and so I could tend to other things, and finally got around to doing this and finishing it yesterday.

Q. And was it your understanding then that you could produce this report at any point right up until the deposition, I take it?

A. No. I knew that there were issues in terms of when such reports were supposed to be provided, according to the court orders. I knew that was an issue. But I was told by counsel that we should go ahead and do the analysis and submit it and -- because it's -- it might be useful. It should be useful.

Q. And did plaintiffs' counsel indicate to you that it should be provided by a particular date or time?

A. No.

Q. I want to talk briefly about what we've marked as Exhibit 8, and that is the supplement to the analysis of the number of incarcerated registered voters who could not vote during their incarceration on the weekend and Monday before the November 2012 general election. Did I read that correctly?

A. Yes.

Q. And I'll represent to you, as I've indicated on the record, that this was provided to us yesterday around 3:30.

Q. Is this a report that you drafted?

A. Yes.

Q. And I'll represent to you, as I've indicated on the record, that this was provided to us yesterday around 3:30.

Q. And I want to ask what triggered your decision to reevaluate the content that's initially supposed to be deposed on, I believe
reflected in the incarcerated voters report?
A. Well, two things. When we were
originally thinking about the design of the
study, we realized that the potential bias in
the sampling of the nine counties, it would be
useful to be able to address the potential
bias, and we knew that we had the data from the
Ohio Department of Rehabilitation and
Correction, and that data provided
possibly some useful information to compare our
sampled jails to the other jails in the State,
and by comparing the characteristics of
our sampled jails to the characteristics of the
non-sampled jails that we might be able to
detect the bias that might be there, and that
we could use that knowledge to adjust -- or to
use some of that information to come up with a
better, or at least a different estimate for
the entire state. So we looked at the data
that was in those, what I call profile reports,
they're inventory reports, and found one of the
fields seemed to be appropriate, and that was
the average daily prisoner count. And that if
we compared the average -- so we were thinking
about using this data some time ago, and never
had the opportunity or the time, or had the
time to try to use it. And then so subsequent
to that first report sort of forgot about the
project, got busy doing other things, etc.,
this meeting was being planned, etc., and so
the question of whether or not we should return
7 to that other data to see if that was helpful,
and in addition we were also responding to --
I'm not going to get his name right -- but the
person who responded to my report, the first
report, who indicated there was an issue of
whether or not the sample was representative.
So recognizing that that was still
a question, we went back to the issue of
whether or not there's an independent set of
data, i.e., the Ohio Department of
Rehabilitation and Correction, that would help
us come up with another estimate that would be
based on, again, you know, a more reliable or
independent set of information.
So we looked at the data from that
source, and found this variable that we thought
was potentially useful, the average daily count
of prisoners, and so we calculated -- I
calculated the proportion of the sampled
counties' average daily prisoner count to the
unsampled jails' daily prisoner count, and used
that ratio to estimate what the possible or
probable count of such persons would be in
those other counties, and added that to the 207
that we did find in our sampled jails, and came
up with a new estimate, and felt that that is
an alternative estimate that is not based on
the population of the sampled counties versus
the others, but -- and it was lower than our
estimate based on the counties. But on the
other hand, it was in the general ballpark, and
was a reasonable estimate of the State's total
as well. And that not knowing the actual
number of such persons that were denied voting
opportunities, the combination of those two
methods were confirming to me that the total
number really likely was somewhere in the 400s,
or possibly higher.

Q. Okay. The conversation that you
had, you indicated that -- first of all, you
referred to "we." Who do you mean by "we"?
A. I'm usually referring to myself.
Q. Was plaintiffs' counsel involved in
these decisions as well?

A. You know, early on, like I said, we
did talk about possibly using the profile data
to help us with our estimate for the entire
state. We never -- I never actually did that,
because we ran out of time and that sort of
ting to produce the report, and we just
decided to go with the population method. And
then so -- I'm not sure where -- I lost track
of your question.

So subsequently with the report
questioning that method of using the population
numbers, this thought about returning to that
issue and that question about a different
methodology, and decided to try it and came up
with the results that we did -- that I did.
Q. And you mentioned that you began
speaking, you said, a long time ago with
plaintiffs' counsel about the possibility of
using this data --
A. Right.
Q. -- from the Department of
Rehabilitation and Correction. When
specifically did you begin considering using
this data?
A. Prior -- so, again, prior to the

64 (Pages 250 - 253)

www.veritext.com 888-391-3376
Case No. 1:12cv979
Veritext Legal Solutions Midwest
Defendants' Emergency Motion to Exclude
Exhibit F, p2
first report we had talked about it.

