

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
EASTERN DIVISION

THE OHIO ORGANIZING)
COLLABORATIVE, ET AL,)
)
PLAINTIFFS,) CASE NO. 2:15-CV-1802
)
vs.)
)
JON HUSTED, ET AL,)
)
DEFENDANTS.)
_____)

TRANSCRIPT OF THE BENCH TRIAL PROCEEDINGS - VOLUME VII
BEFORE THE HONORABLE MICHAEL H. WATSON
MONDAY, NOVEMBER 30, 2015; 9:00 A.M.
COLUMBUS, OHIO

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1 Monday Morning Session

2 November 30, 2015

3 - - -

4 THE COURT: Call your next witness.

5 MR. KAUL: Your Honor, just before we do, briefly, I
6 was going to raise a few housekeeping issues.

7 THE COURT: Very good.

8 MR. KAUL: Mainly just as an FYI for the Court.

9 First, we have three witnesses left. One of them, Brad
10 Cromes, is available tomorrow. So Defendants have agreed to
11 let him come first thing tomorrow. We appreciate it.
12 Otherwise our other two witnesses would be first and second
13 today. After that, we'll be in a position to rest. That was
14 the first issue.

15 Second, we are basically ready, I think, to tee up our
16 exhibits for admission. We have a number that are unobjected
17 to which I'll read into the record when the time comes. There
18 are a number that there is a dispute as to. So I'm not sure
19 what's easiest for the Court in terms of whether you'd like us
20 to identify those in advance or later. But we're happy to do
21 whatever you prefer.

22 THE COURT: Identify them in advance, if you would.

23 MR. KAUL: Okay. I can do that now or I can do it
24 between witnesses.

25 THE COURT: Now is fine.

1 MR. KAUL: I'm going to categorize them by type, which
2 I think will make it a little bit easier. It's somewhat out of
3 order numerically. 1 through 18 are the legislative videos and
4 transcripts. I know the Court's aware of that issue.

5 THE COURT: And again, we're doing disputed at this
6 point, right?

7 MR. KAUL: That's correct.

8 THE COURT: All right.

9 MR. KAUL: Then there's a group that either is written
10 testimony for the legislature or in one case a letter from a
11 representative to Secretary of State. These are all
12 Plaintiffs' Exhibits, this is 20, 67 to 71, 85 is the letter.

13 MS. COONTZ: Slow down.

14 MR. KAUL: I'm sorry. The category that's either
15 written testimony to the legislature or the one letter I
16 mentioned from Kathleen Clyde to the Secretary. That's 20, 67
17 to 71, 85, 96 and 121. Then there's a group of letters that
18 were sent in response to inquiries from Franklin County Board
19 of Elections from constituents. Those are 72 through 84 and
20 120.

21 Then there are a series of documents that were either
22 sent from an e-mail account at the Secretary of State's Office
23 or to someone at the Secretary of State's Office. My
24 understanding is that there's a hearsay objection but no other
25 objections. But obviously correct me if I'm wrong and feel

1 free to correct me later. I'm not trying to put you on the
2 spot. Those are 49 to 53, 55 to 58, 60 to 61, 63 and 64, 66,
3 88 to 89, 95, 100, 103 and 118.

4 THE COURT: Again, all disputed?

5 MS. COONTZ: Yes.

6 MR. KAUL: And 60, there was an attachment which is
7 124.

8 MS. COONTZ: And does the Court want the basis for the
9 dispute now or how does the Court want to handle that? Some of
10 it's hearsay from the communications that we're talking about
11 that witnesses did not testify. So hearsay, foundation issues
12 as well.

13 THE COURT: I don't want it now.

14 MS. COONTZ: Okay.

15 THE COURT: I want to review the documents first.

16 Go ahead.

17 MR. KAUL: And then the other exhibits to which I
18 understand there's hearsay and then an additional objection of
19 some sort, on my list I have 65, 87, 94, 97 to 99 and 104 to
20 105. And then the last one, 21, the defendants are deciding
21 their position right now. We're going to revisit that.

22 MS. COONTZ: Did we talk about 100 and 103? I
23 apologize.

24 MR. KAUL: And I can move in the unobjected to ones
25 now if that's easier or I can wait.

1 THE COURT: Let's do it now.

2 MR. KAUL: It's our understanding that 19 has been
3 admitted already and that 92 was admitted with the redactions.
4 That's the fraud billboard.

5 THE COURT: Ms. Coontz, agreed?

6 MS. COONTZ: We object to 92 but we understand the
7 Court has admitted it.

8 THE COURT: All right. Go ahead.

9 MR. KAUL: And then the ones that we'll move in to
10 which there's no objection are 22 through 43, and for the
11 Court's reference, those are either the bills that are at
12 issue, the directives at issue, the relevant House and Senate
13 journals and some tie-vote letters, letters the Secretary sent
14 in response to ties from county boards. That's 22 to 43. And
15 then also 119. So we'll move those at this point.

16 MS. COONTZ: No objection, Your Honor.

17 THE COURT: 19, 92 over the objection of the defense,
18 22 to 43 and 119 are all admitted with only the one subject
19 objection.

20 MR. KAUL: And then 90 and 91, it's our understanding
21 there's no objection and we'll move those. 90 is turnout
22 results from 2008, and 91 is 2010 census data concerning Ohio.

23 THE COURT: 91, you say, is the 2010 census; 2008
24 turnout. Is that Brill's report?

25 MR. KAUL: No. It's just 90 is Secretary of State

1 website results, I think, and 91 is just basic census data.

2 THE COURT: Very good.

3 MS. COONTZ: No objection, Your Honor.

4 THE COURT: 90 and 91 will be admitted.

5 MR. KAUL: And then 106 through 114 are the various
6 expert materials. So we'll move those.

7 MS. COONTZ: No objection.

8 THE COURT: 106 through 114 will be admitted.

9 MR. KAUL: So those are the unobjected to exhibits.

10 And then the other quick housekeeping matters are
11 Mr. Preisse, I understand it, has agreed to content for a
12 declaration. And I'll let Mr. McTigue supplement if he's got
13 anything to add.

14 MR. MCTIGUE: Just last night Mr. Jabe, Mr. Preisse's
15 attorney, sent me revisions to the declaration. I sent him an
16 e-mail this morning accepting the revisions. I've given a copy
17 to the defense. It has electronic signature on it so the
18 question we have for the Court is whether that suffices or
19 whether we have to get it signed by Mr. Preisse, physically
20 signed.

21 MS. COONTZ: We're fine with electronic signature. We
22 just got the document so we'll take a look at it. We may have
23 an objection. I'm just not sure at this point.

24 THE COURT: I think orders are routinely put on the
25 docket with electronic signatures, so you don't need to get an

1 original signature.

2 MR. MCTIGUE: Thank you.

3 MR. KAUL: And then finally, Ms. Roberts, our
4 paralegal, was about to finalize a declaration which I think
5 will narrow some of the authentication issues so we can more
6 squarely present the exhibit issues to the Court.

7 THE COURT: Very good. Thank you.

8 MR. KAUL: That's all I have.

9 And the other thing, I'm sorry. In addition to the
10 exhibits, we're going to move deposition designations today or
11 at least we can. We've narrowed it and I'll let Mr. Spiva --

12 THE COURT: Are these disputed?

13 MR. VOIGT: Yes, Your Honor.

14 MR. SPIVA: Some are disputed, Your Honor, some are
15 not. The undisputed ones, as I understand it, are the
16 designations of both the 30(b)(6) and the personal capacity
17 depositions of Matthew Damschroder of the Secretary of State's
18 Office. And then I think the rest of these are disputed.

19 We would like to move the following on the basis that
20 they are over 100 miles. There's -- I think the basis of the
21 dispute is that when you look on Google Maps you get over
22 100 miles, that's what it would take for somebody to actually
23 drive from where ever the person is to here. As the crow
24 flies, some of these I think do come in under 100 miles and
25 it's our position, and we can get Your Honor case law if need

1 be, that really the rule contemplates the distance the person
2 would actually have to travel.

3 The individuals who fit in that category are John Weber
4 W-E-B-E-R -- I'm sorry. Let me back up.

5 A couple of these I think it's undisputed that they are
6 over 100 miles, Your Honor. That would include Mr. Weber. It
7 would also include Daniel Troy and it would include Patrick
8 McDonald. Then the following --

9 THE COURT: These are truly undisputed?

10 MR. VOIGT: No, Your Honor. My reading of the rule is
11 that even though they're beyond 100 miles, there still needs to
12 be an effort to ask the witness to try to be here at court.
13 I'm not aware of any effort that was made to at least request
14 their appearance.

15 MR. SPIVA: Rule 32(a), Your Honor, is quite clear
16 that this is one of the categories of individuals whose
17 depositions can be admitted if they're over 100 miles.

18 THE COURT: At this point I'm going to mark them
19 disputed. Go ahead.

20 MR. VOIGT: If I may add, Your Honor. If the Court
21 does deem those admitted, we would ask the opportunity to mark
22 cross-designations and objections as well as, in fairness, the
23 declarations that those individuals signed should come in as
24 well if the depositions themselves come in. Although we object
25 to the depositions coming in. So on that basis, we would also

1 not move for the declarations to come in if the depositions do
2 not come in.

3 MR. SPIVA: We don't object to them marking
4 counterdesignations, Your Honor, and making objections. We do
5 still object to the declarations coming in. They are hearsay.
6 These are witnesses within the State's control so they could
7 have brought them in to testify. They simply don't -- unlike
8 the deposition designations, they just don't -- there's no rule
9 that permits their admission when the witness is unavailable
10 because of distance whereas, as I said, 32(a), we think, quite
11 clearly does permit the use of the deposition in that fashion.

12 THE COURT: I'll let you know.

13 MR. SPIVA: Okay.

14 THE COURT: Keep rolling.

15 MR. SPIVA: And then, Your Honor, these are ones for
16 which there's a dispute over -- in addition to the dispute over
17 whether we can enter them at all, there's a dispute over the
18 distance. And this goes back to the crows fly versus actual
19 travel distance issue, Your Honor. And that would be Kerry
20 Metzger, M-E-T-Z-G-E-R, Barbara Tuckerman.

21 By the way, Your Honor, should I -- I actually have the
22 distances that we calculated using Google Maps. Would that be
23 helpful to the Court or is that not necessary?

24 THE COURT: It's not necessary.

25 MR. SPIVA: Continuing then. Brian Baldrige,

1 B-A-L-D-R-I-D-G-E. And I think that is it in terms of the ones
2 that we are seeking to move admission.

3 We had designated a number of other deposition
4 transcripts at the time for that filing on November 12th and we
5 are -- the ones that -- other than the ones that I just
6 mentioned, we're dropping the rest of them. We're not seeking
7 admission of any of the others.

8 THE COURT: Very good.

9 MR. VOIGT: Just so I'm clear, the ones that you just
10 mentioned were John Weber -- and including the first list, John
11 Weber, Kerry Metzger, Daniel Troy, Barbara Tuckerman, Pat
12 McDonald and Brian Baldrige?

13 THE COURT: Those are the six I have.

14 MR. SPIVA: Yes. That is correct. And adding, of
15 course, I think you said this, but Matthew Damschroder was the
16 only other one that's not -- but that one there's no dispute
17 over.

18 MR. VOIGT: Your Honor, he is testifying and so we
19 don't feel that there's a need to admit the transcript of his
20 deposition.

21 MR. SPIVA: They had previously told us they didn't
22 dispute his -- he is both a party opponent if it's in the
23 managing agent category under Rule 32(a) and --

24 THE COURT: If you're going to have a chance to
25 cross-examine him live, you can use those documents to do it, I

1 suppose.

2 MR. SPIVA: Yes, Your Honor. But his deposition
3 testimony is evidence as well and so to the extent there are
4 statements that we obtained in those depositions, they're party
5 admissions. I don't know whether they'll come out the same way
6 on cross. We also can save some time, probably, if we had
7 those designations.

8 Actually because they had told us they did not object to
9 him previously I didn't actually think there was any issue with
10 respect to that.

11 MR. VOIGT: With respect --

12 THE COURT: I'll let you know with respect to
13 Damschroder. He's going to testify. I've heard him testify
14 before. I certainly can read what you want me to read.

15 MR. VOIGT: Your Honor, with regard to the three --

16 THE COURT: Are you finished, first, Mr. Spiva?

17 MR. SPIVA: I am.

18 THE COURT: Very good. Go ahead.

19 MR. VOIGT: With the three additional deponents that
20 Mr. Spiva mentioned, Kerry Metzger, Barbara Tuckerman and Brian
21 Baldrige, those are all clearly within 100 miles of the court
22 and the case law does state that it's as the crow flies. We
23 submitted an, it's in our exhibits actually, an affidavit by
24 Brodi Conover where he calculated the distances. What's the
25 number on that one?

1 We'll get the number for you on those actual distances.
2 But because they're within 100 miles, Your Honor, the
3 plaintiffs were obligated to, if they wanted to bring that in,
4 to subpoena these individuals. We're aware of no effort to do
5 so.

6 MR. SPIVA: Your Honor, you said it wasn't necessary,
7 but if need be, we certainly could submit a declaration showing
8 that, for instance, Kerry Metzger is 116 to 120 miles based on
9 Google Maps. And the others, as well, come in over 100 miles.

10 THE COURT: Is their evidence anything other than me
11 too evidence?

12 MR. SPIVA: Evidence in their deposition designations?

13 THE COURT: I've already read Barbara Tuckerman's, for
14 instance.

15 MR. SPIVA: Right. These are individuals that
16 submitted declarations, Your Honor, and so I think our view is
17 that there are helpful admissions in there. Many of them
18 admitted that fraud is negligible. They're admissions
19 concerning --

20 THE COURT: Did they write every word of their
21 declarations?

22 MR. SPIVA: Well, they signed them, Your Honor. I
23 doubt they wrote every word. But we're seeking to admit the
24 deposition designations which test those declarations.

25 THE COURT: I'll let you know.

1 MR. SPIVA: Thank you.

2 MR. VOIGT: And, Your Honor, we're not affirmatively
3 moving the declarations into evidence. Those are documents
4 that our experts relied upon in preparing their expert reports,
5 but I believe in fairness, if the deposition transcripts do
6 come in that the declarations should come in as well. But we
7 do object to the depositions coming in, as I stated.

8 THE COURT: Thank you.

9 MR. VOIGT: Thank you.

10 THE COURT: Can I get a witness?

11 MR. SPIVA: Yes, Your Honor.

12 MR. MARTIN: Good morning, Your Honor. We call
13 Dr. Minnite.

14 (Witness sworn.)

15 THE COURT: Mr. Martin, you may begin when your
16 witness is comfortable.

17 - - -

18 LORRAINE MINNITE, PH.D.

19 Called as a witness on behalf of the Plaintiffs, being first
20 duly sworn, testified as follows:

21 DIRECT EXAMINATION

22 BY MR. MARTIN:

23 Q. Good morning.

24 A. Good morning.

25 Q. Could you please state your name for the record?

1 A. Lorraine Carol Minnite.

2 Q. Could you spell that for the Court, please?

3 A. Lorraine is L-O-R-R-A-I-N-E, C-A-R-O-L, Minnite is
4 spelled M-I-N-N-I-T-E.

5 Q. Dr. Minnite, where are you currently employed?

6 A. At Rutgers University in Camden, New Jersey.

7 Q. What is your position there?

8 A. I'm an associate professor in the department of public
9 policy and administration.

10 Q. What is your educational background?

11 A. I have a bachelor's degree in history and I have two
12 master's degrees and a Ph.D. in political science.

13 Q. Where did you obtain those degrees?

14 A. The bachelor's degree is from Boston University and the
15 graduate degrees are from the City University of New York.

16 Q. Since obtaining your Ph.D. where have you taught?

17 A. I've taught at Barnard College which is part of Columbia
18 University in New York, and Rutgers University, my current
19 employer.

20 Q. And since obtaining your Ph.D. what has been the focus
21 of your research?

22 A. I've spent a lot of time on the study of American
23 elections and, in particular, the incidents of voter fraud in
24 American elections.

25 Q. And how many years have you spent researching American

1 elections and voter fraud?

2 A. Fourteen.

3 Q. And have you published any articles, peer-reviewed
4 articles or books on the topics of American elections and voter
5 fraud?

6 A. Yes.

7 Q. Could you describe those?

8 A. Yes. I've published a book called *The Myth of Voter*
9 *Fraud* in 2010. I published another book in 2009 with two
10 co-authors called *Keeping Down the Black Vote*. I published a
11 couple of peer-reviewed chapters, book chapters on the issue of
12 voter fraud. One in a book called *Law and Election Politics*.
13 Another one which is coming out in January is published by the
14 American Bar Association, and I published a number of other
15 reports and articles on the issue.

16 THE COURT: The ABA thing, is it a chapter?

17 THE WITNESS: Yes.

18 BY MR. MARTIN:

19 Q. Could you turn to tab 21 in Plaintiffs' binder?

20 MR. MARTIN: May I approach, Your Honor?

21 THE COURT: You may.

22 BY MR. MARTIN:

23 Q. Have you seen this document before?

24 A. Yes.

25 Q. Can you describe what it is?

1 A. This is a report that I wrote for a nonprofit,
2 nonpartisan group called Project Vote. The title of it is The
3 Politics of Voter Fraud.

4 MS. COONTZ: Objection, Your Honor.

5 THE COURT: Basis.

6 MS. COONTZ: We're going to object to the
7 admissibility of this article, if that's what the intent is,
8 and that's my understanding. It is hearsay but if the witness
9 wants to testify about points that are made in this article
10 that are also captured in the report, we obviously don't have
11 an objection. But to the extent that the witness is going to
12 testify about any findings of this report that are outside the
13 context of her expert report in this case, we would object.
14 And, again, the basis would be hearsay with respect to the
15 entire article.

16 MR. MARTIN: Your Honor, at this point we're just
17 authenticating this document is what it is.

18 THE COURT: Your objection is noted.

19 Go ahead.

20 BY MR. MARTIN:

21 Q. Is that a true and correct copy of the article that you
22 wrote?

23 A. Yes.

24 Q. Okay. Thank you. You can put that aside for now.

25 Dr. Minnite, have you ever testified before on the

1 subject of voter fraud?

2 A. I've testified in court cases. I've also testified
3 before Congress.

4 Q. Can you describe those cases?

5 A. Yes. I've testified in a case that was a state court
6 challenge in Pennsylvania to a photo ID law called *Applewhite*
7 *v. Commonwealth of Pennsylvania*. I testified in a federal
8 court case in Wisconsin which the name changes but I believe
9 it's now called *LULAC v. Deininger*. I've testified in Texas in
10 a case called -- originally called *Veasey v. Perry*, and I've
11 testified in North Carolina in another federal case called
12 *NAACP v. McCrory*.

13 Q. Can you describe your congressional testimony as well?

14 A. Yes. The question was to report on my research on the
15 incidents of voter fraud in American elections.

16 Q. And to which body was that?

17 A. That was a subcommittee of the -- I believe it was the
18 house judiciary committee. This was several years ago.

19 Q. Have your opinions ever been excluded by any Court?

20 A. No.

21 MR. MARTIN: At this point, Your Honor, I'd like to
22 move to admit Dr. Minnite as an expert on the incidents and
23 effect of voter fraud in American politics.

24 THE COURT: Ms. Coontz?

25 MS. COONTZ: I would just ask that it be narrowed to

1 American elections. I believe that's what the witness'
2 testimony has been.

3 THE COURT: Let's hear her testimony first.

4 BY MR. MARTIN:

5 Q. Dr. Minnite, let's focus now on the work that you did in
6 this case. What were you asked to do in this case?

7 A. I was asked to provide an opinion on the incidents of
8 voter fraud in American elections and also the effects of
9 allegations of voter fraud.

10 Q. You submitted a report in this case, correct?

11 A. That's correct.

12 Q. Could we now turn to Plaintiffs' Exhibit 107.

13 MR. MARTIN: Your Honor, may I approach again?

14 THE COURT: Yes.

15 BY MR. MARTIN:

16 Q. Is this the initial report you prepared in this case?

17 A. Yes.

18 Q. You also prepared a rebuttal report, correct?

19 A. That's correct.

20 Q. Could you turn to tab 108, please? Is that the rebuttal
21 report you prepared in this case?

22 A. Yes.

23 Q. Dr. Minnite, to begin, can you provide a sort of
24 high-level general summary of the opinions and conclusions you
25 reached in this case?

1 A. Yes. In this case and in the report I conclude that the
2 incidents of voter fraud in American elections is rare; that
3 allegations of fraud are typically used to try to shape public
4 opinion and also election law and rules concerning access to
5 the ballot; and that the incidents of voter fraud in Ohio is
6 also rare.

7 Q. Can you describe, in terms of your methodology, the
8 types of sources and materials you use to reach those
9 conclusions?