Q. Would this have been back --
A. Not knowing exactly what we would
to with that data, or how we would use it to
come up with an estimate for the entire state.
Q. Sure. And you had this data
certainly well before you filed the --
A. I did.
Q. -- last report, correct?
A. I did.
Q. And so these conversations happened
prior to the time that the October report was
issued, probably back sometime in the summer or
fall; is that a fair characterization?
A. Sure. I think so.
Q. At the latest?
A. Let me back up, because I remember
specifically I was at a conference in
September, and just before that conference I
think I had received the data from defense
counsel, and while I was on vacation I tried
doing some analysis, real quick analysis in my
hotel room, and then ran out of time and wasn't
able to take it any further. So back in early
mid-September I had the data, I know.
Q. And so at what point did you
recently decide that you were going to go ahead
and move forward and conduct this analysis and
produce a new report?
A. I think it was after receiving the
report -- analysis of the earlier report, and
realizing that we might be able to come up with
something that was more useful and believable
as an estimate. And so I'm sure we talked
about it sometime in January about whether we
should go ahead and do that, and decided to go
ahead and use the data.
Q. And so this would have been back in
January of 2014?
A. I think so, yeah. Everything is in
January.
Q. And certainly at the time you did
your initial analysis in the October report,
you were aware of concepts like
representativeness and bias, correct?
A. Sure.
Q. So those were not new issues or
concept for you, correct?
A. True.
Q. I want to take a look quickly at