10 A. The conclusion regarding the incidents of voter fraud
11 nationally is primarily drawn from the research that I did that
12 is reported in my book, *The Myth of Voter Fraud*. So that was
13 research that I began around 2001 following the disputed
14 presidential election of 2000. And I continued to do that
15 research up through 2008, 2009 into the publication of the
16 book. And then following the publication of my book, I
17 continued to work on the issue and publish some of the material
18 that I mentioned earlier, but also the work that I've done in
19 the various court cases over the last several years, that has
20 allowed me to look very intensively in several more states and
21 to, in a sense, update the research that initially went into
22 that book.

23 So the research method that I use and the research
24 itself relied on a wide variety of sources that included
25 archival research, interviews with election officials, with

1 lawyers defending people who had been accused of voter fraud,
2 databases, court records, the records of efforts by the U.S.
3 Department of Justice to look for and prosecute voter fraud,
4 news articles. And I should say with respect to the news
5 articles, I did very intensive examination. And the point of
6 that, initially, was to get a sense of what the public knew
7 about voter fraud and also going with the idea that voter fraud
8 is of great concern to everyone that incidents of voter fraud
9 would likely be reported in the press.

10 So I did a very extensive analysis of news reports as
11 well. And I'm trying to think what else, but all of that
12 research that went into the publication of my book, which I
13 published in various ways before and after, the book relied on
14 this sort of wide set of sources.

15 In addition, I looked at, most recently, the efforts of
16 the Ohio Secretary of State to get an accounting and try to
17 shine light on the record of voter fraud in Ohio. And so under
18 his leadership, his office put out accountings, reports on
19 voter fraud and press releases and other documents. I always
20 looked at the official records of law enforcement or
21 Secretaries of State.

22 When I was working on my book, for example, I sent
23 letters to every Attorney General and every Secretary of State
24 or chief election official in the United States and, invoking
25 state public records laws, asked for statistics on recent

1 elections on the incidents and allegations of voter fraud. I
2 also sent letters to every prosecuting attorney in the United
3 States asking for it.

4 And the reason for this sort of broad reach in the
5 research method is because there are no good statistical
6 records of voter fraud. There are no good criminal justice
7 statistics on the incidents of voter fraud. So if there had
8 been, all of that effort, you know, wouldn't probably have been
9 required. And when I originally began the research on my book,
10 I sort of thought it would be easy to do because I thought,
11 well, I'll just go to where to I would go to look at crime
12 statistics or that sort and I'll find it there. I might have
13 to dig a little bit. But as I started that research, it just,
14 you know, it just unfolded and unfolded that I had to try many
15 other different ways to get the data because it was not being
16 recorded anywhere.

17 So, again, the method is to look at a wide variety of
18 sources, assuming that no one source gives you a complete or
19 maybe even completely accurate view. But when you, in a sense,
20 triangulate it, you look here and you look there, you look here
21 and you look everywhere, and you're getting the same result or
22 the same finding that you have more reliability in the findings
23 when you do it that way.

24 So that's a bit of a long-winded answer to your question
25 about resources or the sources that I examined for my research.

1 Q. Could you say a little bit more of the method of
2 analysis you employ in looking at those sources?

3 A. It's something that in the social sciences, because I'm
4 trained as a social scientist, it's usually referred to as
5 mixed methods because it brings in qualitative and quantitative
6 data sources and then tries to, as I say, sort of triangulate
7 the findings. And it's an appropriate method for this problem.
8 And the problem being to try to measure the incidents of voter
9 fraud, again, because there are no better sources of that.

10 Q. And before we talk in more detail about the opinions and
11 conclusions you've reached regarding the incidents of voter
12 fraud, can you describe what your definition of voter fraud is?

13 A. Yes. I have a whole chapter in my book titled *What is*
14 *Voter Fraud?* in which I examine this question. And, again,
15 from the perspective of social science, it's very important to
16 develop concepts in ways in which -- which allow you to measure
17 the phenomenon that you want to measure. So I had to think
18 very hard about what voter fraud was. And, again, at first I
19 consulted the political science literature and there were --
20 people use the term somewhat loosely. Voter fraud, vote fraud,
21 election fraud. And also it sort of taps into an idea about
22 corruption in American elections.

23 So we have to have a very precise definition if we want
24 to try to measure something. So I began to try to do that by
25 looking, well, how is it treated in the law? Because I read

1 every election code for all the 50 states and federal
2 regulation, federal law, as well, that applied. And
3 essentially we have -- we don't really have a national election
4 system. We have 50 systems. So there are differences across
5 the states. So I read those codes.

6 Every state criminalizes activity that we would call
7 voter fraud. For example, voting when you're not ineligible
8 under state rules or voting more than once. So in state law
9 there usually isn't something called voter fraud. Instead,
10 it's illegal voting and it would define what that is, for
11 example.

12 So I looked at that and I said, well, this isn't really
13 helping -- it's helping me but it's not really answering the
14 question enough yet. I looked at the way that the justice
15 department defines voter fraud and the Public Integrity Section
16 of the Criminal Division of the U.S. Department of Justice
17 produce a manual for U.S. Attorneys on election corruption and
18 how to recognize it and what the state laws are and what the
19 state role is or I'm sorry, what the federal role is in state
20 elections or in nonfederal elections and so forth. It lays it
21 all out there and also provides a history of what those laws
22 are.

23 Again, the definition in my mind was still too broad.
24 And so the way that I approached it was, I thought about the
25 electoral process is a process that, say, begins with a voter

1 or citizen who wants to participate in an election and all
2 states, except for one, require registration. So you have to
3 register, you have to show who you are, provide your identity,
4 go through the process, and elections are organized by actors
5 beyond voters, of course. So politicians who want to run,
6 there are rules for that. Campaigns, election officials. So
7 there are many different, what we would call, actors in the
8 process of pulling off an election.

9 So I broke up the process and then I thought about the
10 different participants and I reasoned that voters could only
11 corrupt the part of the process that they essentially had
12 access to. So voters can't corrupt the count because they
13 don't count the ballots. And my focus on voters comes from my
14 interest in the public policy issues because the question of
15 fraud usually leads to rules that affect voters. So we tighten
16 up identification requirements, for example.

17 So I wanted to know, well, voters as actors in the
18 electoral process, what fraud -- how much fraud are they
19 committing? That's the focus of my research. I'm trying to
20 relate the process by which I got down to looking at voters as
21 actors and then thinking about the process of going from
22 registering people to somebody wins the election, what does
23 that process entail? And where do voters interact with that
24 process?

25 So basically voters can corrupt only the part of the

1 process, I said, as they had access to. That tends to be their
2 own registration and their own voting. So a voter could send
3 in a registration and not be truthful about their citizenship
4 or where they live. A voter could attempt to vote more than
5 once. But very important in this definition, in addition to
6 breaking up the process and looking at the actors and thinking
7 about where do voters come in, very important is the idea of
8 intent because actually the Latin word that's the origin of the
9 word fraud means to deceive.

10 So fraud always involves intent. And to my knowledge,
11 all state laws that criminalize something like illegal voting
12 will say knowingly committed this. So there's always -- that's
13 also reflected in the law that the person has to know what
14 they're doing. They have to have the intent to deceive
15 regarding their, say, their identity or their eligibility or
16 whether they voted, you know, more than once.

17 So that all goes into, ultimately, the definition of
18 voter fraud which, for me, is the intentional corruption of the
19 electoral process by voters. And that kind of a definition
20 then allows me to try to measure how much voter fraud is there
21 because I tried to, very clearly, define what voter fraud is.

22 Q. Okay. Can you describe how you go about measuring the
23 incidents or rates of voter fraud?

24 A. Well, as I said, I initially scan the news coverage of
25 it to try to get a sense of what the incidents are, what people

1 have reported, that way. But I don't necessarily use that as
2 my foundation for sort of counting things. I use that to try
3 to understand where there were problems and where there were
4 allegations. It's very, very important, especially, you know,
5 over the last 10 or 15 years, American politics have become
6 very polarized and there have been, also with the rise of the
7 internet, there's now a new media platform where it's very easy
8 to accuse anybody of anything.

9 Anybody can be accused of anything so there's been a
10 sort of proliferation of allegations of voter fraud. And I
11 realized why some of my colleagues in political science have
12 not really attempted to do this before. It's extremely labor
13 intensive to sort of run down an allegation and find out, well,
14 what really happened? What's the story behind this? It's part
15 of why it took me so long to produce the book because there are
16 many, many, many, many more allegations than there are actual
17 cases.

18 So in my book I give an example of a report that was put
19 out by a sort of a phony organization that said that this
20 report included all of the study of voter fraud in the 2004
21 election and, you know, there were close to 200 cases in this
22 report that implicated something like 300,000 votes being
23 potentially fraudulent in the 2004 election. And it took me,
24 you know, I had some students helping me. It took me all
25 summer one year to run down every single one of those

1 allegations and I report on that in a big fat appendix in my
2 book. In the end, there was something like less than 50 of
3 those votes were potentially fraudulent. So go from 300,000
4 votes to something like 50 gives you a sense of how the
5 allegations really cannot be the measure of voter fraud. So
6 what is it?

7 I've relied, in the end, on the idea that it's a crime
8 and that we can use criminal justice statistics if we can
9 obtain them to try to come to some sense of a measure of voter
10 fraud. So I've used, for example, a number of indictments, not
11 even convictions but indictments to study this.

12 Q. And where did you obtain those -- the statistics about
13 the number of indictments?

14 A. Well, there were a couple of sources. One is the
15 justice department launched a program following the
16 2000 election called the Ballot Access and Voting Integrity
17 program. This was announced by the Attorney General sometime
18 in the spring of 2001. And it was an initiative that brought
19 together attorneys from the civil rights division and from the
20 criminal division, the public integrity section, which has the
21 responsibility for prosecuting election crime.

22 Brought them together to train them further on
23 recognition of voter fraud and voter intimidation and annual
24 sessions and providing materials and urged U.S. Attorneys to be
25 a little more publicly available to the public and announce,

1 put out press releases that in an upcoming election they would
2 be there and if people saw things, they could report to them.
3 So very aggressively tried to find and prosecute voter fraud.
4 And I think less so voter intimidation, even though that was in
5 the title of the program. But voter fraud.

6 So I initially sent in a Freedom of Information Act
7 request. It sort of took two years to process, but in the
8 meantime I had found a case list of the cases that were brought
9 under that initiative in the first three years of that program.
10 So that was fiscal year 2002 through fiscal year 2005. So that
11 was one source on the question of federal indictments.

12 Another was a database that is produced by the
13 administrative office of U.S. Courts called the federal
14 integrated database. And this is a database that is produced
15 annually and it includes every indictment that's brought in
16 Federal Court on an annual basis. And I had access to that
17 data for a ten-year period and I examined that.

18 That data set was a little bit more difficult to work
19 with because the coding system that they used for tagging
20 indictments, it wasn't quite as refined as my definition would
21 require. So it allowed you to pull out election crimes of a
22 sort. I was able to segregate campaign-finance crimes but it
23 still was, then more broadly would include something like
24 election fraud versus voter fraud. But that was another source
25 of information on the federal indictments.

1 Q. And in analyzing these statistics about the federal
2 indictments, what did you find?

3 A. Well, I found from the Ballot Access and Voting
4 Integrity Initiative case list that there were, over that
5 three-year period, there were 95 indictments. And I went in,
6 using the PACER system that gives the public access to court
7 records, to look at every single one of those indictments. And
8 then I was able to apply my definition to sort out, what really
9 are we looking at here? And I could identify who the
10 defendants were and what role maybe they played. For example,
11 were they a voter or were they a politician or were they an
12 election official. And also to look at the crime itself for
13 which the person was being indicted. For example, was it
14 double voting versus noncitizen voting?

15 And applying that analysis to the 95 indictments, I
16 found that actually only 40 of them were voters. And of those
17 40, they fell into three categories. One was a group of people
18 who were not citizens who had managed to be registered and some
19 of them had voted, and they were mostly in Florida. And then
20 there were another set of people who had felony convictions and
21 their voting rights had not yet been restored and some of them
22 had voted. They were mostly in Wisconsin. And then the last
23 set, I think maybe five of them, were double voters, a couple
24 of people who had cast ballots in two different states.

25 So of the 40 voters, 26 were either convicted or pled

1 guilty.

2 Q. You mentioned this earlier but can you remind me what
3 years this data covers?

4 A. This covers the first three years of that program which
5 was 2002 through 2005. And I focused then, partly because I
6 was working on this in 2006, 2007, 2008, but also it's
7 important to keep in mind that this was a program in which the
8 federal government was actively looking for and trying to
9 prosecute voter fraud in federal elections. So that would have
10 covered the 2002 and 2004 election. There was something like
11 200 million votes cast in those two elections.

12 I took that to take into consideration that sometimes
13 people say, well, law enforcement doesn't prosecute this so you
14 can't use those statistics. They don't tell us anything. And
15 my response to that is, well, we can look and see where
16 actually there is an effort on the part of law enforcement.
17 What does it produce?

18 The case I just related about the federal government and
19 the justice department being very active in looking for voter
20 fraud is one. But there are other cases that I report on in my
21 book. For example, in the state of Minnesota, the prosecuting
22 attorneys are required by law to follow up on these allegations
23 of voter fraud. And as I report in the book, there was only,
24 over the period I looked at, there was only one case of a sort
25 of -- it was actually sort of a flagrant case of registration

1 fraud.

2 Q. And at this point it might help to turn to, I think,
3 page 14 of your initial report. That's tab 107 again.

4 This describes some research you've done into other
5 voter-fraud allegations, correct?

6 A. Yes.

7 Q. Just beginning here on the second paragraph. Could you
8 describe the Milwaukee investigation that you discuss here?

9 A. Yes. The issue of voter fraud was very prominent in
10 Wisconsin because Wisconsin has been a swing state in recent
11 years. Also because that federal program I mentioned, the
12 Ballot Access and Voting Integrity Initiative, included some
13 pilot projects to see, in the words of the chief of the public
14 integrity section, quote/unquote, what works with juries? With
15 respect to the federal government prosecuting individuals for
16 voter fraud because in the past, the federal government has
17 tended to focus on conspiracies. For example, vote buying
18 conspiracies in Appalachia, in places where there's been an
19 endemic kind of a problem and where there's a serious sort of
20 problem that affects elections.

21 So this was a shift in federal policy to try to focus on
22 individuals who might have committed voter fraud. One of those
23 pilot programs was in Milwaukee. And as a result, there was a
24 task force created of state, local and federal officials, law
25 enforcement officials which I report on here, the joint task

1 force of the U.S. Attorney -- under the leadership of the U.S.
2 Attorney there. And they use the Special Investigations Unit
3 of the Milwaukee Police Department to conduct the actual
4 investigation.

5 They put out a preliminary report. They never actually
6 put out a final report. But in the interim, a sort of interim
7 report that had been produced by the special investigations
8 unit was leaked to the press and then kind of publicly it was
9 available. And in that report they talk about complaints that
10 were filed by the Republican Party of Wisconsin that 60 persons
11 had voted more than once in the November 2004 general election.

12 When you read the report, you get an understanding of
13 what goes on with these allegations. And that is to say that
14 most of this was clerical error, human error, recordkeeping
15 error, problems that produce what we might call irregularities
16 in the data.

17 So, for example, the *Milwaukee Journal Sentinel* was on
18 this case. They were covering this almost every day, the issue
19 of voter fraud in Milwaukee. And they looked at logs of people
20 signing in and then how many ballots in a particular precinct
21 and sometimes they found mismatches. They found either more
22 people signing in and fewer ballots or more ballots and fewer
23 people signing in. And that, I would call that generally an
24 irregularity. Those numbers should match. And when they don't
25 match, we want to know why.

1 The investigation ultimately found that the explanation
2 is data-entry errors, clerical errors, poll workers being
3 overwhelmed by the job in front of them, not maybe being
4 trained or not being able to do the work as well as we want
5 them to do it. Those were the explanations.

6 I also report here on a 2007 audit of the voter
7 registration rolls by the state auditor in North Carolina which
8 purportedly initially they said there were 380 deceased voters
9 who appeared to have voted in the election after their dates of
10 death. And that audit found that in all of those cases, people
11 had died after they cast the absentee ballot but before the
12 election.

13 And this is a not uncommon phenomenon. People do die in
14 the month of October. They maybe vote in the second week of
15 October and they die before the November election. So this
16 isn't uncommon. But we want to know why. We want to know why
17 these irregularities are showing up.

18 And I also report on a report by the South Carolina
19 Attorney General who claimed that there were sort of 900
20 instances of dead people voting in recent elections there. And
21 the state election commission investigated what the attorney
22 general had actually told the justice department were cases of,
23 maybe it was called cemetery voting, people voting from the
24 grave. And in fact, when they did a sample of -- took a sample
25 of that and looked at those cases, they found it was simple

1 human error in 95 percent of the cases.

2 So here, again, as a social scientist, we look at ex --
3 we look at alternative hypotheses. One that certainly has
4 emerged from my work is that human error is most likely the
5 explanation for what we see as irregularities in the data, that
6 we should at least consider it, if not rule it out, before
7 assuming that what we see is fraud.

8 Q. You have also -- have you also investigated allegations
9 of fraud in Ohio?

10 A. Yes.

11 Q. And can you describe your investigation, those
12 allegations and your conclusions?

13 A. Yes. I report on some of this in the 2009 book that I
14 co-authored that I mentioned earlier, *Keeping Down the Black*
15 *Vote*. And this was a case in Ohio coming out of the 2004 or I
16 should say going into the 2004 election when there were
17 allegations that the Republican Party of Ohio and the
18 Republican National Committee were going to, quote/unquote,
19 cage voters. And this is a term that goes back to actually
20 marketing. It comes out of marketing and the old days when you
21 got return mail, you would stick it like in a -- I don't know
22 what it's actually called, but a sort of box where you would
23 put different kinds of categories of returned mail. That's
24 what voter caging refers to.

25 But in terms of electoral politics, what it has tended

1 to refer to is when, say, a party sends out a mailing with a
2 nonforwardable return address and gets some of it back and then
3 they assume that, well, the reason I got it back is because
4 that person doesn't really live there or that's not a real
5 address. And that raises a suspicion about the eligibility of
6 the person if the list comes from the voter registration rolls.

7 So in Ohio, going into the 2004 election, the republican
8 party compiled this list of people whose names got there
9 because they had been sent a mailing. They were mostly
10 newly-registered voters and they had gotten a mailing from the
11 republican party saying, you know, congratulations, you're a
12 registered voter and so forth, and some number of that had come
13 back and they said, we're going to challenge these people. We
14 don't think that they're legitimate voters. We're going to
15 challenge them. And the list grew to, you know, tens of
16 thousands. I think it was 23,000 or I believe I have the
17 number here in my account.

18 And it then was litigated because some people found out
19 they were on that list and they did not believe they should be
20 on that list initially and it was brought into Federal Court
21 under an existing consent agreement between the DNC, the
22 Democratic National Committee, and the RNC that went back to
23 1982 and was being supervised by the Federal Court in New
24 Jersey. And that consent agreement between the two national
25 committees said that if the RNC was going to engage in what

1 they called ballot security program, such as what I've just
2 described, ballot security program is one in which the
3 allegation is that this is voter fraud. That if the RNC is
4 going to engage in that kind of a program, it has to clear the
5 procedures by which it will put that program together with the
6 Federal Court in New Jersey. And they had not done that.

7 And the Federal Court in New Jersey found that there was
8 a sort of racial targeting involved. Because the people being
9 targeting were mostly in Cleveland, they were mostly
10 African-American. It wasn't everybody in the state of Ohio.

11 So I relate that story here because it's an example of
12 how sort of unfounded allegation of voter fraud that came out
13 of this procedure for sending in mail and getting some of it
14 back, which really doesn't tell you that there's voter fraud,
15 shaped party tactics in this case and efforts to, frankly,
16 intimidate voters by saying, we're going to challenge you
17 before you are allowed to cast a ballot. That's one example.

18 But there are many other examples where the allegation
19 of voter fraud is used in, say, in a debate in a state
20 legislature over a particular change in election rules that
21 make it or going to make it more difficult for some voters to
22 either register or vote. And the reason, the justification
23 over and over and over again is that voter fraud will be
24 facilitated by this change. And I should say, again, my
25 initial taking up of this subject, now more than 14 years ago,

1 came, in part, because there was an organization called Demos
2 which is a public policy organization based in New York,
3 nonpartisan, nonprofit organization at the time was -- the
4 executive director was Miles Rapoport who had been in the state
5 legislature in Connecticut and also served as the Secretary of
6 State for the state of Connecticut.

7 That organization was interested in election-day
8 registration and they thought that that was a good reform. He
9 said, you know, every time we try to do this in the state, we
10 hear voter fraud. Voter fraud is going to be facilitated. We
11 can't do this.

12 You're a political scientist, is there voter fraud?
13 Nobody seems to know actually if there is voter fraud. Is this
14 a justifiable reason or not? And that is actually what
15 launched me into the research because as I looked at the issue
16 of election reform and election-administration reform after the
17 2000 election, you know, I thought, well, the 2000 election, we
18 all learned a lot about election administration, even us
19 political scientists who really didn't know much about it.

20 We all learned about how problems can happen and how
21 voters can get entangled in these rules and how the rules
22 change from state to state and people don't know. How election
23 administrators who, I will say I believe do the best they can
24 with the resources they're given. But essentially running an
25 election you have basically a volunteer core who are the poll

1 workers who are hired to work. They may do that job only once
2 or twice or maybe three times a year.

3 So you've got this sort of somewhat unstable system but
4 we learned a lot and yet the public debate shifted away from
5 serious reform. For example, more resources or other reforms
6 that people were proposing at the time like nonpartisan
7 election administration and so forth, it shifted away from that
8 and the problems we saw in Florida, it became voter fraud was
9 the problem. So that was a bit of a mystery about how that
10 happened.

11 But, again, to try to answer your question, it is
12 frequently used to justify election-rule changes that tighten
13 up or make access to registration and voting shrink it for
14 certain populations, especially.

15 Q. I want to go back a moment about your methodology and
16 you described the way that you look at reports of allegations
17 of voter fraud. Have you researched whether or not the public
18 reports of the incidents or rate of voter fraud is a good
19 indicator of the actual prevalence of the problem?

20 A. If you're referring to public reports in the way of
21 allegations, allegations are not a good indicator of how much
22 voter fraud there is.

23 Q. Well, I was referring more to, for instance, your
24 research into the number of indictments for charges of voter
25 fraud. Have you tried to determine whether or not that is a

1 reasonable gauge of how common the problem actually is or how
2 much voter fraud is being committed?

3 A. Well, yes. I think in the end, I settled on that, even
4 though I wouldn't argue it's an absolutely perfect measure but
5 that it is a useful measure because unlike other kinds of
6 crime, and especially other kinds of, say, fraud crime or white
7 collar crime, it is something that -- fraud is something that
8 law enforcement officials can discover.

9 Q. Maybe at this point we could turn to page 9 of your
10 report. So this is a table from page 9 of your report. Could
11 you describe what that table shows?

12 A. Yes. This is reporting for one year, fiscal year 2005,
13 on my analysis of the database I mentioned before that's
14 produced by the administrative office of U.S. Courts of all
15 federal indictments that are brought. And so in fiscal year
16 2005 there were 183,284 criminal indictments brought in the
17 federal courts. And what I did here was I thought about the
18 kinds of deception and fraud people would engage in if they
19 were engaging in election fraud and I made an analogy to other
20 kinds of fraud to show that, in fact, there is -- there are
21 quite a few number of cases of criminal indictments for types
22 of fraud that involve some of the same kinds of fraud you'd
23 have in election fraud.

24 So, for example, as I say here, Social Security fraud
25 can involve impersonation and making false claims. Same as in

1 election fraud, making false claims about eligibility.
2 Counterfeiting can involve forgery and making false claims
3 about identity. Tax evasion can involve false claims of
4 residence.

5 I thought, you know, what is so special about voter
6 fraud that people say, you know what, it's meant to be
7 concealed, we can't ever find it. In fact, the fact that we
8 never can find it is evidence that it's being committed, and I
9 thought that's really illogical. I'm an empiricist. So you
10 can't say that the fact that we never find it is sort of the
11 evidence that it's massively happening.

12 If you don't see it, you either don't see it because
13 it's being concealed in some way and you haven't figured out
14 how to find it or you don't see it because it's not happening.
15 That's another possibility. You don't see it because it's
16 actually not happening.

17 So we have to consider both. And I sort of thought,
18 well, I'm reading this manual put out by the public integrity
19 section of the justice department and the chief of that public
20 integrity section who was there for, I think, three decades, I
21 believe he's now retired, and he wrote the manual with another
22 person and he says that, in fact, election fraud is one of the
23 easier kinds of fraud to detect. And his reasoning was, well,
24 you have to do it in front of the person whose job it is to
25 prevent you from doing it.

1 I use the analogy if you're a pickpocket, it wouldn't be
2 a good idea to try to pick the wallet of a cop. That's not a
3 good idea. It's probably generally not a good idea. But
4 that's sort of the case that if you're going to impersonate
5 another voter, you have to be willing to do that by going into
6 the polling place and presenting false credentials or saying
7 you're somebody you're not or forging a signature. And you do
8 it right in front of the person who is supposed to be there to
9 prevent that from happening.

10 So I thought about, again, I try to stress and I thought
11 about this from as many angles as I possibly could. One was
12 the evidentiary base for it and looking. And I'm very aware of
13 the critique that the numbers should be scrutinized because
14 some people say law enforcement doesn't go after it. Other
15 people simply say, you'll never find it because it's meant to
16 be concealed. I've tried to take all the criticisms that
17 people have made in the past about relying on, say, indictments
18 or criminal cases, take those things very seriously.

19 But I also thought about the motivation for doing it as
20 well. And, again, trained as a political scientist, we're very
21 influenced by what we would call rational actor models. And a
22 rational actor model which is the mainstream way of studying
23 voting behavior is to sort of think about whether it's rational
24 to vote. And the approach is to say, what are the costs and
25 what are the benefits?

1 For a very long time after this approach was introduced
2 by political scientists, some may say even in the 1950s,
3 political scientists couldn't come up with a model that would
4 explain why anybody voted. It was never rational to vote. And
5 so, over time, the models have changed and people have offered
6 different arguments about the rationality of voting. For
7 example, saying, well, the benefit is something that is a
8 little bit difficult to quantify because it may go to a
9 person's core values, to the way that they identify themselves
10 as a citizen, as a responsible person so they participate in
11 elections. These things are a little bit harder to quantify in
12 a model that would trade off costs and benefits.

13 But I thought about that with respect to committing
14 voter fraud and I said, well, what are the sort of costs and
15 benefits of committing voter fraud? And the costs are higher
16 for committing voter fraud than they are for voting because you
17 have to be willing to commit a crime in front of the person
18 whose job it is to prevent you from doing that and then you
19 have to risk the sanctions that come with that, whatever they
20 may be. In many cases they could be felony charges. So there
21 are costs that are imposed by the penalties.

22 There are costs imposed by just trying to do it. For
23 example, if you wanted to vote in three -- just two places but
24 say three places or four places, well, you have to figure out
25 how to do that. You have to get around, you have to move

1 around the state or move around from precinct to precinct. So
2 there are a lot of -- you have to be extremely motivated to
3 want to do this.

4 And then what are the benefits? The benefits for the
5 individual voter may be adding one extra ballot, two extra
6 ballots, three extra ballots. It's more likely that that kind
7 of fraud, for it to have an effect with respect to election
8 outcomes, is more likely that there would need to be more of a
9 conspiracy involved to do that to ensure that you would win.
10 And I am aware of the fact that there can be local elections
11 where the person wins by one vote or two votes. But in most
12 states there are rules that allow the person who loses in a
13 situation like that to have the benefit of a recount, to have
14 the benefit of an investigation if there is some credible
15 evidence that there was fraud involved. And I've looked at
16 many elections like that.

17 But my main point is in addition to trying to
18 understand -- to look at the evidence of voter fraud in the
19 variety of ways that I've tried to do that, to empirically
20 measure it and to surface it and to think about where would it
21 show up and then go there and look for it and ask, you know,
22 law enforcement officials, election officials about their
23 experiences. In addition to that, I've thought about on the
24 voters' side, what is the rationale for doing this and when
25 would somebody try to do this?

1 And I still come back to the conclusion that it is --
2 it's sort of a motiveless crime in the way that people talk
3 about it. You have to have a really strong determination to do
4 it as an individual voter and there are existing rules and
5 sanctions in place to prevent it. So that explains to me why
6 I'm not seeing a lot of it when I look for it.

7 Q. And you mentioned earlier one of the criticisms you've
8 heard about your method is that perhaps you're not finding lots
9 of indictments because law enforcement don't care about it.
10 Can you describe your research into whether or not law
11 enforcement do dedicate resources to detecting voter fraud, and
12 specifically in Ohio?

13 A. Well, again, I was actually, you know, impressed by the
14 efforts of the Secretary of State, not exactly law enforcement
15 but as the chief election official for the state, to try to get
16 to the bottom of it and how much voter fraud do we actually
17 have. And those efforts included mandating in the last two
18 elections, the two federal elections, that the county boards of
19 elections, those officials in the 88 counties, in there that
20 they have put a process in place for dealing with allegations,
21 irregularities, problems that are brought to the county board
22 by holding a public hearing and by voting actually on whether
23 to move any kind of an allegation, to refer it to the county
24 prosecutor but also to report it to the Secretary of State so
25 that there was, in a sense, a process put in place to

1 centralize the data collection from the 88 counties on just
2 what they were actually referring to local prosecutors. And
3 then to inform the public with two reports on the
4 irregularities that are reported and also the actual numbers of
5 cases that have been referred.

6 And so in my reading of all of the information that I
7 compiled from the Secretary of State's Office which included
8 the various press releases and these reports and the directives
9 and some news coverage as well was, as I state in the beginning
10 of my expert report here, something just short of 300 cases of
11 potential fraud were referred to local prosecutors, and another
12 44 noncitizens, potentially fraudulent votes from noncitizens
13 being referred coming out of the last two federal elections in
14 Ohio.

15 Q. And do you know how many of those were actually charged
16 with a crime?

17 A. I tried to find that out. I think the -- with respect
18 to the 2014 election, that report and the investigations were
19 just happening this year. So by the time that I wrote that
20 report, I couldn't really tell much from the numbers of people
21 who were actually charged out of the 2014. But out of the
22 2012, again, I don't have -- I tried to discover that but that
23 would be my one criticism of what the Secretary of State's
24 Office has done which is they've reported irregularities
25 reported to them, referrals to prosecution but they haven't

1 followed up and said, well how many of these have actually
2 turned into successful prosecutions or guilty pleas?

3 My best effort to look at that made me conclude that at
4 least in the last year I think was the last time the data could
5 show me anything that I could find, it was something less than
6 ten of the cases had been prosecuted. But I don't stake a
7 major claim on that because I don't know that all of that has
8 been reported to the public yet.

9 Q. And do you know how many ballots were cast in those
10 elections?

11 A. I think in the 2012 election it was about 5.6 million.
12 I believe there's something like 8 million registered voters.
13 I don't recall the number for the midterm.

14 Q. Are you familiar with a term called golden week?

15 A. Yes.

16 Q. And what does that term mean to you?

17 A. My understanding is that this was a somewhat recent
18 reform initially, it's no longer in place, but that is was an
19 opportunity for people to both register to vote and cast a
20 ballot in the period between 35 and 30 days before an election.
21 So it basically opened up early in-person voting to 35 days
22 before an election but it kept in place Ohio's registration
23 deadline which is 30 days before the election.

24 Q. And have you had the opportunity to review the expert
25 reports of Dr. Hood in this case, Dr. Trey Hood?

1 A. Yes.

2 Q. And is it -- what's your understanding about his
3 argument with respect to fraud in golden week?

4 A. He didn't say much about it but he did rely on
5 declarations of three election officials in Ohio in this case
6 who made statements regarding golden week facilitating voter
7 fraud. And so he just simply reported a few quotes from those
8 three individuals in their declarations and sort of said, well,
9 they say that golden week facilitates voter fraud.

10 Q. Did you have the opportunity to review those
11 declarations which he was relying?

12 A. Yes.

13 Q. And did you have the opportunity to investigate the
14 allegations that were made in those declarations?

15 A. I did my best to investigate them. I do not agree with
16 Professor Hood. I don't think that his conclusion is justified
17 because if you look at those declarations, they don't present
18 evidence that golden week facilitates voter fraud.

19 So, for example, the declaration of Timothy Ward, who I
20 believe is the director of the elections board in Madison
21 County, he made that statement, well, this is typically when we
22 have problems with voter fraud is during golden week. But then
23 he said that, on average, only three people in Madison County
24 have even used the opportunity to register to vote and vote.
25 So only three people. But he also didn't provide any evidence

1 that golden week was actually connected to voter fraud in terms
2 of facilitating voter fraud. That's one example.

3 Another declaration that Professor Hood relied on was
4 that of Alex Triantafilou. I'm not sure I'm pronouncing his
5 name correctly.

6 Q. I'm not sure that I know how to pronounce it either. It
7 would be the blind leading the blind if I tried.

8 A. And he is also an election official in Hamilton County.
9 And he reported that there were cases of voter fraud in
10 Hamilton County that were facilitated by golden week. But
11 actually, the six cases he mentioned, only two of them were
12 people who ended up being indicted. And I looked carefully at
13 those two and I report on this in my supplemental report what I
14 found there.

15 Q. Your rebuttal report?

16 A. Yes. Rebuttal report, excuse me, what I found there.
17 And at least one of them, the case of Ernestine Strickland who
18 was an 84 year old woman who, as her daughter testified to the
19 Hamilton County Board Of Elections, would spend time between
20 her three children living with them, presumably so they could
21 take care of her. She resided primarily in Tennessee but she
22 was staying with her daughter during the election of 2012 and
23 managed to register and vote during golden week, cast a ballot
24 during golden week.

25 She was indicted as well. I don't know the outcome of

1 it. I tried to look at the criminal court database for
2 Hamilton County. I didn't see -- I couldn't figure out what
3 happened in the end but I did see the indictment.

4 But I looked at that case and I read the testimony of
5 her daughter before the Hamilton County Board of Elections and
6 I did not come to the conclusion that that was a case of voter
7 fraud. It looked like voter confusion to me. Where she may
8 have gone -- she's living with her daughter for three months.
9 She may have gone to the election board and said, I want to
10 vote an absentee ballot, thinking I want that absentee ballot
11 to go to Tennessee and they said, well, you're not registered.
12 She got registered. But I could see that it could be a case of
13 voter confusion because she did not cast a ballot in Tennessee.
14 She didn't attempt to vote twice.

15 There was another case mentioned by Steven Cuckler,
16 another election official whose declaration Professor Hood
17 relied on. And I read that declaration and one of the cases
18 that he mentioned, I think he said there were three cases of
19 golden-week fraud, if you will, was the case of a young woman
20 named Nicole Young. And I also didn't think that that was
21 likely a case of voter fraud because that was a case where she
22 had requested -- this young woman had requested an absentee
23 ballot and she requested it from her parents' home in Delaware
24 County and she wrote on the application, send me the absentee
25 ballot in Cincinnati. And then she registered on October -- I

1 forget the exact date, I think it was October 9th. She sort of
2 registered at the last minute in Hamilton County.

3 Mr. Cuckler said she cast a ballot but he actually
4 didn't provide evidence that she cast the ballot. But he did
5 provide a copy of the registration record. Then she registered
6 at her Cincinnati address and then her absentee ballot, which
7 she signed October 15th arrived. And so --

8 Q. Where did it arrive?

9 A. It arrived -- I guess it arrived back in Delaware
10 County. So that looked like a case where here's a person who
11 voted an absentee ballot and then tried to go in on golden week
12 and register in another county and cast another ballot. But I
13 thought that was more likely a case of voter confusion because
14 she was 20 years old and she asked for the ballot to be sent to
15 her in Cincinnati. I don't know if it was or wasn't, whether
16 it was sent to the parents and the parents forwarded to her and
17 then she thought, this is the last day to register and I'm
18 living in Cincinnati, I'm not on the rolls in Cincinnati. I go
19 down there and then they said, well, you can cast a ballot.
20 She said, well, I asked for an absentee ballot. I didn't get
21 it yet and they said, well, you can vote. And then she got the
22 absentee ballot, she thought --

23 I guess I sympathize because I think if anybody -- have
24 you dealt with the phone company? You have to ask people two
25 or three times sometimes to get things done. So I can

1 understand why people could be nervous, they send an absentee
2 ballot in, they check, they say, we don't have it yet or we
3 can't tell you and they think, oh, I have to do it again. And
4 then they get there and they think, you're an election
5 official, you know if you got my absentee ballot. Why are you
6 letting me cast a second one if you know that I gave you one
7 already? It's just going to be the same thing over again.

8 I can sympathize with people who could be anxious about
9 the process, who maybe don't understand the way it works and
10 don't think that they're committing fraud by submitting a
11 second ballot in that circumstance. But I want to emphasize,
12 this was only a couple of cases anyway.

13 Q. In any of those cases --

14 THE COURT: Hold that question and let's take a break.

15 (A recess was taken at 10:30 a.m. until 10:45 a.m.)

16 THE COURT: Mr. Martin, you may continue.

17 MR. MARTIN: Thank you, Your Honor.

18 BY MR. MARTIN:

19 Q. Dr. Minnite, when we left off, I think you were
20 discussing some of the incidents of alleged fraud and
21 referenced the declaration attached to Hood's report. I wanted
22 to ask whether or not, in any of those instances where the
23 voter had been alleged to have committed fraud during golden
24 week, whether or not their ballots had been counted?

25 A. It's my understanding that there was no second ballot

1 counted.

2 Q. And in the case of Ernestine Strickland from Hamilton
3 County, was her ballot counted?

4 A. It's my understanding it was not.

5 Q. And in the case of I think it was Ms. Young who,
6 referenced in Mr. Cuckler's declaration, was the ballot that
7 she sent back to Delaware County counted?

8 MS. COONTZ: Objection.

9 THE COURT: Basis.

10 MS. COONTZ: She's not using this to form an opinion.
11 She's simply restating what's in the declarations at this point
12 as an affirmative factual statement.

13 THE COURT: I can read the declarations.

14 BY MR. MARTIN:

15 Q. In each of these instances, Dr. Minnite, do you have an
16 opinion as to why the ballots were not counted?

17 A. Well, it's my understanding that the procedures for
18 checking for illegal ballots or fraudulent ballots were
19 adequate and that they were followed and put in place and they
20 were -- in other words, the procedures in place seem to be
21 working.

22 Q. And can you describe what your understanding of those
23 procedures is?

24 A. Well, with respect to what?

25 Q. With respect to registrations and absentee ballots cast

1 during golden week, the verification process for those?

2 A. My understanding is that the registration process is the
3 same, that golden week didn't change anything regarding the
4 existing rules for deadlines on voter registration and that the
5 procedures that county board of election officials follow
6 involve, with respect to new registrants, sending out something
7 that's called an acknowledgment mailing or acknowledgment card
8 that is not forwardable to that new registrant. If it does
9 come to the county officials, they send out a second mailing
10 that is forwardable on the assumption that in between the time
11 the person registered and the time the mailing went out, it's
12 possible that the person moved. And, therefore, the second
13 mailing would go to where ever they moved to and telling them,
14 your registration is not matching and get in touch with us or
15 let us know what's happening. Otherwise, they would be
16 considered not properly registered.

17 So there's a procedure for verification of new
18 registrants that I believe was not changed with golden week and
19 was in place. With respect to, then, voting, my understanding
20 is that voting during golden week was simply an extension of
21 what, in Ohio, is called early in-person voting or absent voter
22 where a person gets an absent-voter ballot but they cast the
23 ballot not by mail but in person. I say that because the
24 terminology is different all over the country with respect to
25 absentee balloting, mail-in balloting, in-person voting, early

1 voting and so forth.

2 So in Ohio, my understanding is that golden week just
3 extended an existing period of early in-person voting to 35
4 days before the election. And because the voter was voting an
5 absent-voter ballot, that ballot could be segregated and
6 counted through the process of counting absent-voter ballots
7 which is separate from counting ballots that are cast on a
8 machine, for example, on election day.

9 So the ballot could be separated or segregated or held
10 until the registration was verified. And that period for
11 verifying registration doesn't change, it's still 30 days
12 before the election.

13 Q. So in your opinion, has eliminating golden week reduced
14 the potential for fraud in any way in Ohio?

15 A. In my opinion it has not.

16 Q. Before I end here, Dr. Minnite, can you summarize once
17 again what your opinions and conclusions are in this case?

18 A. My opinion is that the incidents to voter fraud, as I
19 have carefully tried to define it as the intentional corruption
20 of the electoral process by voters, is rare nationally and it's
21 also rare in Ohio, at least in the recent past, in the last two
22 elections that I was able to look at. I have also found, and
23 this is part of sort of half of my book was looking at why, if
24 the incidents of voter fraud is so rare, why do people seem to
25 think that it is an explosive epidemic endemic problem in

1 American elections.

2 And my discussion there, which I won't go into because
3 you just want a summary, is that the allegations of voter fraud
4 are a kind of political tool. They can be used to shape
5 electoral practices and also election rules. And they have
6 been. And that in American history, it is African-Americans
7 primarily who have been the target of these allegations. And
8 so it's been African-American voters who have been, in a sense,
9 I would say, the victim of it.

10 My third conclusion is that with respect to Ohio, as I
11 said, looking at the numbers produced by the Secretary of
12 State's Office effort to find voter fraud and report on it is
13 that it is also rare in Ohio.