Q. And that report actually indicated
that the analysis had not been undertaken to
determine the impact on African-American
electors, correct?
A. No. I wouldn't say that's a
correct summary.
Q. Well, we just read that paragraph.
Should we pull that back out? And you can let
me know if I'm misrepresenting -- do you still
have the copy in front of you?
A. I do.
Q. So if you want to take a look at
it, and let me know where it noted -- and I'll
just quote here -- "noted the higher percentage
among African-Americans who were registered
voters under able to vote during the few days before the
election." And I'm sure we talked
about it sometime in January about whether we
should go ahead and do that, and decided to go
ahead and use the data.
Q. And this would have been back in
January of 2014?
A. I think so, yeah. Everything is in
January.
Q. And certainly at the time you did
your initial analysis in the October report,
you were aware of concepts like
representativeness and bias, correct?
A. Sure.
Q. So those were not new issues or
concept for you, correct?
A. True.
1 significantly higher percentage that are in
2 jail and were denied the opportunity to vote.
3 And that's an indication to me that it has a
disparate impact. It's not definitive, but
4 it's certainly a strong indication to me that
5 African-Americans were denied
6 disproportionately their ability to vote.
7 Q. And what I'm asking is where in the
8 October 30th report does it offer a conclusion
9 that there is a disparate impact?
10 A. Oh, it doesn't offer a definitive
11 position.
12 Q. In fact, we looked at the 46
13 percent, and we just discussed that it says 46
14 percent of the inmates in the database. And I
15 think we ultimately concluded that that was
16 probably the total inmate database, correct?
17 A. I'm not sure, but probably.
18 Q. And that includes individuals who
19 were not incarcerated November 3rd through
20 November 5th, correct?
21 A. Correct.
22 Q. And so that would not be an
23 analysis of the number of people who were
24 prevented from voting during the three days
25 prior to the election?
26 A. You're correct. That paragraph,
27 that sentence is probably missated. It's not
28 well-stated. I think the intent of the
29 statement, however, is still true. I think the
30 general point of the statement is still true.
31 Q. And it states here that "The
32 supplemental analysis of additional data from
33 the annual inventories of jails provides
34 further support for the fact that there is a
35 disproportionate impact on African-American
36 voters who were not allowed to vote." You're referring to the ODRC
37 inventories that we just discussed --
38 A. Yes.
39 Q. -- that you had back sometime in
40 late summer or fall?
41 A. Correct.
42 Q. I want to turn to the last page of
43 your report, page 4, where you start the
44 paragraph with "racial impact."
45 A. Okay.
46 Q. And so the 38 percent, is that the
47 number that's reflected in this last paragraph
48 here which states; "The inventory of jails
49 noted above also provides data on the racial
50 composition of inmates state-wide. Again,
51 using the latest inventories available, we find
52 that 38.4 percent of adults in those jails were
53 African-American"?
54 A. Yes.
55 Q. And so that's just stating that of
56 the people who are in jail, 38.4 percent are
57 African-American, correct?
58 A. Right.
59 Q. It doesn't offer any attempt to
60 break down the population by those who were
61 incarcerated during the time period we're
62 looking at?
63 A. Correct.
64 Q. The weekend prior to the election?
65 A. Correct.
66 Q. And in the paragraph preceding
67 that, you state; "The issue of possible
68 disparate racial impact of the inability of
69 registered jail inmates to vote" -- and I'm
70 going the jump ahead here a little bit -- "can
71 be addressed with the inmate data since race is
72 included in the file. 46 percent of the
73 inmates in the database were black, while there
74 was 20 percent of the adult 2010 Ohio
75 population that were black."
76 That's -- those are the exact same
77 numbers that we just discussed that were in the
78 previous report, correct?
79 A. Correct.
80 Q. Did you undertake any new analysis
81 to determine whether there was a disparate
82 impact since your last report?
83 A. Just in the sense of looking at the
84 percentage of the inmates in the database on --
85 the inventory database, and looking at what the
86 State reports as the racial composition of its
87 inmates, feeling that the 38 percent confirms
88 that it's significantly higher than the general
89 population, adult population, that 20 percent
90 from the census. The point being there's a
91 disproportionate number of inmates, whether
92 it's year round, or probably in the jails in
93 the period before the election that are
94 African-American. And if they're denied votes,
95 the opportunity to vote, then it's probably
96 impacting African-Americans disproportionately
97 compared to non-African-Americans.
98 Q. Okay. And I want to just break
that down a little bit. First of all, you used
the same terminology here that you used in your
October 30th report, that 46 percent of all the
inmates in this database were black. And this
is a report you said you prepared yesterday; is
that correct, or sometime in the last few days?
A. This is a report that I produced
recently, yes.
Q. And did you prepare it also
recently? When did you prepare this report?
A. What's the date? The 20th. I'm
sure it was in draft mode with various
components being worked on before the 20th, but
it was finalized on the 20th. I had a draft on
the 19th and I brought it to the meeting and we
found some typos, and I corrected those typos,
and then they were sent to you.
Q. Okay. And so does that refresh
your recollection as to whether the database
that you're referring to is the overall inmate
database, or the data -- the people
specifically incarcerated at 11/3 through 11/5?
A. No. I just borrowed the paragraph
from the earlier report.
Q. Okay. So it's the same conclusion
we reached, where you don't recall
specifically, but it is most likely the overall
database that we're looking at?
A. I think that's a fair statement.
Q. And so you had all this information
when you produced your report on October 30th,
correct?
A. Yes.
Q. And as we just mentioned, you
stated there "the issue of possible disparate
racial impact of the inability of registered
jailed inmates to vote could be addressed," and
the next sentence starts "without undertaking
that full analysis," correct?
A. Yes.
Q. And so that same data here in this
report enables you to draw a conclusion about
the overall disparate impact?
A. I think I'm just simply pointing
out the discrepancy in the two numbers, and
letting the reader reach their own conclusions.
But if you're asking me, I think that it's
pretty indicative of the disparate impact.
Q. And that wasn't something you felt
necessary to write in your previous report,
correct?
A. That's correct.
Q. Do you have any idea where the race
information that is included in the files came
from, what the source of that race information
is?
A. In the inventory files?
Q. Correct.
A. I believe that the administrators
of the jails provide that data to the Ohio
Department of Rehabilitation and Correction.
Q. And those inventories reflect
different years, correct?
A. They do.
Q. Some are only as recent as 2008,
correct?
A. Correct.
Q. And I think some were 2009, some
were 2010?
A. Yes.
Q. How do you standardize that
information?
A. I haven't standardized it. But if
the issue is whether or not there's been
significant change, for example, in the racial
composition in the jails, and one can easily
verify that, and I can be pretty confident to
say that one would find that the proportion of
a jail population that's African-American has
always been disproportionately high among
African-Americans, whether it's 2008 or 2012 or
2014.
Q. But in terms of the actual number
that you provide, this 38.4 percent, that is an
aggregate of some data that dates as far back
as 2008?
A. That's correct.
Q. The race information for the
individuals included in your jail files for the
purposes of your count, ultimately the 207 now
as a result of the supplemental report, you
indicated that race is provided. That comes
from the jail information, correct?
A. From the inmate -- sorry.
Hello Holly and Ryan,