14 MR. MARTIN: That's all for right now, Your Honor.

15 THE COURT: Thank you, Mr. Martin.

16 Ms. Coontz, you may cross.

17 MS. COONTZ: Thank you, Your Honor.

18 - - -

19 CROSS-EXAMINATION

20 BY MS. COONTZ:

21 Q. Good morning, Dr. Minnite.

22 A. Good morning.

23 Q. My name is Bridget Coontz and I represent the defendants
24 in this case. I'm with the Ohio Attorney General's Office.

25 In your report you define voter fraud as the intentional

1 corruption of the voting process by voters; is that correct?

2 A. That's correct.

3 Q. Your opinions in this case are limited to that specific
4 type of fraud. That is, corruption by voters, correct?

5 A. That's correct.

6 Q. So you do not consider any fraud by poll workers?

7 A. No.

8 Q. And you don't consider any fraud by a candidate,
9 correct?

10 A. That's correct.

11 Q. And you don't consider any fraud by a political party?

12 A. That's correct.

13 Q. Or any fraud committed by a campaign worker; is that
14 correct?

15 A. Right. If what you mean by consider, do I try to
16 measure it?

17 Q. Right.

18 A. That's correct then.

19 Q. Okay. And then using the same definition of consider,
20 you don't consider any type of fraud by, say, a voter
21 registration canvasser, correct?

22 A. That's correct.

23 Q. And so based on that, if a political organizer would
24 find an absentee ballot, fill it out and mail it as someone
25 else, your definition of fraud would not include that type of

1 violation, correct?

2 A. That's correct, yeah.

3 Q. But you would agree with me that this type of fraud, in
4 fact, exists?

5 A. There have been some cases of it that I'm aware of.

6 Q. Okay. And you have observed and written about this kind
7 of fraud, a person going to a mailbox, taking someone else's
8 ballot and casting it, correct?

9 A. Well, I wrote about a case in Miami in a mayor's race in
10 the late 1990s, I think it was '97, in which there were some
11 individuals who were called ballot brokers who had been -- they
12 clearly had some help on the inside, if you will, with
13 obtaining other people's absentee ballots. And that was a very
14 serious case of that kind of fraud that you're talking about.
15 So I separate -- I talk about voter fraud in the way that we've
16 defined it and I kind of put everything else into a general
17 category of election fraud.

18 Q. Okay. That's a fair distinction.

19 So this help on the inside that you just discussed in
20 this Miami county, would that be like a poll worker or a board
21 of election type of help?

22 A. Yes. I don't remember. Specifically in that case I
23 think there were a couple of poll workers who were called to
24 testify and took the Fifth and I'm not sure whether they were
25 actually indicted or not, but it could be.

1 Q. Okay. And that's election fraud which is different from
2 voter fraud, correct?

3 A. That's correct.

4 Q. And your opinions are limited to voter fraud?

5 A. That's correct.

6 Q. And your report does not discuss these instances of
7 election fraud, correct?

8 A. That's correct.

9 Q. Before opining in this case, did you conduct any
10 research into the Secretary of State directives that are at
11 issue in this case?

12 A. I did look at lot of -- well, several directives. I
13 don't know which ones you're talking about specifically. If
14 you're talking about --

15 Q. The directives that are at issue in this case.

16 A. I don't know all of those that are at issue.

17 Q. Did you call the Secretary of State's Office to ask
18 about any of the directives at issue?

19 A. It's my understanding, and this may be wrong, but that
20 as someone who was being essentially hired by the plaintiffs'
21 attorneys to provide an expert report that I could not do that.

22 Q. Okay. Did you talk to any election -- any Ohio
23 elections administrators about the directives that are at issue
24 in this case?

25 A. No. For the same reason.

1 Q. Okay. So it's your understanding that all of Ohio's
2 elections administrators, even at the county level, are -- they
3 work for the Secretary of State?

4 A. No. Not that they work for the Secretary of State but
5 that they would -- they may be aware of the litigation and they
6 may -- I would have to certainly disclose that I was doing this
7 research in conjunction with my preparing an expert report in
8 this case and that they would likely not be allowed to talk to
9 me.

10 Q. Did you try at all --

11 A. No.

12 Q. -- to contact any Ohio --

13 A. No.

14 Q. -- elections administrators?

15 Are your opinions in this case based on the assumption
16 that the challenged laws and directives are based only on the
17 elimination of voter fraud as you define it?

18 A. I'm not really involved in the rest of the case in that
19 way. I was asked to provide an opinion on the incidence of
20 voter fraud.

21 Q. You did not consider whether there were any election
22 administration rationales for either the laws or the directives
23 at issue in this case?

24 A. No. I wasn't asked that question.

25 Q. Okay. And in the cases in which you've previously

1 served as an expert witness, you were a witness for the
2 plaintiffs challenging the laws, correct?

3 A. That's correct.

4 Q. And in those cases, you also opined that the elimination
5 of fraud by voters, as you define it, should not serve as a
6 basis for an election law?

7 A. No. I don't think I said that.

8 Q. But you were testifying on behalf of Plaintiffs who were
9 challenging laws?

10 A. Yes.

11 Q. So you're not making any assumptions with respect to the
12 rationales for the directives or laws at issue in this case?

13 A. Only to the extent that the rationale is that the law is
14 needed to guard against voter fraud to either address a problem
15 or to even prevent it. So, for example, in the Pennsylvania
16 case, the Applewhite case, in that case, the state of
17 Pennsylvania or the Commonwealth of Pennsylvania actually
18 stipulated in court that they did not have a problem with voter
19 fraud but they had other rationales and that one of them was
20 that, well, we want to be able to prevent it. So in that
21 regard, my testimony regarding the fact that, in fact, the
22 state said they had no problem with voter fraud was consistent
23 with what I had found in the sort of national case that I
24 looked at.

25 Q. But you would agree that an election procedure that's

1 designed to avoid the possibility of voter fraud is a
2 reasonable goal, correct?

3 A. I think that a state has a rational reason to guard
4 against fraud in elections. A state interest, I would say.

5 Q. And that the state would have an interest in deterring
6 the fraud as well, correct?

7 A. Yes.

8 Q. You've never administered an election in Ohio, correct?

9 A. That's correct.

10 Q. And you've never taught a class related to elections or
11 election administration, correct?

12 A. No. I have taught courses in American government which
13 deal substantially with elections.

14 Q. But not Ohio elections?

15 A. Not Ohio, that's correct.

16 Q. I'm going to turn to page -- to the report on or the
17 table on page 9 of your report. You discussed this table on
18 your direct and this table only includes federal indictments,
19 correct?

20 A. That's correct.

21 Q. And it doesn't include any state indictments?

22 A. That's correct.

23 Q. And you agree that, generally, voter fraud is more
24 likely prosecuted at the state or local level and not the
25 federal level?

1 A. That's probably the case.

2 Q. And this also does not include any federal investigation
3 that did not lead to an indictment, correct?

4 A. The table?

5 Q. Yes.

6 A. No. The table is just indictments.

7 Q. And so it also doesn't include state indictments as
8 well?

9 A. That's correct.

10 Q. Or state investigations that did not lead to an
11 indictment, correct?

12 A. That's correct.

13 Q. Now, you're aware that prosecutors have discretion to
14 prosecute cases, correct?

15 A. Yes.

16 Q. And they have discretion as to whether they're going to
17 bring an indictment when an investigation is handed to them?

18 A. That's correct.

19 Q. Now, let's talk about some of the comparisons on this
20 chart. Tax evasion, these are all instances of federal crimes,
21 is this correct?

22 A. Yes.

23 Q. So the IRS has a special unit designed to investigate
24 tax -- violations of the tax code, correct?

25 A. If you say so.

1 Q. Are you aware of whether the U.S. Postal Service has an
2 investigative unit to investigate criminal offenses?

3 A. No. I'm not aware.

4 Q. Do you know whether the INS has certain investigatory
5 agents designed to ferret out criminal offenses?

6 A. I don't think we have an INS anymore.

7 Q. ICE, I'm sorry. ICE.

8 A. I don't know.

9 Q. Do you know whether the Social Security Administration
10 has investigators to investigate allegations of criminal
11 activity?

12 A. No. I don't know.

13 Q. But I believe on your direct you testified that election
14 fraud violations would be detected by poll workers; is that
15 correct?

16 A. They could.

17 Q. So you're comparing violations to be detected by poll
18 workers with these other federal offenses, correct?

19 A. I am comparing indictments brought for violations of
20 federal law.

21 Q. But you don't know who investigates any of those
22 investigations -- any of those offenses, correct?

23 A. Not in this specific case, no, I don't.

24 Q. Did you interview any Ohio prosecutors related to their
25 decisions as to whether to prosecute instances of voter fraud?

1 A. No. For the same reasons I stated before.

2 Q. Did you interview any federal prosecutors with respect
3 to whether they use discretion to prosecute voter fraud?

4 A. Not in Ohio, but in Wisconsin I interviewed the U.S.
5 Attorney there for the Eastern District of Wisconsin.

6 Q. So did you conduct any calculations as to how often Ohio
7 county prosecutors decided not to pursue potential voter fraud?

8 A. No.

9 Q. Do you know how many county prosecutors there are in
10 Ohio?

11 A. I know there are 88 counties in Ohio.

12 Q. Nonetheless, you would agree that crime statistics are
13 not a perfect match for the entire universe of potential
14 instances of voter fraud, correct?

15 A. That's correct.

16 Q. And they're not a perfect match for the entire universe
17 of election fraud as you define it; is that correct?

18 A. That's correct. For all crime statistics and all
19 crimes.

20 Q. So essentially, crime statistics don't account for
21 everything; is that correct?

22 A. That's true. With respect to the actual incidents if we
23 could know what it is, that's correct.

24 Q. Now, to kind of -- that dovetails into what you talked
25 about on your direct with respect to the Secretary of State

1 commissioning a report regarding voter fraud. I believe you
2 testified that you read a report about voter fraud during the
3 2012 general election?

4 A. Yes. I wouldn't quite call it a report. It was a
5 spreadsheet with the numbers for each county and then it was
6 some detail in press releases.

7 Q. And I believe you testified that there were roughly 300
8 instances of voter fraud on that spreadsheet?

9 A. No. What I said was that the two reports, 2012 and
10 2014, all together the number of cases referred to local
11 prosecutors was, I think the number was something like 287. So
12 something just short of 300.

13 Q. Did you contact any of the prosecutors to whom those
14 cases were referred to discuss what happened with those cases?

15 A. No. Again, for the same reason I stated earlier which
16 was that I could not contact state officials to do this
17 research in Ohio.

18 Q. Okay. So it's your understanding that you could not
19 contact the county prosecutor?

20 A. That's correct.

21 Q. Did you ever try?

22 A. No.

23 Q. Did you reach out to anyone at the local level?

24 A. No.

25 Q. So you don't know whether the decisions to prosecute any

1 of these cases was based on prosecutorial discretion?

2 A. I think we stated that all prosecutors have
3 prosecutorial discretion.

4 Q. And did you research the number -- the instances of --
5 in which counties reported voter fraud under Secretary of State
6 Brunner?

7 A. No.

8 Q. Did you ask Plaintiffs counsel if you could contact any
9 of these local officials about their decision to prosecute
10 these 270 referrals?

11 A. I think I did.

12 Q. Based on that, you did what?

13 A. I didn't do it.

14 Q. You would agree that the possibility for voter fraud is
15 higher with mail-in absentee ballots, correct?

16 A. I have a tentative answer to that. A lot of people say
17 that. A lot of people think that. And the reason why it could
18 be true is because of what we might call chain of custody over
19 ballots. So when ballots leave the county board of elections
20 and go through the U.S. mail and they end up with the voter and
21 then they have to come back, there's less control, if you will,
22 in the chain of custody than when a voter goes into a polling
23 place and casts a ballot. So I understand why people say that.

24 Q. But you did not talk to any election administrators in
25 Ohio to talk with them about that possibility, did you?

1 A. No.

2 Q. And you agree that some election laws are helpful in
3 preventing voter fraud?

4 A. Yes.

5 Q. And it's also possible that there's not widespread voter
6 fraud because these laws exist?

7 A. That's correct.

8 Q. And you did not compare any of the instances of, excuse
9 me, the allegations of voter fraud in 2010 versus 2014, did
10 you?

11 A. In Ohio?

12 Q. Yes.

13 A. No.

14 Q. And you were not aware that the 2014 postelection audit
15 showed fewer cases of voter fraud; is that correct?

16 A. That's correct.

17 Q. And you didn't analyze the impact of any of the
18 challenged provisions that are at issue in this case on voter
19 fraud, did you?

20 A. That wasn't what I was asked to do.

21 Q. Okay. Have you ever lived in Ohio?

22 A. No. My brother-in-law is from Toledo so I've been here.
23 It's a nice state but I have never lived here.

24 Q. I think I know the answer to the next question. Have
25 you ever voted in Ohio?

1 A. No.

2 Q. Okay. Now, you had some criticisms on your direct of
3 some of the declarations on which Dr. Hood relied. Is that
4 fair to say?

5 A. That's correct.

6 Q. Now, you're not saying that those declarations are
7 false, are you?

8 A. No. They are what they are. I read them and I had a
9 different interpretation of the possibilities of what happened
10 in them and that different interpretation comes from all of the
11 work that I've done over the last decade in which time and time
12 and time again a situation like what I saw and described in the
13 declaration was the result of voter confusion, poll-worker
14 error. Human error, basically. So I simply was saying, you
15 know, this is a more compelling explanation and I don't see
16 that this was ruled out. In fact, what was stated was, this is
17 fraud.

18 Q. And that didn't fit your definition of voter fraud. Is
19 that fair to say?

20 A. No. I mean, these were cases with the declarations I'm
21 referring to are the particular voters that were mentioned or
22 the cases that were mentioned in those declarations that were,
23 in a sense, being offered as evidence of voter fraud. I was
24 saying, well, I think there probably is a better explanation
25 for what might have happened here. I don't know definitively

1 the outcome. I do know, for example, in the case of Ernestine
2 Strickland, she was indicted. And that says to me, the county
3 prosecutor or the Grand Jury, however it happened, thought
4 there was enough there to bring an indictment.

5 Q. Do you agree that there would be a difference -- you're
6 looking at that from a perspective of voter fraud, correct?

7 A. Yes.

8 Q. Could election administrators be looking at that
9 situation from an election administrator perspective?

10 A. I assume they would be.

11 Q. So they would be considering the burden of even having
12 to follow up on that scenario, don't you agree?

13 A. I don't know.

14 Q. Because you did not talk to any of the election
15 administrators who offered declarations in this case?

16 A. I read their declarations. In some cases I read
17 depositions which were longer interviews with them which I take
18 to be useful. At least in my line of work that would be
19 considered evidence of what an election administrator thought.

20 Q. Okay. So during golden week, voter registration is also
21 going on; is that correct?

22 A. That's my understanding.

23 Q. So that election administrator could be thinking that
24 from the perspective of fraud in the registration process as
25 well?

1 MR. MARTIN: Object, Your Honor. She's being asked to
2 speculate about what election administrators --

3 MS. COONTZ: I'll rephrase.

4 THE COURT: Thank you.

5 BY MS. COONTZ:

6 Q. Simply put, these declarations are from election
7 administrators, correct?

8 A. That's correct.

9 Q. And --

10 A. The three that I mentioned, yes.

11 Q. And you are not an expert in election administration,
12 are you?

13 A. I don't offer myself out. I do think I know a good deal
14 about it but I wouldn't call myself an expert.

15 Q. In election administration?

16 A. Right.

17 Q. One more question. Dr. Minnite, your report does not
18 analyze any state justifications for the challenged laws
19 outside voter fraud, does it?

20 A. No. I didn't analyze the state justifications except
21 with respect to responding to Professor Hood's argument or
22 claim that it was reasonable to eliminate golden week because
23 of potential for fraud. So in that sense, I'm responding to
24 something Professor Hood said about it and I -- based on these
25 declarations of election officials. And I disagreed with his

1 conclusion there.

2 Q. But you didn't examine any other state justifications
3 for these laws or the directives?

4 A. No.

5 MS. COONTZ: Thank you. I have nothing further.

6 THE COURT: Redirect?

7 MR. MARTIN: Just a few questions, Your Honor.

8 - - -

9 REDIRECT EXAMINATION

10 BY MR. MARTIN:

11 Q. Dr. Minnite, on cross you were asked whether the state
12 has a legitimate interest in deterring voter fraud. Do you
13 believe that fraud deterrence justifies eliminating golden
14 week?

15 A. No.

16 Q. You were also asked in -- comparing the rates of
17 indictments for election fraud. And why is that, Dr. Minnite?

18 A. As I state in that rebuttal report, first of all, there
19 was very little evidence of voter fraud presented in those
20 declarations. There's also very little evidence of voter fraud
21 discovered and reported on by the Secretary of State who is the
22 chief elections official in the state and who, as my
23 understanding is, was interested in trying to get at the bottom
24 of the allegations. I think I read comments by him to that
25 effect that back coming out of the 2012 election, he wanted to

1 figure out, how much of this do we actually have? That was the
2 reason for his directive to the county boards to adopt a
3 process, to go through a process, to air the complaints, to
4 investigate the complaints and report to him how many, in the
5 course of their work, how many of them did they decide to send
6 on to prosecutors?

7 And all of this is very consistent with what I have
8 found everywhere else I have looked for it. So I was not so
9 surprised that the incidents of voter fraud out of the -- it's
10 a direct quote from the Secretary of State is rare in Ohio.
11 That is partly where I'm basing my conclusion regarding your
12 question about whether voter fraud and deterring voter fraud is
13 a good rationale for eliminating golden week. If that is what
14 state officials said and if that is the reason, I would
15 disagree with that.

16 Q. You were also asked in regards to the table on page 9 of
17 your report where you compare the rates of indictments from, I
18 believe, fiscal year 2005 for election fraud or voter fraud
19 compared to the rate of indictments for other types of fraud,
20 you were asked in that context whether or not the IRS and
21 Social Security Administration had units dedicated to detecting
22 voter fraud; is that correct?

23 A. Yes.

24 Q. Do you know at that time whether or not the federal
25 government or the justice department had a unit dedicated to

1 detecting voter fraud?

2 A. Yes. That was the Ballot Access and Voting Integrity
3 Initiative of the justice department.

4 MR. MARTIN: That is all I have, Your Honor.

5 THE COURT: Anything further?

6 MS. COONTZ: Just briefly, Your Honor.

7 - - -

8 RE-CROSS-EXAMINATION

9 BY MS. COONTZ:

10 Q. Dr. Minnite, you testified that instances of voter fraud
11 in Ohio are rare. Again, this is based on your definition of
12 voter fraud, correct?

13 A. Yes.

14 Q. So were you aware that during the pendency of this case
15 the Ohio Bureau of Criminal Investigation opened an
16 investigation into a voter registration canvasser for the Ohio
17 Organizing Collaborative after receiving reports that the
18 canvasser submitted fraudulent voter registrations in several
19 counties?

20 A. Yes. I read about that. I think that happened after I
21 filed my rebuttal report.

22 Q. But you don't consider that to be voter fraud, correct?

23 A. I consider that to be most likely, if those allegations
24 are true, that that would be a case of election fraud.

25 Q. So that would not factor into your opinions in this case

1 in any event?

2 A. That's correct. I don't know of a single instance of a
3 case of even proven registration fraud turning into a
4 fraudulent ballot.

5 Q. But you don't consider voter registration fraud voter
6 fraud, correct?

7 A. That's correct. I don't want to seem to be splitting
8 hairs. I think I tried to lay out why I approached the
9 definition of voter fraud the way I do and that I am cognizant
10 of other forms of election fraud. But with respect to voters
11 as actors in the electoral process, that was sort of the policy
12 question that was driving my research.

13 Q. And did you know that the Ohio Organizing Collaborative
14 was the original Plaintiff in this case?

15 A. I did know that.

16 MS. COONTZ: Thank you. I have nothing further, Your
17 Honor.

18 THE COURT: Thank you, Doctor. You may step down.

19 MR. KAUL: Your Honor, our next witness is Phyllis
20 Cleveland.

21 THE COURT: Good morning, ma'am. If you would
22 approach the witness stand over there, raise your right hand
23 and be sworn.

24 (Witness sworn.)

25 THE COURT: Make yourself comfortable behind all those

1 books over there.