Attached are two reports from our expert Mark Salling along with his CV and list of cases. We will be sending correspondence and other documents via FedEx tomorrow.

Sincerely,
Ngozi Ndulue

OHIO JUSTICE & POLICY CENTER
Staff Attorney
215 East Ninth Street, Suite 601
Cincinnati, OH 45202
513-421-1108 ext. 34
513-562-3200 fax
From: Ngozi Ndulue
To: Holly Wallinger
Cc: Ryan L. Richardson; Erin Butcher-Lyden; Sarah Pierce
Subject: Additional subpoena response
Date: Friday, January 10, 2014 12:26:54 PM
Attachments: Euclid City police NEWBATES.PDF

I’m resending this message because the attachment was initially rejected due to its size. Please let me know if you receive this.

Ngozi

From: Ngozi Ndulue
Sent: Friday, January 10, 2014 7:51 AM
To: Holly Wallinger
Cc: Sarah Pierce; Erin Butcher-Lyden; Ryan L. Richardson
Subject: Additional subpoena response

Hello Holly,

We received an additional subpoena response from Euclid City Jail. The documents are attached. Also, we have been having intermittent e-mail problems for the last week and a half, so if you e-mailed us please resend the message. Thank you.

Ngozi

OHIO JUSTICE & POLICY CENTER
Staff Attorney
215 East Ninth Street, Suite 601
Cincinnati, OH 45202
513-421-1108 ext. 34
513-562-3200 fax
Ngozi—

Attached please find the report of Defendants’ expert Dr. Stephen Mockabee. In addition to the report, I have attached Dr. Mockabee’s CV, his cover letter setting forth details, and an email to him regarding his review.

On a related matter, we’d like to issue a notice of deposition to Dr. Salling—do you have some convenient dates for him that we can incorporate?

Best—

Holly

Holly W. Wallinger
Assistant Attorney General – Constitutional Offices
Office of Ohio Attorney General Mike DeWine
Direct: 614-644-7876
Main: 614-466-2872
Fax number: 866-413-7031
Holly.Wallinger@OhioAttorneyGeneral.gov

Confidentiality Notice: This message is intended for use only by the individual or entity to whom or which it is addressed and may contain information that is privileged, confidential and/or otherwise exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify me immediately by telephone.
Ngozi—

February 21\textsuperscript{st} works well for us for Dr. Salling’s deposition, with the reservation to use our remaining
time, if necessary, at a later date.

Also, Dr. Mockabee is available on February 24\textsuperscript{th}, at our offices.

See you then.

--Holly


Holly W. Wallinger  
Assistant Attorney General – Constitutional Offices  
Office of Ohio Attorney General Mike DeWine  
Direct Line: 614-644-7876  
Main Line: 614-466-2872  
Fax number: 614-728-7592  
Holly.Wallinger@OhioAttorneyGeneral.gov

Confidentiality Notice: This message is intended for use only by the individual or entity to whom or which it is
addressed and may contain information that is privileged, confidential and/or otherwise exempt from disclosure
under applicable law. If the reader of this message is not the intended recipient, or the employee or agent
responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination,
distribution or copying of this communication is strictly prohibited. If you have received this communication in error,
please notify me immediately by telephone.

Hello Holly,

After our conversation on Monday about rescheduling Mark Salling’s deposition, I’ve consulted with
Mark and co-counsel about possible deposition dates. Of the dates that you proposed, Mark is
available on the 21\textsuperscript{st} (but on that day he needs to be finished by 4) or the 24\textsuperscript{th}.

Have you been able to find dates that work for Dr. Mockabee? An additional date that would work
for us is February 27\textsuperscript{th}.

Sincerely,

Ngozi Ndulue