2 You may inquire, Mr. Kaul.

3 - - -

4 PHYLLIS CLEVELAND

5 Called as a witness on behalf of the Plaintiffs, being first
6 duly sworn, testified as follows:

7 DIRECT EXAMINATION

8 BY MR. KAUL:

9 Q. Would you please state your name for the record?

10 A. My name is Phyllis Cleveland.

11 Q. And where are you currently employed?

12 A. I'm a member of Cleveland City Council, Cleveland, Ohio.

13 Q. How long have you been on the city council?

14 A. I'm wrapping up my tenth year now. At the end of this
15 year will be ten years.

16 Q. You're in your third term?

17 A. Yes.

18 Q. And which ward do you represent?

19 A. I represent Ward 5.

20 Q. And do you live in that ward?

21 A. Yes, I do.

22 Q. How long have you lived there?

23 A. I've lived in that ward or the neighborhood, trying to
24 remember how old I am, over 50 years.

25 Q. And prior to being a member of the city council, what

1 did you do for a living?

2 A. Before I was elected to city council I was a Magistrate
3 in Common Pleas Court in Cuyahoga County.

4 Q. So you're an attorney?

5 A. Yes.

6 Q. Did you have other jobs between getting your law degree
7 and becoming a Magistrate?

8 A. Yes. Before I became a Magistrate I was an assistant
9 county prosecutor in the civil division for about six years.
10 And for four years prior to that I was a judicial law clerk in
11 Common Pleas Court.

12 Q. Those are both courts in Cuyahoga County?

13 A. Yes, they are.

14 Q. Let me ask you a few questions about Ward 5. You said
15 you lived there for over 50 years?

16 A. Yes.

17 Q. Did you grow up there?

18 A. Yes.

19 Q. And can you describe the demographics of the ward?

20 A. The neighborhood I live in is a Central neighborhood
21 which is the biggest part of my Ward. Historically it's a very
22 poor neighborhood. A third of all public housing in Cleveland
23 is in my ward. In fact, probably within half a mile of where I
24 actually live. I live -- I've lived in a four-block radius in
25 the Central neighborhood my entire life in Cleveland.

1 Q. And are there other neighborhoods within your ward?

2 A. Yes. Central is the biggest but also have the Kinsman
3 neighborhood. Again, another historically poor neighborhood
4 which is a little further south of Central. I represent the
5 North Broadway neighborhood which is south of Central, and then
6 a few other districts, Midtown District, campus district.

7 Q. The first three, are those the largest three?

8 A. Yes. Most heavily residential.

9 Q. I believe you described Central and Kinsman as
10 historically poor?

11 A. Yes.

12 Q. Are those currently low-income neighborhoods?

13 A. Yes, they are.

14 Q. And what are the racial demographics in those
15 neighborhoods?

16 A. Kinsman and Central are, I would say, more than
17 95 percent African-American.

18 Q. What about North Broadway?

19 A. North Broadway was -- it's a part of an area called
20 Slavic Village and historically the name was accurate.
21 Probably the last ten years or so the demographic has changed.
22 The racial balance is probably 50/50 African-American with a
23 small Hispanic population.

24 Q. Do you know -- first of all, which part of Cleveland are
25 those neighborhoods in?

1 A. It's the east side of Cleveland.

2 Q. And do you know how your ward stacks up with other parts
3 of Cleveland in terms of poverty rate?

4 A. I would say Central and Kinsman and possibly North
5 Broadway are among the poorest communities in the city of
6 Cleveland or in Cuyahoga County. There may be one or two
7 neighborhoods on the same footing in that regard. But Central
8 is probably, you know, well known and well documented as a poor
9 community.

10 Q. And you mentioned public housing in Central?

11 A. Yes.

12 Q. Is there public housing in the other neighborhoods as
13 well?

14 A. There's public housing in Kinsman. There's none in
15 North Broadway.

16 Q. What kind of public housing buildings are those?

17 A. In Central, actually both neighborhoods, the public
18 housing, if I can distinguish, is traditional public housing
19 that is owned by the Cuyahoga Metropolitan Housing Authority.
20 And then there are privately-owned multifamily developments
21 that are subsidized through HUD dollars. Typically with the
22 CMHA, the public housing authority, it states that you have
23 combinations of family estates where there are units intended
24 to house families, two, three, four bedrooms and then there are
25 a couple of high-rises that were initially intended for seniors

1 and now include seniors and disabled younger people.

2 Q. Do you know approximately what percentage of your
3 constituents own a vehicle?

4 A. I would say, particularly in the public housing areas,
5 less than 50 percent.

6 Q. Do you know how the literacy rate in your ward compares
7 to other wards in Cleveland?

8 MR. VOIGT: Objection, Your Honor. Calling for,
9 essentially, expert testimony. Particularly because --

10 THE COURT: She lived there for 50 years, she knows
11 these people. She's been a Magistrate Judge in the Cuyahoga
12 County Common Pleas Court, assistant county prosecutor. She's
13 interacted with folks. She can give us her sense of it, I
14 suppose. I recognize she's not testifying as an expert.

15 MR. VOIGT: Thank you.

16 BY MR. KAUL:

17 Q. So you can answer the question. Do you want me to ask
18 it again?

19 A. Would you, please?

20 Q. Do you know how the literacy rate in your ward compares
21 with other parts of Cleveland?

22 A. In my experience, in my sense, the literacy rate is
23 probably among the lowest in the city. I've had the
24 opportunity to work with some of the literacy groups in
25 Cleveland and they particularly targeted my neighborhoods

1 because of the data that they collected that shows that the
2 literacy rates are low in those neighborhoods.

3 Q. So as a council member, you're an elected official,
4 right?

5 A. Yes.

6 Q. So have you been involved in your own campaigns?

7 A. Yes.

8 Q. Extensively?

9 A. Yes.

10 Q. And have you been involved in other campaigns during
11 your time -- during your 50 years in Ward 5?

12 A. Yes, I have.

13 Q. And does that include judicial campaigns?

14 A. Yes.

15 Q. And were you also a volunteer for President Obama's
16 campaign?

17 A. Yes.

18 Q. Through that work and your work with city council, did
19 you become familiar with the voter turnout rates in your ward?

20 A. Yes. Yes, I did.

21 Q. How did those rates compare to other parts of the state?

22 MR. VOIGT: Objection.

23 THE COURT: When?

24 MR. KAUL: That's a good question, Your Honor.

25

1 BY MR. KAUL:

2 Q. Let's talk about before 2008. How did turnout rates
3 compare in your ward to other parts of the state?

4 A. Before 2008 --

5 MR. VOIGT: Your Honor, I object again. I mean, I
6 recognize the witness has a lot of knowledge regarding her
7 specific area but I just don't know that foundation has been
8 established for her knowledge of other areas for a comparison.

9 THE COURT: The question is directed at her ward where
10 she's run and been elected several times. Again, I'm not
11 treating it as expert opinion. I'm treating it as somebody
12 who's particularly knowledgeable about that area as color
13 commentary.

14 MR. VOIGT: Thank you.

15 THE COURT: Go right ahead.

16 BY MR. KAUL:

17 Q. You can answer if you remember.

18 A. Can you repeat the question?

19 Q. Yes. How does turnout in your ward in 2008 compare to
20 turnout in the rest of the state?

21 A. Prior to 2008, my ward, Ward 5, had a historically very
22 low voter turnout.

23 Q. What do you mean by that?

24 A. Probably looking at, in recent elections before 2005
25 that I'm familiar with, probably voter turnout rate of lower

1 than 30 percent of the registered voters in the ward.

2 Q. And did that change in the 2008 election?

3 A. Yes, it did.

4 Q. Did you vote in that election?

5 A. Yes.

6 Q. Did you vote in your ward?

7 A. Yes.

8 Q. Did you wait in line?

9 A. Yes, I did.

10 Q. For how long?

11 A. In 2008, I waited about at least two hours to vote.

12 Q. When did you vote?

13 A. I voted on election day.

14 Q. And do you know where the early-voting location in
15 Cuyahoga County is located?

16 A. There's only one early-voting location, the Cuyahoga
17 County Board of Elections.

18 Q. And can you describe where that location is in relation
19 to your neighborhood?

20 A. My ward is pretty big. At the closest parts of my ward
21 you're probably looking at, at least, half a mile to a mile.
22 The furthest parts of my ward you're probably looking at four
23 or five miles away. It's not really -- it's not a straight
24 shot for people to get to based on where my ward is. I think
25 for most people, they would have to take at least two buses if

1 they don't drive to get to the board of elections. Or very,
2 very long walk.

3 Q. And is the area between your ward and the board of
4 elections, is it a generally walkable area?

5 A. Not generally. The board of elections is located in
6 primarily what would be a commercial district. Cleveland is
7 becoming very walkable but this area has not met that standard
8 yet. Between traffic and sidewalk conditions and things, it's
9 just not a very walkable area.

10 Q. And you mentioned people have to take two buses. Why is
11 that?

12 A. Based on the location of my ward, there's really no
13 buses that would take a person from Central directly to the
14 board of elections which is on Euclid Avenue. So if there's no
15 direct connection then you're going to have to take a bus to
16 get to one location that will take you to the connecting
17 location.

18 Q. Let me direct your attention to October 2012. So that
19 would be approximately a month before the presidential
20 election, right?

21 A. Yes.

22 Q. And you mentioned before that turnout in your
23 neighborhood was up in 2008 relative to previously?

24 A. Yes.

25 Q. Did there come a time in October 2012 when billboards in

1 your neighborhood were brought to your attention?

2 A. Yes.

3 Q. Can you explain what happened?

4 A. One evening in October as I'm headed home from out
5 working and I get a call from a constituent who's pretty irate
6 and told me to go take a look at the billboard around the
7 corner from my house.

8 Q. And did you?

9 A. Yes, I did.

10 Q. What did you see?

11 MR. VOIGT: Your Honor, I have a continuing objection
12 to this line of questioning based on hearsay.

13 MR. KAUL: I'll just say, Your Honor, the hearsay is
14 just to provide context to what happened next.

15 THE COURT: The question asked was what did you see.
16 I don't think she's being asked to describe anything other than
17 the fact that she received a call from an irate citizen.

18 What did you see?

19 THE WITNESS: I saw a billboard, a very large
20 billboard, again, one street over from my house, with a picture
21 of a big gavel that said, voter fraud is a felony and the words
22 three and a half years, \$10,000 fine. Well-lighted a billboard
23 that typically had advertisings for cigarettes and half-naked
24 young women selling alcohol.

25

1 MR. KAUL: So could we bring up Exhibit 92A on the
2 screen? This is the redacted version of 92.

3 BY MR. KAUL:

4 Q. Is this the billboard you're describing?

5 A. Yes, it is.

6 Q. And do you actually recognize this location?

7 A. Yes. This is the billboard on the street next to where
8 I live.

9 Q. Can you describe this neighborhood?

10 A. This is the Central neighborhood. I live -- you can't
11 see it, but I live one street over. In the background is Arbor
12 Park development which is a private but subsidized housing
13 development of over 600 units right there you see in the
14 background.

15 Q. And after observing this did you drive around your
16 neighborhood?

17 A. Yes, I did.

18 Q. Why was that?

19 A. I thought if there was one billboard, there were
20 probably others. You know, thinking, where did it come from?
21 Why is it there? I immediately had an idea of why it was there
22 and I figured if there was one there then there is probably
23 some in other parts of my neighborhood.

24 Q. And did you see other billboards in your neighborhood?

25 A. Yes, I did.

1 Q. Do you remember how many you saw in your neighborhood?

2 A. Specifically in my ward, in my neighborhood, there were
3 four.

4 Q. And did they all have the same content?

5 A. Yes. They were identical.

6 Q. And where were those other billboards located in your
7 neighborhood? What types of communities?

8 A. Again, one of those was in the Kinsman neighborhood near
9 a development called Rainbow Terrace which is similar to Arbor
10 Park, a privately owned but HUD subsidized development with
11 primarily poor families. There was one at East 79th and Cedar,
12 again, a very economically-challenged neighborhood. And there
13 was one at East I think 36th and Carnegie which is actually not
14 residential but it's a commercial area, but it was right at the
15 location of Minute Men temp agency where a lot of people in the
16 neighborhood found temporary employment.

17 Q. And did you subsequently do further investigation into
18 this issue?

19 A. Yes, I did.

20 Q. And what did you learn?

21 A. Well --

22 THE COURT: What investigation did you do?

23 MR. KAUL: That's a better question. Thank you, Your
24 Honor.

25 THE WITNESS: I started doing research looking at news

1 and looking up articles to see, number one, where did the
2 billboards come from? Who put them up? On the billboard, you
3 can't see it but it says, paid for by a private family
4 foundation or some similar words. I was trying to determine,
5 you know, who paid for the billboards? Who put them up and why
6 were they placed in my neighborhood? What was this all about?

7 BY MR. KAUL:

8 Q. And did you subsequently drive around the city of
9 Cleveland, not just your neighborhood?

10 A. Yes.

11 Q. And did you determine that there were other billboards
12 up in Cleveland?

13 A. Yes.

14 Q. And about how many billboards did you see total?

15 A. I saw maybe about ten. Somewhere between nine, ten,
16 eleven.

17 Q. And in doing the investigation you described, did you
18 learn that there were billboards in other locations?

19 A. Yes, I did.

20 Q. And where else in Ohio?

21 A. In Columbus, in the Columbus area and Cincinnati area.

22 Q. Through your work as a member of the city council, and I
23 guess just as a member of your community, did you learn about
24 any confusion that these billboards caused for your
25 constituents?

1 A. Yes. In my work and in meetings with members of my
2 community, the reactions ranged from people who were angry,
3 like the original constituent, people who were confused, people
4 who were wondering, well, maybe I shouldn't vote. And they
5 asked a lot of questions like can you vote if you have warrants
6 or can you vote if you owe child support? Can you vote --

7 MR. VOIGT: Objection, Your Honor, to hearsay.

8 THE COURT: Sustained.

9 BY MR. KAUL:

10 Q. Let me ask you the question in a specific way. Did you
11 have communications with your constituents regarding these
12 billboards?

13 A. Yes.

14 Q. As a result of those communications did you explain to
15 them whether, for example, outstanding warrants prevented them
16 from voting?

17 A. Yes.

18 Q. Did you explain to them whether unpaid parking tickets
19 prevented them from voting?

20 MR. VOIGT: Objection, Your Honor. Leading.

21 THE COURT: I think I get the picture.

22 MR. KAUL: Okay.

23 BY MR. KAUL:

24 Q. To your knowledge, have there been any allegations or
25 findings of voter fraud committed in Ward 5 either prior to or

1 since the 2012 election?

2 A. I've never heard of any instances.

3 MR. KAUL: No further questions.

4 THE COURT: Thank you.

5 Mr. Voigt.

6 - - -

7 CROSS-EXAMINATION

8 BY MR. VOIGT:

9 Q. Hello, Ms. Cleveland. My name is Steven Voigt and I
10 represent the defendants in this case and I just have a few
11 questions for you.

12 Have you ever held a position involving election
13 administration?

14 A. No.

15 Q. Have you ever served on a board of elections?

16 A. No.

17 Q. You mentioned some billboards that you saw in your
18 particular area. Do you have any evidence that those
19 billboards were put up by Ohio's election officials?

20 A. No.

21 Q. Do you have any evidence that those billboards were put
22 up by the Secretary of State?

23 A. No.

24 Q. Do you have any evidence that they were put up by the
25 General Assembly?

1 A. No.

2 MR. VOIGT: No further questions.

3 THE COURT: Thank you.

4 - - -

5 REDIRECT EXAMINATION

6 BY MR. KAUL:

7 Q. You were asked about evidence about who put the
8 billboards up. Did you investigate that issue?

9 A. Yes, I did.

10 Q. What did you learn?

11 A. I learned that they were paid for by a small family
12 foundation out of Wisconsin. I think it may be -- I don't know
13 if it's called the Einhorn Foundation but the individuals were
14 a couple whose name was Einhorn.

15 Q. Did you learn anything about them?

16 A. Yeah. They were closely affiliated with Wisconsin
17 Governor Scott Walker.

18 MR. KAUL: Thank you.

19 MR. VOIGT: No further questions.

20 THE COURT: Councilwoman Cleveland, thank you so much
21 for your testimony. You may step down.

22 THE WITNESS: Thank you, Your Honor.

23 MR. SPIVA: Your Honor, I think that with the
24 exception of Mr. Cromes, who will be here tomorrow, those are
25 all of our live witnesses as opposed to designations. So I

1 think we would turn the floor over to the defense counsel.

2 THE COURT: Who's your first witness?

3 MS. PIERCE: Our first witness is Mr. Mark Munroe.

4 He's arriving from Mahoning County. I don't believe he's quite
5 here yet, Your Honor.

6 THE COURT: Let's go to lunch and come back at one
7 o'clock.

8 (A recess was taken at 11:42 a.m.)

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1 Monday Afternoon Session.

2 November 30, 2015

3 1:00 p.m.

4 - - -

5 THE COURT: Who's first?

6 MS. PIERCE: Mark Munroe, Your Honor.

7 THE COURT: Would you approach the stand, sir? Raise
8 your right hand and be sworn. And that's the stand you want to
9 be on, hiding behind those books over there.

10 THE WITNESS: Over here?

11 (Witness sworn.)

12 THE COURT: Ms. Pierce, you may proceed.

13 MS. PIERCE: Thank you, Your Honor.

14 - - -

15 MARK E. MUNROE

16 Called as a witness on behalf of the Defendants, being first
17 duly sworn, testified as follows:

18 DIRECT EXAMINATION

19 BY MS. PIERCE:

20 Q. All set?

21 A. All set.

22 Q. Could you please state your name for the record?

23 A. Mark Eugene Munroe.

24 Q. And where do you work, Mr. Munroe?

25 A. Well, I've a couple of vocations. I work for Compco

1 Industries in Columbiana County. I work for Mahoning County.
2 I'm the Chairman of the Mahoning County Board of Elections.
3 And I serve on the Ohio State Racing Commission.

4 Q. How long have you been a member of the Mahoning County
5 Board of Elections?

6 A. About 22 years, starting back in 1991.

7 Q. And I think you mentioned that you were also the
8 Chairman. Did I hear that correctly?

9 A. I am.

10 Q. How long have you been Chairman of the Board of
11 Elections?

12 A. I've been on and then off and then back on again
13 probably for a total of about maybe six to eight years.

14 Q. And what is the composition of the Board of Elections?
15 How is it made up?

16 A. Well, it's interesting because, in Ohio, boards of
17 elections are, by design, bipartisan. They're one of the few
18 governmental agencies that is, by design, a political animal.
19 Half the board are Democrats. Half of them are Republicans.
20 It's a very neat system, and it seems to work very well.

21 Q. And, if I may ask, what side do you fall on?

22 A. I fall on the Republican side.

23 Q. And what are the duties of the Mahoning County Board of
24 Elections?

25 A. Well, the Board of Elections, the duties of the Board

1 are spelled out pretty concisely in Title 35 of the Ohio
2 Revised Code. We certify elections. We hire the full-time
3 staff, the Director, the Deputy Director. We certify
4 candidates' petitions to the ballots. We conduct elections.
5 We certify recounts. We establish a budget for the Board. We
6 conduct hearings when there are certain types of election
7 disputes.

8 I think that's kind of a summary.

9 Q. What is the budget for the Mahoning County Board of
10 Elections heading into 2016?

11 A. Don't know precisely, but I believe it's going to be set
12 at around two-and-a-half-million dollars.

13 Q. All right. And changing gears just a little bit, what
14 options do voters in Ohio have to cast a ballot?

15 A. Well, in Ohio, voters have a number of options for
16 voting. There is absentee voting by mail. There is early
17 in-person absentee voting at the Board of Elections. And
18 there, of course, is election day voting at your local
19 precinct.

20 Q. Mr. Munroe, are you familiar with the term "golden
21 week"?

22 A. Yes, I am.

23 Q. Could you explain to the Court what that means?

24 A. Golden week is the period of time that's commonly
25 referred to as that overlap between the close of registration

1 in Ohio and the start of absentee voting. I think it's
2 about -- it's approximately a one-week time period that existed
3 about five weeks before election day.

4 Q. And I understand that golden week was in effect in Ohio
5 in the 2012 election. Is that right?

6 A. I believe that's correct, yes.

7 Q. Do you know how many voters in Mahoning County utilized
8 golden week to both register -- to register to vote and cast a
9 ballot?

10 A. I believe it was something in the range of 60 to 70
11 voters, perhaps, in 2012.

12 Q. And does it cost the Board money to administer golden
13 week when it was in effect?

14 A. Well, everything you do costs money. But to prepare for
15 early in-person voting, we typically hire some additional
16 part-time staff. And so, sure, there are some expenses
17 involved in running an early voting activity, yes.

18 Q. Is it primarily personnel costs?

19 A. Primarily personnel, yes.

20 Q. Are you able to put kind of a ballpark figure on that
21 for golden week, say, in 2012?

22 A. I think I did take a look at this as part of my
23 deposition. I don't recall the specific number, but I believe
24 it was in the range of a few thousand dollars.

25 Q. Now, based on your experience as a Board of Elections

1 official in Mahoning County, does golden week present any
2 election administration issues for the Board, other than costs,
3 of course?

4 A. Well, of course, everything we do regarding the
5 administration of elections has its own particular challenges.
6 Everything we do is driven by the Ohio Revised Code, by
7 directives that are issued by the Secretary of State, by court
8 orders, for example. And, of course, we'll do whatever is
9 required of us to see that the law and the directives are
10 executed as efficiently as possible. So, sure, there
11 are -- there are issues, yes, but it's just part of the
12 business of running good elections in Ohio.

13 Q. Okay. Could you describe specifically what some of
14 those issues are when it comes to golden week when it was in
15 effect?

16 A. Well, from an election-administration standpoint, I
17 think it simply involves ensuring that we've got adequate staff
18 on hand to handle the people that might come in wanting to
19 register and vote at the same time. Of course, the problem is
20 you don't know exactly who might come in, who might show up.
21 But, as with most election activities, we're given a challenge.
22 We, the staff, come together, we put a plan together, and we
23 execute it to the best of our abilities.

24 Q. Does it present any potential for voter confusion, for
25 example?

1 A. Well, when golden week first became a reality, I was
2 very concerned that voters could become confused, because
3 oftentimes people hear stories on the news, the radio, or
4 television, they hear about something that was in the paper,
5 and they hear that, oh, election day is coming, and, hey, we
6 can -- we can just show up and register and vote at the same
7 time, without having an appreciation for that is a
8 very -- there is a very narrow window to do that. And I've
9 often -- I've often been concerned that there could, in fact,
10 be confusion about exactly what golden week is and how it works
11 and that some people might, in fact, have the notion that, why
12 worry about getting registered on time, I could just go down
13 and show up and vote, when in case -- that's not the case.

14 Q. Switching gears just a little bit, but does Mahoning
15 County follow the early voting hours set by Secretary of State
16 directive?

17 A. Yes, we do.

18 Q. I'm glad to hear that. But is having those hours
19 uniform across the state important from an election-
20 administration perspective?

21 A. I think that's very important, particularly in counties
22 that are served by -- well, there are many counties, for
23 example, that reside in a one-media market. I'm up in Mahoning
24 County. To the north of us is Trumbull County. To the south
25 of us is Columbiana County. And if there were news reports

1 that, hey, election hours are different in Columbiana County,
2 versus Mahoning County, or that they're different in Mahoning
3 County, versus Trumbull County, that could certainly cause
4 confusion.

5 I know there is always an effort around election time to
6 let people know what are their options for voting. And if
7 there are not regular hours in all the counties, it can
8 certainly cause confusion.

9 Q. What voting equipment do you use in Mahoning County
10 currently?

11 A. We are currently using the ES&S precinct count optical
12 scan system. It's known as the DS200.

13 Q. Have you ever used DRE machines?

14 A. Yes, we have.

15 Q. Why the switch from DRE machines to the precinct-based
16 optical scan ballots?

17 A. Well, going back a little bit further, Mahoning County,
18 we actually were a central count optical scan system for about
19 30 years. But, then, as we approached, I believe, the year
20 2000, our 30-year-old system was really kind of at the end of
21 its run, and we were looking for a new system. That's when
22 DREs were first becoming available. And we thought DRE, the
23 DRE technology, made a lot of sense for Mahoning County, had
24 many advantages; didn't require any paper whatsoever; we could
25 generate election results more quickly; we could make

1 last-minute ballot changes very easily. We thought the
2 security of the electronic machines was much better than a
3 paper system, when you could tamper with a paper system with
4 just a pencil. And so we thought there were many good reasons
5 to go to DREs back in 2000; but, once we acquired those
6 systems, the rules began to change. The legislature got
7 involved. The Secretary of State got involved. And they
8 started applying new requirements to the DRE machines. First
9 of all, there was a requirement that the machines had to have a
10 voter-verified paper audit trail.

11 Now, these machines that we bought didn't have that
12 feature, so they had to be retrofitted. And they were not
13 designed to have a printer attached to them. So that became
14 kind of a Rube Goldberg kind of contraption, I suppose. And
15 once that printer was attached to that voting machine, it no
16 longer was possible to take that machine out for curbside
17 voting, for example. That was one of the advantages of the DRE
18 machines.

19 Another advantage was that we could actually transmit
20 the results electronically from remote polling locations back
21 to the Board of Elections to get rapid election night returns.
22 Well, the directive came back down that said we could no longer
23 do that.

24 The DRE machines were originally used for provisional
25 voting. Voters could actually cast provisional ballots on

1 those machines; but, at some point, there was a change. And
2 the rule was, well, if a voter's going to cast a provisional
3 ballot, it has to be on paper.

4 Another rule came down that said, well, we think that
5 every polling place should have backup emergency paper ballots
6 just in case something goes wrong. So we finally got to the
7 point where we were essentially running two parallel voting
8 systems. We were -- we had these machines that didn't require
9 any paper, but at the same time we were being required to have
10 paper, a lot of paper. And as those machines reached the end
11 of their life, we simply made the decision, well, if we have to
12 have paper anyway, we might as well just make the conversion
13 back to paper. And at that point we made the decision to go
14 with the precinct count optical scan system.

15 Q. Did you have any issues with the DRE machines as they
16 aged?

17 A. Well, like any piece of technology, they required upkeep
18 and maintenance. Batteries had to be replaced. I know there
19 were some screens that were cracked and had to be changed out.
20 But, in general, all of the maintenance items were things that
21 we could deal with, although we knew that, going forward, if we
22 went much beyond ten or twelve or thirteen years, that getting
23 replacement parts was going to be a problem at some point. And
24 that was one of the factors that we considered as we thought
25 about changing back to a paper-based system.

1 Q. Did you ever have DRE machines that just completely
2 failed on election day?

3 A. That was a rare occurrence; but, over the 10 or 12
4 years, it did happen on occasion. But the good news was, in
5 all of the polling places, there were always multiple machines
6 available. And we always maintained backup machines that could
7 be delivered to a polling place fairly quickly. But did it
8 happen? Yes, it did.

9 Q. Could you -- how often did it happen?

10 A. As I said, I think it was a rare occurrence. I know
11 there were certainly elections when we didn't have those kinds
12 of problems, but I think -- again, just thinking back over the
13 past -- over the ten or twelve or thirteen years that we had
14 those machines, it happened maybe just a handful of times.

15 Q. Does Mahoning County have an early in-person voting
16 location?

17 A. Yes, we do.

18 Q. And where is that located?

19 A. At the Mahoning County Board of Elections at 345 Oak
20 Hill Avenue in Youngstown.

21 Q. Are there any advantages to having the early in-person
22 voting location in the same place as the Board of Elections?

23 A. Oh, absolutely. First of all, we have security. Our IT
24 infrastructure is right there. We have all of our supplies.
25 We've got all of our staff. And so certainly from an

1 elections-administration standpoint, it makes good sense. We
2 also have good parking. People know where the facility is.
3 It's worked out fairly well.

4 Q. Could you move the early in-person voting location away
5 from the Board of Elections?

6 A. Anything is possible. Sure, it could be done. There
7 would certainly be a budget consideration, security
8 considerations. But could it be done? Sure, it could.

9 Q. Now, would an additional early in-person voting
10 location -- an additional location, would that fit within the
11 Board's budget for 2016?

12 A. No, it would not.

13 Q. And in your experience, your extensive experience as a
14 Mahoning County Board of Elections member, is there a need for
15 an additional early in-person voting location in Mahoning
16 County?

17 A. I don't think there is. I think Ohio has got many
18 opportunities for voting right now. Voting has never been
19 easier or more convenient.

20 When I first joined the Board back in 1991, election day
21 was 12 hours long, and you practically had to have a note from
22 your mother or your boss or your daughter -- or your doctor,
23 not your daughter -- in order to cast an absentee ballot. But,
24 today, we have no-fault absentee voting. Anybody can ask for
25 an absent voter's ballot by mail for any reason. We have

1 expanded hours on election day. We have now 13 hours of
2 in-person or election-day voting at the precinct place. And
3 we've got -- we've got in-person absentee voting available.
4 So, I think it's -- I think voting has never been easier in
5 Ohio.

6 Q. Okay. If there was a need, a budgetary need, for the
7 Board, are there options for the Board to get that money?

8 A. If we needed more money?

9 Q. If you needed more money.

10 A. Well, sure. We can always approach the County
11 Commissioners and ask them for additional money. If we thought
12 there was a situation where we absolutely had to have more
13 money to conduct an election, we're one of the few government
14 agencies, like the courts, we could go -- we could apply to the
15 Court of Common Pleas and ask for a Common Pleas Court judge to
16 issue an order mandating that we receive the necessary funding
17 to conduct elections. That is also one of our options.

18 Q. Switching gears just a little bit, does the Board of
19 Elections, the Board itself, approve acceptance of absentee or
20 provisional ballots?

21 A. Well, certainly, provisional ballots, we do. That's one
22 of the requirements under one of the directives issued by the
23 Secretary of State. The Board has to meet in session, and we
24 have to vote to either accept or reject provisional ballots,
25 something we just did, I think about, well, a week and a half

1 ago as part of our certification process.

2 Q. At that time, the week and a half ago, how many
3 provisional ballots did you vote to accept, if you remember?

4 A. I don't have the precise numbers, but I believe
5 that -- I believe there were -- there were over 900 provisional
6 ballots cast in Mahoning County, between 900 and 1,000. And I
7 believe that we -- I think we certified about maybe 750 of
8 them, something in that ballpark.

9 Q. What was the reason, the primary reason, for rejecting
10 around 250 provisional ballots?

11 A. I think the primary reason for rejecting a provisional
12 ballot, it's typically the fact that the voter is not, or, the
13 person who is attempting to vote or who did vote is not
14 registered. That is, I think, the most common reason.

15 Q. Now, what about absentee ballots? Does the Board vote
16 to accept absentee ballots?

17 A. Not generally. If absentee ballots are timely received,
18 if the application is completed properly, if there are no
19 questions, those ballots are -- that does not require the
20 Board -- Board approval.

21 Q. Did you have to approve any in this past election?

22 A. We did not.

23 Q. Are you aware of any cases of voter fraud in Mahoning
24 County?

25 A. I'm aware of one, in particular, quite a long time ago

1 when there was a case of double voting in Mahoning County. I
2 bet it was maybe 15 or 16 or 18 years ago.

3 We do see other cases where -- you might have a case
4 where there might be a question about whether a signature is
5 non-genuine or not, whether somebody signs a form for a person
6 purporting to be somebody else, like on petitions, for example.
7 Most of those kinds of problems relate to registration or
8 campaign finance, those kinds of things.

9 Fortunately, the kind of -- I think when people think
10 about election fraud, they think about, you know, somebody
11 voting who shouldn't be voting or somebody who votes ten or
12 fifteen times. Fortunately, those kinds of things are very
13 rare, as well they should be.

14 Q. And why do you say "fortunately"?

15 A. Well, you know, I'm often asked, you know, what does the
16 Board of Elections do. And my usual answer is, hey, we do all
17 that stuff that I talked about earlier, budgets and review
18 petitions; but what we really do -- our number one job is
19 really to help the public have confidence in the voting system
20 in Ohio. That is -- that is our number one job. People have
21 to have faith and trust that when they count their -- when they
22 cast their ballot, that that vote is accurately and properly
23 counted and reflects the will of the people. That is the most
24 important thing we do.

25 Q. How does that relate to voter fraud?

1 A. Well, I guess -- I guess it -- I think I've just been
2 answering the question as to why I think it's important that we
3 be concerned about voter fraud. Anything that we can do to
4 create the impression, to create -- to enhance the public
5 impression that voting, in fact, isn't safe -- that it is safe,
6 that it is conducted properly, that only those persons
7 authorized to cast votes do in fact cast them, that is an
8 important part of the system. People have to have that faith
9 and that trust.

10 Q. Does Mahoning County have e-poll books?

11 A. Yes, we do.

12 Q. How long have you had e-poll books in place?

13 A. This is -- this is something new. We did a pilot
14 program during the primary election where we conducted -- where
15 we used e-poll books in just a couple of precincts. This last
16 general election, we rolled it out countywide. And so, for the
17 first time, this last general election, we did use them,
18 countywide, in Mahoning County.

19 Q. Any issues with the e-poll books in the past election?

20 A. Well, anytime you roll out a brand new technology for
21 the first time, there are challenges and there are issues. I
22 think, on balance, it's going to be good for the County.
23 Having that countywide database information at each precinct, I
24 think, is very valuable. In most of the precincts, it went
25 very well. There were a couple of precincts where some of the

1 poll workers just weren't -- they weren't up to speed yet. And
2 it was new for the voters, too.

3 And that is one reason why I'm so glad we rolled it out
4 this year rather than next year during a presidential election
5 year. But it's good technology. It's going to be helpful.

6 MS. PIERCE: Okay. That's all I have for you, Mr.
7 Munroe.

8 Thank you, Your Honor.

9 THE COURT: Thank you.

10 Ms. Callais.

11 - - -

12 CROSS-EXAMINATION

13 BY MS. CALLAIS:

14 Q. Good afternoon, Mr. Munroe.

15 A. Well, a fine good afternoon.

16 Q. My name is Amanda Callais. And I am one of the
17 attorneys for the plaintiffs in this matter, and I just have a
18 few questions for you today.

19 Mr. Munroe, I think you said that one of your
20 responsibilities as a member of the Mahoning County Board of
21 Elections is to approve budgets, right?

22 A. Yes.

23 Q. And one of the things that the Board of Elections looks
24 at when it creates budgets is the historical data, budgets from
25 previous elections?

1 A. Absolutely.

2 Q. And just to make sure that I understand the process, for
3 a presidential election year like 2016, the Board and staff
4 would look back to the previous presidential election's budget?

5 A. That's correct.

6 Q. Okay. So that would be the 2012 election?

7 A. Yes.

8 Q. And I think you stated on direct that the estimated
9 expenses for golden week in 2012 were a few thousand dollars?

10 A. Yeah. I do recall, in preparation for the deposition
11 that I gave, I went back to one of our accounting clerks at the
12 Board. And I asked him to just put together an estimate of
13 what our actual direct expenses were related to golden week.

14 Q. Okay. And those were a few thousand dollars?

15 A. I believe so.

16 Q. And you also stated that Mahoning County's estimated
17 budget for 2016 is about \$2.5 million?

18 A. I believe that's a good ballpark number, yes.

19 Q. So, budgets for presidential election years, they're
20 about the same, or similar?

21 A. You mean four years to four years?

22 Q. Yeah.

23 A. They're similar, yes.

24 Q. Okay. So, the budget for 2012, would that have been
25 similar to the budget for 2016 that we just discussed?

1 A. It should be similar, yes, but, of course, allowing for
2 health-care expense increases and so on and so forth. But,
3 yes.

4 Q. But it would be similar?

5 A. Similar. Ballpark. Yes.

6 Q. Okay. Mr. Munroe, I believe you mentioned in your
7 testimony that you had some concerns that voters would be
8 confused about golden week, that they might show up on election
9 day and believe that they could also register and vote. Is
10 that correct?

11 A. That is correct.

12 Q. Now, you aren't aware of anybody actually showing up on
13 election day and wanting to register and vote, are you?

14 A. I am not, no.

15 Q. And I think you also mentioned that you were concerned
16 that voters might become confused and attempt to show up
17 between, you know, golden week and election day and try to
18 register and vote; is that correct?

19 A. That's correct.

20 Q. But you don't know of any voters who have actually shown
21 up between golden week and election day and attempted to
22 register and vote; is that correct?

23 A. I do not.

24 Q. And I believe you said that voter fraud is very rare?

25 A. Yes, thank goodness.

1 Q. And in your 20 years of experience on the Mahoning
2 County Board of Elections, you're only aware of one case of
3 double voting; is that right?

4 A. No. There have been other cases, but it wouldn't -- I
5 wouldn't -- one example, this last election, we had -- there
6 are cases, for example, where a voter votes by absentee ballot;
7 then they forget; did I vote five weeks ago? They'll show up
8 at the polling place on election day, and they will attempt to
9 vote at the polling place. They're given a provisional ballot,
10 and they're given the opportunity to vote a second time.

11 So that's double voting, although I wouldn't -- I
12 wouldn't call that election fraud. I think it's just a mistake
13 that a voter made.

14 Q. So you are only aware of one case of double voting that
15 you would call election fraud?

16 A. Yes, I am.

17 Q. And, in fact, that one case of double voting that you
18 would call election fraud, that's the only case of voter fraud
19 that you've actually referred to a prosecutor, correct?

20 A. That's correct.

21 Q. And that one case took place more than 15 years ago,
22 right?

23 A. It was a long time ago, yes.

24 Q. And golden week did not exist 15 years ago?

25 A. That's correct.

1 Q. Okay. So that case that you referred to the prosecutor,
2 that wasn't a case of double voting connected to golden week,
3 was it?

4 A. That's correct.

5 Q. Mr. Munroe, I think you talked about voters having
6 confidence in the election system and that being part of your
7 job as a member of the Mahoning County Board of Elections. If
8 voters had the impression that people are being denied the
9 right to vote, does that affect their confidence in the
10 election system?

11 A. Well, sure.

12 Q. And then just two more questions, Mr. Munroe.

13 You were contacted by the Attorney General's Office in
14 this case and asked to prepare a declaration?

15 A. That's correct.

16 Q. And the Attorney General's Office actually prepared the
17 first draft of that declaration; is that correct?

18 A. Well, the -- they conducted a telephone interview with
19 me, prepared a draft, which I reviewed, made some changes, sent
20 it back to them. And then I signed it.

21 Q. But they wrote the first draft?

22 A. That's correct.

23 MS. CALLAIS: No further questions. Thank you.

24 THE COURT: Thank you.

25 Ms. Pierce, anything further?

1 MS. PIERCE: Yes, Your Honor.

2 - - -

3 REDIRECT EXAMINATION

4 BY MS. PIERCE:

5 Q. Mr. Munroe, you mentioned in your direct testimony that,
6 just a week and a half ago, you had 200-plus ballots,
7 provisional ballots, that were rejected because the voters were
8 not registered in the State of Ohio; is that right?

9 A. Well, that was certainly one of the reasons. I mean,
10 there are other reasons for rejecting provisional ballots, but
11 that is certainly the primary reason.

12 Q. So those voters showed up to vote on election day and
13 were not registered?

14 A. Correct.

15 Q. Okay. Mr. Munroe, when golden week existed in 2012, was
16 your Board doing other things during that week other than
17 administering golden week?

18 A. Well, sure. Five weeks before election day, there is
19 plenty of activity going on in terms of preparing the election
20 machinery, reviewing ballots, processing absentee voter
21 requests. Absolutely.

22 MS. PIERCE: Thank you. No further questions.

23 THE COURT: Thank you, Mr. Munroe. I appreciate your
24 driving down. You may step down, sir.

25 THE WITNESS: Thank you.

1 THE COURT: Who is next?

2 MS. PIERCE: Dr. Theodore Allen, Your Honor.

3 THE COURT: At 2:25, I need to break to take a call.
4 Doctor, I'd ask you to approach the witness stand over
5 there, raise your right hand, and be sworn.

6 (Witness sworn.)

7 THE COURT: Make yourself comfortable there, sir.
8 And, Ms. Pierce, you may inquire.

9 MS. PIERCE: Thank you, Your Honor.
10 Could we have the monitor switched over to --

11 COURTROOM DEPUTY CLERK: Sure.

12 MS. PIERCE: Thank you.

13 - - -

14 THEODORE T. ALLEN

15 Called as a witness on behalf of the Defendants, being first
16 duly sworn, testified as follows:

17 DIRECT EXAMINATION

18 BY MS. PIERCE:

19 Q. Good afternoon, Dr. Allen. Could you please state your
20 name for the record?

21 A. My name is Theodore T. -- Tetreault -- Allen.

22 Q. And what is your occupation, Dr. Allen?

23 A. I'm an Associate Professor at The Ohio State University.
24 Is that too loud?

25 Q. Nope. That's perfect. That's great.

1 What department do you teach in?

2 A. Integrated Systems Engineering.

3 Q. And are you a tenured professor?

4 A. Yes.

5 Q. Okay. Could you describe, briefly, your area of study?

6 I think you said "Integrated Systems Engineering."

7 A. Integrated systems engineering is the science and
8 practice of better, faster, cheaper. We attempt to advise
9 people how to improve system outcomes and outputs by changing
10 the system inputs.

11 Q. And what, if any, specializations do you have within
12 that field?

13 A. There is the area of operations research, which includes
14 some of applied statistics, there is manufacturing engineering,
15 and there is human factors engineering.

16 Q. Okay. And in which of those are you a specialist in?

17 A. Operations research and applied statistics.

18 Q. And could you describe, briefly, your educational
19 background, please?

20 A. I received my advanced bachelor's/A.B. degree from
21 Princeton in physics, with a certificate in engineering
22 physics. Then I received my master's in physics from UCLA.
23 Then I received my master's and Ph.D. in industrial and
24 operations engineering from the University of Michigan, Ann
25 Arbor.

1 Q. Oh, oh.

2 And when did you join the faculty at OSU?

3 A. In 1996.

4 Q. And do you have any peer-reviewed publications?

5 A. Yes.

6 Q. Could you describe those briefly for me? If there is a
7 theme, you can describe --

8 A. Yes. I have over 50 peer-reviewed publications,
9 including conference papers and two textbooks. The theme
10 relates to applied statistics and optimization. In particular,
11 a major theme relates to waiting systems and the design of
12 inputs to improve outcomes.

13 Q. Any of those specifically in the voting context?

14 A. Yes.

15 Q. Could you describe those a little bit?

16 A. Yes. I have around six publications relating to
17 election systems. The two main questions relate to how many
18 resources -- could be voting machines, could be voting
19 booths -- are needed, and where to put the resources on a
20 county level.

21 Q. And, besides your academic research, have you worked in
22 the private sector in your field of study?

23 A. Yes.

24 Q. Could you describe some examples of that work, maybe
25 just, say, in the past year, year and a half or so?

1 A. Yes. So, in the past year, I've been involved with my
2 students in at least 18 applications. These have ranged from
3 helping Honda of America decide how many resources they need
4 and how to allocate those for waiting of parts, which are
5 called inventory.

6 I've also helped with, for example, Jennies Ice Cream in
7 laying out their facilities to make the waiting have beneficial
8 properties for them.

9 I've worked with the U.S. Army. I'm trying to help them
10 to improve their analysis of the field reports with software.

11 Q. Has your academic study or your practical experience
12 involved any work with waiting-line analysis?

13 A. Yes.

14 Q. Could you clarify which of those things involve waiting
15 line analysis?

16 A. Sure. So I worked for Franklin County, where we are
17 now, in 2005 and 2006, trying to help them, and also in 2008,
18 trying to help them to analyze what had happened in 2004, and
19 also plan for election day in 2006 and election day in 2008.

20 Q. Okay.

21 A. Oh! And, also, I've worked for Cuyahoga County, where
22 Cleveland is, and Onondaga County, where Syracuse, New York,
23 is.

24 Q. Okay. And have you ever been accepted by a court as an
25 expert witness before?

1 A. Yes.

2 Q. Could you describe those matters?

3 A. Yes. I've served on two cases in Sandoval County, New
4 Mexico. I helped some Republican plaintiffs who alleged that
5 the Democratic administrators had incompetently decided how
6 many resources and that it caused damage to their clients. We
7 won that case.

8 I also have served for the League of Women Voters and
9 the ACLU in North Carolina. And in that case I tried to help
10 them to understand how the changes in early voting laws
11 affect -- would likely affect election day -- would have likely
12 affected election day, and with implications for the future.
13 That case has not been decided, to my knowledge.

14 Q. Have you ever been excluded as an expert by a court
15 before?

16 A. No.

17 Q. Okay.

18 MS. PIERCE: At this time, Your Honor, I'd tender
19 Dr. Allen as an expert witness in the field of integrated
20 systems engineering, waiting-line analysis, specifically in
21 elections?

22 MR. KAUL: No objection.

23 THE COURT: Very well.

24 BY MS. PIERCE:

25 Q. All right, Dr. Allen. Let's move to the work you did in

1 this particular case. Were you asked to serve as an expert
2 witness for the plaintiffs in this case?

3 A. Yes. My understanding is that they did ask me,
4 formally, to do that.

5 Q. Okay. And, obviously, you're here as a defendants'
6 expert. Why did you decline to serve as an expert for the
7 plaintiffs?

8 A. Well, I became aware of some of their claims. And I
9 thought about it over the weekend. And I work for the State of
10 Ohio in my main job. And I thought it would be a little
11 awkward to work -- to be involved in suing some of the highest
12 administrators in Ohio. Officials, I'd say, officials. And
13 then, also, I reflected back on my experience in 2006 and my
14 honest admiration for what Secretary Husted and Assistant
15 Secretary Matthew Damschroder achieved when they spear-headed
16 the effort to allow no-fault absentee voting in the state.

17 Back then, if they hadn't done it, it would have been a
18 disaster. Our models predicted that they would have really bad
19 waiting-line problems in 2006, rivalling 2004. And I really
20 respect and I'm grateful to them for affecting that positive
21 change.

22 Q. I believe you mentioned you had reviewed the plaintiffs'
23 case. Did you have any thoughts about it at that point?

24 A. Yes. So the plaintiffs made many claims. And I'm not
25 qualified to address many of those claims.

1 Two of the claims, in particular, do have issues related
2 to waiting lines that I have expertise associated with. So,
3 for those, one of them relates to the possibility of dividing
4 resources prior to election day -- I mean in the early voting
5 period. And then the other relates to the formula for the
6 minimum number of DRE machines needed in a DRE county.

7 Q. And what were your thoughts about those claims?

8 A. So, from my experience and knowledge relating to
9 election days and the circumstance of turning around equipment
10 from the day before elections to election day, my understanding
11 is that, without a significant major investment in resources,
12 election officials would be faced with dividing a fixed number
13 of resources. And, if they were to divide them, elementary
14 waiting-line analysis suggests, immediately, that there would
15 be longer waiting lines in the locations which would have fewer
16 machines but also fewer voters.

17 Q. Okay. Let's turn to the work that you have done in this
18 case. Could you briefly describe what you were asked to do?
19 By the defendants, I should say.

20 A. Oh, yeah. Let me also make another comment.

21 So there was another part of my research, or my work on
22 this, my report on this, which relates to the formula for the
23 number of -- minimum number of machines needed in a county.
24 And my summary of my conclusions for that case was that neither
25 before nor after the law would I consider the formula ideal,

1 but I do consider the formula a step towards what I would say
2 is an ideal formula in a qualitative sense.

3 Q. Okay. So let's turn to the work you were asked to do by
4 the defendants.

5 A. Sure.

6 Q. Could you briefly describe what questions you were asked
7 to address?

8 A. You mean by the defense?

9 Q. Yes.

10 A. Okay. So you want to get into more details?

11 Q. Could you just generally tell me what questions you were
12 asked to address?

13 A. Yes. So the questions relate to what would happen in
14 particular if you were to take, for example, a hundred machines
15 from Franklin County and divide them into multiple locations,
16 and what would happen to the end precinct waiting times and can
17 we estimate those, approximately, and how would -- what exactly
18 would an ideal waiting-line formula look like, and is
19 subtracting what you know about the number who voted in the
20 previous election a reasonable step towards a thoughtful
21 approach.

22 Q. Okay. Let's focus first on that first question. And it
23 might help to take a look at your report. That's defendants'
24 Exhibit 16. I can help you find it.

25 MS. PIERCE: May I approach, Your Honor?

1 THE COURT: Yes, you may.

2 MS. PIERCE: Thank you.

3 BY MS. PIERCE:

4 Q. All right. So, again turning to that first question,
5 how did you approach that question? Could you describe your
6 methodology for me?

7 A. Yes. So, to quantify the effects, the likely effects of
8 dividing resources among multiple locations, I had a choice
9 about how to predict the likely effect on lines. And I chose,
10 for the motivation of simplicity and transparency, to use,
11 arguably, the simplest approach for doing that, which is called
12 the M/M/c queuing formula.

13 Q. And what was -- you said that you had multiple options
14 available to you. What's another option?

15 A. So to predict the likely effects of resource allocations
16 in waiting systems, a person could use queuing theory, discrete
17 event simulation, agent-based modeling or Markov chains
18 modeling.

19 Q. And you chose the queuing theory?

20 A. Yes.

21 Q. Why did you make that choice?

22 A. Well, partly because the case relates to the formula for
23 the number of machines needed, and I -- and, also, you know,
24 "All the models are wrong, but some models are useful" is a
25 saying, that many of us live by, from the late Professor George

1 Box from the University of Wisconsin.

2 And so I knew that there is advantages for
3 different kinds of models. And I have used discrete event
4 simulation in the past, and I've used queuing theory in the
5 past. And I decided, partly to police my own errors, partly
6 for the sake of transparency, and partly because it gives
7 intuition, to use discrete event simulation -- I mean to use
8 queuing theory.

9 Q. Okay.

10 MS. PIERCE: Brittnie, could you bring up that first
11 model?

12 BY MS. PIERCE:

13 Q. So how did you go about applying queuing theory to the
14 question at hand?

15 A. Right. Well, as soon as I read the complaint, I
16 immediately knew that any of these methods would very likely
17 indicate that spreading out resources would cause longer lines,
18 because that's an elementary result in applied waiting-line
19 analysis. And so I'd hope that all my students in my course
20 next semester would be aware of that. And so I knew that
21 immediately. But then, to try to create intuitive predictions
22 that have approximate validity, I modeled a system, as we
23 usually do, as shown in Exhibit A.

24 And so -- waiting systems are not fantastically
25 complicated. They're understandable. And you have arrival

1 process, and so there is an arrival rate. It's an average
2 rate. The arrivals in election systems are uncoordinated, so
3 that it's a pretty random process, yet it can still have an
4 arrival rate.

5 And then there's waiting, queue. That's what's called
6 queue. And then when a resource becomes available, which in
7 this picture is a voting machine, but it could be, also, a
8 booth, when the person in line goes and monopolizes the booth
9 in what we call the service process -- and that service process
10 is which the machine or the booth is serving the customer while
11 they're, essentially, voting -- they're voting, and then it has
12 a certain service rate. And then, when they're done
13 monopolizing the equipment, they leave, and the resource is
14 free to anyone in line.

15 Q. Okay. So let's turn to your tables in your report.
16 Maybe you can explain how that process we just saw relates to
17 your tables.

18 So what does the first column of numbers here represent:
19 The arrival rate?

20 A. Right. So, in early -- it's my understanding, from
21 talking with election officials and my own direct experience,
22 in Ohio, there is a long period of voting, but the voters tend
23 to pick a fraction of that period in which they mainly come.
24 And so I'm essentially modeling, as an approximation, only
25 those rush periods.

1 Q. When are those rush periods, generally?

2 A. So it is my understanding that, here in Franklin County,
3 for example, for the election this November, of the voters who
4 came, very many came in the last few days of the election early
5 voting period.

6 Q. Okay. So what is that second column of numbers in your
7 table there labeled "Service Rate"?

8 A. Right. So, once the voter is at the booth, or at the --
9 in this case, this is Franklin County, so at the DRE machine,
10 the machine serves them by allowing them to vote. And it
11 typically can do around eight per hour because, in my
12 experience, the average waiting -- the average service time is
13 around seven minutes with our current equipment.

14 Q. Okay. How about the next column: The number of
15 machines?

16 A. So, in a major election, Franklin County, it deploys --
17 it has recently deployed a hundred machines in early voting.

18 And so that represents the number of machines. And then
19 the column after that is -- it's called the utilization of the
20 machines. And then the next column is the probability that a
21 person will wait or experience a wait in that situation. And
22 the last column is the queuing theory prediction for the
23 average waiting time, which I essentially calibrated to be
24 equal to the data we have on the early voting period in Ohio
25 from recent elections from Professor Charles Stewart.

1 Q. Okay. And what conclusions do you draw from this table,
2 from this analysis?

3 A. So, if election officials were in a situation where they
4 weren't allowed additional resources and they were taking that
5 hundred machines and they were dividing them into, say, two
6 locations, then there would be 50 machines in each location;
7 or, if they divided it into four, then there would be 25; or,
8 if they divided it into ten, there would be ten locations and,
9 if they had ten machines in each, the voters would also be
10 divided, and the utilizations would be the same, but the
11 probability of waiting would greatly increase, and the expected
12 waiting time would dramatically increase.

13 So this is the in-precinct expected waiting time. And
14 if you used any of the other methods I mentioned -- Markov
15 chains or discrete event simulation or agent-based models -- I
16 would predict approximately similar results.

17 Q. So what I'm hearing is that, the more locations you
18 have, given this fixed number of resources, the longer voters
19 are expected to wait?

20 A. Yeah. The in-precinct waiting times would be longer.

21 MS. PIERCE: Go to the next table, please.

22 BY MS. PIERCE:

23 Q. Could you explain what this table represents?

24 A. So I requested information from four counties, two large
25 ones and two small ones, just to try and make sure that my

1 results had some level of generality. And so Williams was one
2 of the small ones that I picked, and it is a county where they
3 use optical scan and voting booths. So, really, the machines
4 in this case are booths.

5 And so, in this case, if we were to divide the booths
6 into two -- so, if somehow there were two locations and they
7 each had three, then, again, the queuing theory model predicts
8 a dramatic increase in the expected waiting time.

9 Q. Now let's move to the second question you were asked in
10 your initial report. What was the second conclusion you drew
11 about the new DRE provisioning formula?

12 A. Right. So, in my report, I put the famous square-root-
13 staffing formula. It's sometimes called -- I should say the
14 famous M/M/c queuing approximation, which gives you a sense of
15 how many resources you need as a function of arrival and
16 service processes. And studying that equation I feel is useful
17 for people to gain intuition about provisioning for elections.

18 And if you study that and you think about it, you, of
19 course, would want to take what you can -- what you do know
20 about the arrival process into account. And, so, if I was
21 working at Honda or I was working at Jennies Ice Cream, I would
22 encourage the people to do provisioning taking into account the
23 best of their knowledge, what they know about arrivals. And if
24 people have already voted, then they're not going to arrive.

25 Now, at the time at which people have to make the

1 apportionment decisions, generally speaking, in our current
2 system, most of the voting has not happened, if any. And --

3 Q. What do you mean by "apportionment decisions"? I'm
4 sorry.

5 A. So, when a county has to decide how many machines they
6 want, they don't have direct knowledge of the upcoming
7 election. So it's reasonable, in my opinion, to use a
8 surrogate to estimate the number of people who would be likely
9 voting absentee in the future election.

10 Q. And is that what the new law does, that new DRE
11 provisioning formula does?

12 A. Yes. So the new formula relates to the minimum number
13 of machines needed by a DRE county. And, the new formula, it
14 does that exactly. It takes -- it attempts to take out people
15 who are likely to vote no-fault absentee from the calculation.

16 Q. How does that differ from the old formula?

17 A. So neither formula is that close to what -- as what I
18 have in the article, which is Equation 3. The old formula just
19 takes the number of people, which is essentially proportional,
20 to land at the arrival rate, and doesn't even subtract out the
21 number who are likely to vote early.

22 Q. Can you imagine a scenario where the old law would have
23 a negative effect --

24 A. Yes.

25 Q. -- in the election?

1 A. Well -- yes, I can imagine such a situation.

2 So one of the -- one of the important issues about
3 Equation 3 and of my work, in general, that I try and point out
4 every chance I get is that it's important to take into account
5 the service rate. And, surprisingly, in Ohio, the service
6 rates of our booths and our machines are quite slow by the
7 standards of many other states. But if we were to go back to
8 the machines that we used in 2004, for example, which are
9 open-faced, the service rates would approximately double. So
10 then you would need considerably fewer machines.

11 Also, if the county were to have -- if the county were
12 to have short ballots, for example, in an election where there
13 are no referenda, then they could over-provision and
14 essentially waste money, hypothetically.

15 Q. Okay. So, under the old formula, you can imagine a
16 scenario where counties would be over-provisioned?

17 A. Yeah. They would be over-provisioned if a lot of people
18 voted early no-fault absentee, the machines were a lot faster,
19 and the -- so the machines are faster -- they have a lot of
20 people voted early. That would be, basically, the situation.

21 Q. So the new formula is an improvement, then?

22 A. Well, it's a conceptual step towards a formula that is
23 supported by applied waiting-line analysis, or a queuing
24 theory.

25 Q. Okay. Let's move to the second report you submitted in

1 this case. It's Tab 19. I think you'll actually have to go to
2 the next book.

3 A. Okay.

4 Q. Okay. Now, what was the purpose of this, the second
5 report you submitted in this case?

6 A. So the primary purpose was to comment on the opinions of
7 my colleague, Dr. Yang, and his report.

8 Q. And what did you conclude in your second report?

9 A. So I concluded two primary -- I made two primary
10 conclusions. One of the conclusions was that it seems
11 potentially misleading, to me, to only consider scenarios in
12 which the burden on election day increases, given the trends
13 and data. And I think it's quite reasonable to -- I mean, it's
14 quite reasonable to consider the possibility that fewer people
15 will actually come during an election because more people will
16 vote no-fault absentee. So Dr. Yang didn't do that.

17 Also, my colleague, Dr. Yang, was not careful and
18 potentially misleading in his understanding of current election
19 practice and historical election practice and, likely, future
20 practice.

21 Q. What do you mean by that?

22 A. Well, Dr. Yang assumed that people had been following
23 the minimum and that they would continue to follow the
24 minimums, whereas I have direct knowledge that that is not
25 true; that, for example, Franklin County will be far in excess

1 of the minimum in the next election. And during my work with
2 them, also, they were in excess of the minimum.

3 Q. Did Dr. Yang's report contradict the findings in your
4 report in any way?

5 A. No. No, he didn't, I mean except that he called into
6 question the use of discrete events -- I mean of queuing theory
7 and is arguing that it's very important to use discrete event
8 simulation, yet, honestly, I don't think that using either
9 method would really affect, materially, the prediction that
10 dividing resources would cause longer in-precinct lines,
11 perspective lines.

12 Q. Do you have any knowledge of DRE machine failure rates
13 in Ohio?

14 A. Yes.

15 Q. Where do you get that knowledge from? How do you know
16 that?

17 A. Well, so, when I was working in 2006 and 2008, I was
18 able to inspect the records from actual DRE machines --

19 Q. Uh-huh.

20 A. -- and learned about their downtime, and also -- yeah.
21 And, basically, I gained access to the machines.

22 Q. And was that information included in any of your
23 published papers?

24 A. Yes. It was included in the report that I gave to
25 the County. In fact, it was a report included in my report to

1 Cuyahoga County and my report to Franklin County. In both
2 cases, I estimated failure rates.

3 Q. And what contributes to DRE machine downtime, I think
4 you said?

5 A. Yeah. So the election commission, the federal election
6 commission, seems to be focusing on catastrophic failure of
7 machines, which is relatively rare, but downtime can also occur
8 when the paper -- when the machine runs out of paper. It's
9 like a printer, and it sometimes can require -- it can have
10 paper jams, and it can require additional paper. So I tried
11 to, in my simulations in that work, consider both types of
12 failures.

13 Q. And how common is catastrophic DRE machine failure in
14 Ohio in your experience?

15 A. Well, generally speaking, it's fairly rare. A machine
16 is likely, on an election day, to have a failure, what I would
17 call a failure, a downtime, from the paper-jam kinds of issues
18 and the paper replacement, whereas, the election commission has
19 certified, or tries to guaranty, and it seems like a reasonable
20 guarantee, that less than ten percent of the machines will
21 experience a catastrophic failure.

22 Q. In looking at your rebuttal report there, is that a true
23 and accurate copy of the report you submitted in this case?

24 A. Yes.

25 Q. Okay. I'm sorry to do this to you, but if you could

1 take a look back at Exhibit 16, which was your initial report,
2 which is in the other book -- remember?

3 A. No problem.

4 Q. -- I'll ask you the same question. Is it a true and
5 accurate copy of the first report you submitted in this case?

6 A. Yeah. I did already look at it. So, yeah, it is.

7 Q. Okay. Great!

8 And one last question, Dr. Allen. Have any of the
9 expert reports submitted by plaintiffs in this case caused you
10 to alter any of your conclusions?

11 A. No. No, they haven't.

12 MS. PIERCE: Thank you.

13 Thank you, Your Honor.

14 THE COURT: Thank you, Ms. Pierce.

15 Mr. Kaul?

16 MR. KAUL: Your Honor, just for reference, I think
17 you'd mentioned a particular time for a break before. I just
18 wanted to know when.

19 THE COURT: 2:25.

20 MR. KAUL: Thank you.

21 THE COURT: Dr. Allen, did you know Dr. Nash?

22 THE WITNESS: Dr. Nash? You mean the Princeton guy?

23 THE COURT: Yeah.

24 THE WITNESS: Yeah, I kind of did know that guy. He
25 was hanging out in the library all the time, and he had these

1 colored pens, and he would just write pages and pages of
2 equations. And I thought that he had to be pretty crazy
3 because there is just no way those equations would make sense.
4 And I never got up the courage to talk to him, even though we
5 both spent a lot of time together, because I thought he might
6 be kind of dangerous. And so I didn't know who he was. But
7 now that I've seen the movie, I wish I would have talked to
8 him.

9 THE COURT: You should have talked to him.

10 THE WITNESS: One of my regrets.

11 - - -

12 CROSS-EXAMINATION

13 BY MR. KAUL:

14 Q. All right. Dr. Allen, my name is Josh Kaul. You and I
15 met at your deposition in this case, right?

16 A. Yes.

17 Q. Let me start out by asking you a few questions about
18 your original expert report in this case. And I believe that's
19 defendants' Exhibit 16. Are you there?

20 A. Yeah.

21 Q. All right. Now, on page 5, there is a section that says
22 "Background on Waiting-Line Analysis and Elections." Do you
23 see that?

24 A. Yes.

25 Q. All right. And that section continues through page 10,

1 right, down to page 10?

2 A. Yes.

3 Q. All right. Now, Paragraphs 13, here, through 20, are
4 the same as the similar paragraphs in an expert report you
5 wrote for the North Carolina case, right?

6 A. Yes.

7 Q. All right. And you said your lawyer said that was fine;
8 is that right?

9 A. Yes. I asked the lead for the ACLU case, and he said
10 there was no problem.

11 Q. Okay. And you asked your lawyers here, too, you said,
12 right?

13 A. Yes.

14 Q. And you specifically checked on copyright, right?

15 A. Yeah. I don't think any of this is copyrighted.

16 Q. All right. Now, you wouldn't do that in an academic
17 context, right?

18 A. That's right.

19 Q. But this is a different setting; is that fair?

20 A. Yes.

21 Q. Now, beginning with Paragraph 21, the analysis here
22 diverges from the North Carolina report; is that right?

23 A. Yes.

24 Q. Let me show you a copy of that North Carolina report.
25 I'll bring it up on the screen. This is Deposition Exhibit 8.

1 MR. KAUL: May I approach, Your Honor?

2 THE COURT: You may.

3 THE WITNESS: Thank you.

4 BY MR. KAUL:

5 Q. All right. Let me direct you to Paragraph 19 of the
6 North Carolina report.

7 A. Okay.

8 Q. All right. Now, that paragraph discusses some
9 equations, right?

10 A. Yes.

11 Q. And you use a different equation here from the one that
12 was used in North Carolina; is that right?

13 A. You mean Equation 3 is not in the earlier, in that
14 report, you're saying?

15 Q. You tell me.

16 A. Yeah. I mean, I think the Equation 2 is the same as
17 Equation 2. And Equation 1 is the same. It's just I added
18 this equation.

19 Q. Okay.

20 A. But, basically, this equation is sort of a continuation
21 of the earlier equation. So it's not really different. It's
22 just added.

23 Q. Okay. And then continuing on to Paragraph 20 through
24 23 -- let's go to the next page.

25 A. Yeah.

1 Q. -- none of that was included in the report in this case;
2 is that right?

3 A. Yes.

4 Q. All right. And those paragraphs actually relate to the
5 election in Franklin County in 2004, right?

6 A. Yes.

7 Q. So you included those in your report in North Carolina,
8 but not in your report here; is that right?

9 A. Yes.

10 Q. All right. And let's turn to page 13, Exhibit B.

11 THE COURT: And, again, that is North Carolina?

12 MR. KAUL: Yes. I'm sorry. Thank you, Your Honor.

13 BY MR. KAUL:

14 Q. All right. In your North Carolina report, you included
15 an exhibit that shows --

16 MS. PIERCE: Objection, Your Honor.

17 THE COURT: Basis?

18 MS. PIERCE: Relevance.

19 THE COURT: Well, let him get the question out, at
20 least.

21 BY MR. KAUL:

22 Q. All right. In the North Carolina report, you included
23 an exhibit showing waiting times for Franklin County in 2004
24 versus your predicted wait times, right?

25 A. Yeah. Yes.

1 Q. And why didn't you include that here?

2 A. Well, so it wasn't considered necessary or important to
3 the points I was trying to make in this report.

4 Q. Okay. Your report in this case is discussing waiting
5 times in Ohio, right?

6 A. Yeah. Yes.

7 Q. But you thought that the wait times in Franklin County
8 were not relevant here?

9 MS. PIERCE: Objection, Your Honor.

10 THE WITNESS: So --

11 THE COURT: Hold on.

12 THE WITNESS: So --

13 MR. KAUL: Let the Judge rule on the election.

14 THE WITNESS: Sorry.

15 MS. PIERCE: This is -- we're talking about wait times
16 in 2004. Dr. Allen has said it's not relevant to his
17 conclusions in this case. I don't know what the relevance of
18 the North Carolina report is to this.

19 MR. KAUL: I'm impeaching him, Your Honor.

20 THE COURT: I get that.

21 Overruled.

22 Go ahead.

23 THE WITNESS: Okay. So, I mean -- so, I mean, I
24 attempted to put this in, but I didn't put it in because I
25 didn't think I needed to. I didn't think that I needed to. I

1 mean, it is on the record, as you can see. I mean, I could
2 have put it in, but I didn't.

3 BY MR. KAUL:

4 Q. Did you say that you attempted to put it in?

5 A. No. I mean, I considered putting it in, but I didn't.

6 Q. And that was because you thought it wasn't relevant?

7 A. Yeah, because, see -- yeah. Well, I mean, I could see
8 why -- I mean, it's tempting to put it in, but I didn't. I
9 mean, I could have, but -- it is part of the record because
10 it's -- just like you found it here, I mean, it's part of the
11 general record. It's not like it's a secret.

12 Q. And that's because I asked you about it in your
13 deposition, right?

14 A. Well, you could have, or -- I mean, it's just part of
15 the general record. Other people could have brought it up.

16 I mean, I could have put it in. I decided not to, but I
17 could have, I mean, partly to keep the thing shorter, too.
18 That's a benefit.

19 I mean -- the reason to put it in is if people were
20 doubting the relevance of queuing theory, and then this would
21 say, don't doubt it, there is some predictive power here.
22 That's the reason to put it in.

23 The reason to not put it in is to say, well, look, the
24 equations -- it's a pretty basic system; of course, it's
25 relevant; you don't need backup.

1 Q. And one of the debates in this case is whether queuing
2 theory should apply, right?

3 A. Well, honestly, I would use this picture to also try to
4 rationalize and support -- I mean, I have used -- I don't know
5 if this particular one -- this is from queuing theory, but I've
6 used very similar charts, that aren't really that much more
7 convincing or less convincing to rationalize the use of
8 discrete event simulation. So it's not like one is marvelously
9 more predictive than the other in this context.

10 Q. Okay. Let's switch back to your expert report in this
11 case.

12 A. Sure.

13 Q. Okay. And I'd like to look at page 11, Paragraph 23.

14 A. All right. Page 11, yes.

15 Q. All right. And you indicate there that you investigated
16 four counties; is that right?

17 A. Yes.

18 Q. All right. Now, your report in this case only discusses
19 two of those counties, right?

20 A. Yes.

21 Q. And why did you omit the other two?

22 A. Well, I mean, honestly, before I did any of the
23 analyses, I could kind of predict what was going to happen,
24 because it's something that -- I mean, as soon as I read the
25 plaintiffs' -- read your complaint, I immediately knew that

1 this would all unfold the way it would because, if you take
2 resources and divide them, it's a basic result.

3 So I didn't include two of them because I just thought
4 it would be redundant. I mean, I was tempted to put them all
5 in, but I just thought, let's keep the report simple and just
6 say it's, basically, if I consider sort of the biggest one and
7 the smallest one, implicitly, all of the other ones are
8 qualitatively similar.

9 Q. And these counties are not a representative sample,
10 right?

11 A. Not a -- no, they weren't a random sample from all of
12 Ohio. I could have done that. I could have gotten all the
13 counties and then used random number generator, but I didn't,
14 but yet I still feel like -- My intent in selecting them was to
15 be unofficially representative or, let's say, to my own
16 satisfaction, giving me the breadth of Ohio.

17 Q. Okay.

18 A. But it's not -- It's not a scientifically-collected
19 random sample, correct.

20 Q. Okay. And so what standard are you using for your own
21 representativeness?

22 A. Simply that there's only a few big counties like
23 Franklin, like Cuyahoga, Hamilton, Franklin. And then, you
24 know -- then there is a lot of small counties. And so I just
25 wanted to make sure, when I did this, that I didn't just --

1 like, for example, Dr. Muer Yang seemed to focus a lot on
2 Franklin and not really consider the others. I wanted to be a
3 little more thorough and just make sure that what I was saying
4 holds true more broadly. So I thought, let's at least get two
5 small ones and just sort of see how they work.

6 Q. Okay. And you said in your deposition that the
7 selection of these four was purely arbitrary, right?

8 A. Yeah. I mean, I just wanted -- I think "purely
9 arbitrary" may be a little under-selling it. I mean, it's two
10 big ones, two small ones. It was intended to be two DREs and
11 two non-DREs. So, I mean, I think "purely arbitrary" -- you
12 know, it was -- I guess what I meant by that was just that I
13 didn't use a random number generator and do it like I would if
14 I was conducting a scientific poll.

15 Q. Okay. And you said it was intended to be two DREs and
16 two others. What do you mean by that?

17 A. Well, when I learned more about one of the counties,
18 Adams County, it became a little -- I mean, they had -- they
19 had a mixture of e-slates. And so I became a little less -- it
20 wasn't what -- it wasn't -- it didn't conform to exactly what I
21 had thought it would be when I selected them.

22 Q. What do you mean, it didn't conform?

23 A. Well, it wasn't -- like, Franklin County, you could say,
24 is a pure DRE county. I mean, they do -- we do, here in
25 Franklin County, have optical scan machines as a backup, but

1 the primary voting method is DREs, whereas, in Adams County,
2 from studying their allocations and their work, it became less
3 clear to me that they really were a pure DRE county. Even
4 though, as I say, Franklin County, you might say, is not a pure
5 DRE county, it's definitely, primarily, a DRE county.

6 Q. Okay. And let's turn then to page 13, Exhibit B.

7 A. Uh-huh.

8 Q. All right. Now, this is the table where you predicted
9 wait times if, you said, resources were divided?

10 A. Correct.

11 Q. Let me ask you about a few different things here.

12 A. Uh-huh.

13 Q. First, you made a comment, before, about all models
14 being bad and some models being useful?

15 A. Right, or wrong. I mean, all models are wrong, but some
16 are useful. I mean, many of us say that in our courses,
17 because -- In a lot of talks at conferences, that's one of the
18 things they put up, because we all respect that.

19 Q. Okay. And so is it fair to say that you wouldn't put
20 much stock in these particular numbers?

21 A. I don't know. Depends on what you mean, I mean,
22 honestly. I'm not trying to be argumentative. I'm just saying
23 that -- what do you mean by "much stock"?

24 Q. What do you understand "much stock" to mean?

25 A. Well, I mean, it depends on what we're betting. And if

1 we were betting that the waiting times would go up a lot if we
2 divided the resources, I would put a lot of stock in that. But
3 if we're -- you know, if we're saying, is it going to be 83
4 minutes when we actually do it, you know, you showed, from this
5 report, kind of -- you see, because the other thing is, real
6 elections aren't averages.

7 Q. Which report is that? Sorry.

8 A. The North Carolina report, that validation. I mean, I
9 could have put it in. I was tempted to put it in, but I
10 didn't.

11 You know, this is a prediction for the average waiting
12 times. So, if you ran a thousand elections, this would be your
13 average of the waiting times if the model was perfect, whereas,
14 one election, you don't get the average; you get some
15 randomness around the average, or related to the average.

16 And so -- and so, you know -- do you see what I'm
17 saying?

18 So, even if this was a perfect model, even if I gathered
19 tons of data and I used an agent-based model, which could take
20 into account learning behavior of the voters, and did the best
21 I could, you know, spent a long time making them out, I still
22 wouldn't say that the actual election would be like the average
23 performance, because -- you see what I'm saying?

24 Q. So let me ask you about arrival rate.

25 Arrival rate is one of the major factors that

1 contributes to lines, right?

2 A. Yes.

3 Q. All right. And that's how often people -- how many
4 people show up in a given time window, right?

5 A. Well, the average arrival rate is not the actual number
6 of people who show up that time period. So the idea is that
7 the average arrival rate is what you would experience if you
8 ran a thousand or an even larger number of elections and then
9 you timed, or you counted, the number of people who arrived,
10 divided by the time, and that would be the average.

11 Q. Okay. And, in your deposition, you and I did some math
12 with these arrival rates, right?

13 A. Correct.

14 Q. So let's look at the top left figure, 793.

15 A. Yes.

16 Q. All right. Now, if you multiply that -- this is for
17 Franklin County in 2012, right?

18 A. Yes.

19 Q. And if you multiply that arrival rate you've listed
20 there by the number of early in-person voting hours in 2012,
21 you'd get something like 195,000 early in-person voters, right?

22 A. That sounds right.

23 Q. Okay. And the actual number was about 70,000; is that
24 right?

25 A. Right.

1 Q. So this is almost three times higher than the actual
2 average arrival rate?

3 A. Yeah, but -- you want me to explain why?

4 Q. Sure.

5 A. Okay. So I arrived at this by working backwards from
6 the waiting time, but I felt I confirmed this by going and
7 voting in Franklin County and talking to the director. And
8 from my own personal experience and also talking to the
9 director, many of the hours during the early voting period are
10 essentially -- it's a little exaggerated to say dead times,
11 but, as a sort of simple approximation, they're kind of times
12 in which no one comes and no one votes. For example, the time
13 when I had went, I was the only one of two voters that was
14 there that I saw when I voted.

15 So there are these dead periods, and then there are
16 these huge rush periods. And the director took me there, and
17 he showed me that they break down the wall, and they put out a
18 huge number of machines. And even with all the machines -- and
19 I tried to tell them to, you know -- he already knew this idea,
20 but really to try and give people in line the ballots so that
21 they would know what they were going to vote by the time they
22 get to the area. We talked about how to speed that thing up.

23 He said, Right at the end of the period, at the end of
24 the period, we're going to have a huge rush. We know it. It's
25 going to happen. You can set your -- you know, you can predict

1 it very well. And so -- so, in other words, there's dead
2 periods, and there is rush periods.

3 So, this model, this simple model, is essentially
4 modeling the large amount of dead time as if it was dead time,
5 and then the other time as if it was the rush period.

6 Q. Okay. I'm going to come back to that topic in a minute.
7 Before I do, let me just run through the math using the actual
8 average arrival rate. Okay?

9 A. Sure.

10 Q. So, if you were to use the correct arrival rate, it
11 would be about a third of what this says, right?

12 A. Okay. So what -- I wouldn't -- I honestly don't mean to
13 be argumentative, but I'm just telling you "correct" is the
14 wrong word here, because the thing is that this is a model of
15 constant arrivals. So we have a period -- we have a situation
16 where there is pretty much no arrivals, and then there's a ton
17 of arrivals. And, so, if you want to model as a constant
18 period of arrivals, you want to do sort of the dead periods as
19 one period and model them with the low arrival rate, and then
20 the live periods is another period with a high arrival rate.
21 And then you could -- honestly, that is, roughly speaking, what
22 simulation models also do, is they model chunks of time as
23 being homogeneous.

24 Q. And I promise I'll come back to that issue in a minute.

25 A. Okay.

1 Q. But, before I do, I just want to go through what the
2 numbers look like using the arrival rate on an average over the
3 course of the early voting period.

4 A. Sure.

5 Q. If you were to reduce that to about a third of what it
6 is, the expected wait would go to zero minutes, right?

7 A. Yeah. Well, near zero.

8 Q. That would be true for all of these allocations, right?

9 A. I don't know. That's an interesting question. I didn't
10 do it. I don't know if it would go to zero for all of them. I
11 mean, the last one might still be appreciable.

12 Q. Okay. Any difference between the expected waits would
13 be nominal, right?

14 A. Well, you see, the thing is, if I did that, then I
15 wouldn't be able to meet the 7.7 from Dr. Stewart's report. So
16 I was trying to calibrate to that.

17 Q. I'll come back to that in a moment, but let's just take
18 a look, quickly, at Exhibit C --

19 A. Okay.

20 Q. -- which is just below this.

21 All right. And this is Williams County, right?

22 A. Yes.

23 Q. Now, why did you use Williams County as one of the two
24 that you analyzed?

25 A. I talked about it with the counsel. And they said that

1 those people get back to you pretty quickly and that they would
2 be pretty easy.

3 Q. Okay. And, again, if you -- if you do the math, this
4 would indicate -- this arrival rate, times the number of early
5 voting hours, gets you about 10,000 people, right?

6 A. Right. It's the same situation.

7 Q. And, in fact, it's only about a fifth of that in
8 Williams County, right?

9 A. Right.

10 Q. And, again, the expected waits would be about the same
11 if you divided resources at zero, right?

12 A. Okay. Well -- so -- okay. So you're saying, if we
13 modeled the whole period as a constant arrival period, then the
14 queuing model would not validate to Dr. Stewart's method, and
15 then it would predict very low waiting times, is your point.

16 Q. I'm asking you. Is that right?

17 A. Yes, I agree.

18 Q. Okay. So let's go back, then, to this point you're
19 discussing. Are you aware of anybody using a queuing model the
20 way that you've used it here?

21 A. Well, I'm aware that a lot of -- I have talked to
22 several instructors around the country, and a lot of people
23 have started using this. Certainly, people who use my textbook
24 use this to illustrate the principles of waiting-line analysis
25 to lots of students. So, I mean, am I aware of election

1 officials using it?

2 Q. No. I'm sorry. I'm wondering if you are aware of
3 people using it where they alter the arrival rate to reflect a
4 rush period like you have.

5 A. Are you talking about people who are trying to model
6 early voting using the queuing theory?

7 Q. The way that you've done it with Exhibit B and C.

8 A. Honestly, I'm not aware of anybody else besides me who's
9 been asked to do this. So, I mean, honestly, I don't know
10 anyone else who has been asked to do this. I met some people
11 who worked for the Obama campaign, and they were using analysis
12 soluble software on Dr. Stewart's cite, and they used different
13 methods.

14 Q. Nothing published in a peer-reviewed journal?

15 A. Well, you know, in our paper, we said that queuing
16 theory is -- effectively said it's a valid method and the
17 discrete event simulation is a more valid method. That's the
18 terminology we used.

19 Q. I'm asking specifically about this method where you
20 discount what you're calling a dead period during early voting.

21 A. Oh, okay. I see what you're saying now.

22 So you're wondering, like, where is some context for
23 doing things like that. So, you know, I mean, yes, I mean --
24 we do a lot of student projects in my classes, you know,
25 particularly the simulation class. A lot of times we model

1 coffee shops. It turns out that, coffee shops, a lot of them
2 just have rush periods, and then they have lots of dead
3 periods. And so most people experience lines, like, around
4 lunchtime, for example, at least in the ones we studied.

5 And so, yeah, I'm totally -- I mean, I would totally
6 encourage people to model rush period separate from the rest.
7 And so I've done that many times. A lot of students have done
8 that, and it's a reasonable, appropriate thing to do.

9 Same thing for parking lots, too. Like, last semester,
10 we did a project with Campus Park. And, you know, there is a
11 lot of waiting during certain periods of time, and then a lot
12 of others --

13 THE COURT: You'll admit to that?

14 THE WITNESS: Yeah. Everybody hates Campus Park, but
15 I -- and I, also, didn't have the best experience with them.
16 But they -- but they were nice to me, too. And I'm grateful to
17 them.

18 So, yes. But you're right. Campus Park is a little
19 infamous. But, yeah -- no, it's true. And, in fact, the
20 students use, essentially, this model to try and help recommend
21 prices to the Campus Park people. And so they -- and they
22 modeled the period where there is a rush period separate from
23 the other period.

24 BY MR. KAUL:

25 Q. And did you say anywhere in your report that you weren't

1 accounting for this dead time in doing this model?

2 A. No. I didn't mention that.

3 Q. Okay. The first time it came up is when you and I did
4 this math at your deposition, right?

5 A. Yeah. But, I mean, you know, I had to do it because I
6 had to agree with the 7.7. And, I mean, I thought it was a
7 reasonable thing to agree with, 7.7. So I adjusted this to
8 here. And I did think about what you said when I was doing it,
9 but -- and I -- I -- I wish I had, honestly. I wish I'd put
10 this description into the report itself.

11 If Muer had pointed it out, I would have put it in my
12 rebuttal report, but he didn't point it out, I don't think.

13 THE COURT: Hold that thought. I gotta go.

14 (A recess was taken from 2:25 p.m. until 2:45 p.m.)

15 THE COURT: Press on.

16 BY MR. KAUL:

17 Q. Dr. Allen, we were talking about the arrival-time
18 pattern during early voting before. Have you reviewed any data
19 on arrival patterns during early voting for Ohio?

20 A. I'm sorry. I have to think about that question.

21 I mean, during my work, when I was working, they did
22 have early voting, and so I might have reviewed some then. And
23 then, in preparation for this case, I did this Freedom of
24 Information request from the different four counties. And they
25 gave me information, but not quantitative data.

1 Q. Okay. And so your statements about what the arrival
2 patterns look like are primarily based on the conversations you
3 were describing before?

4 A. Yes, and my own direct experiences.

5 Q. Having shown up to vote?

6 A. Having shown up to vote and having worked, in 2008, with
7 the election officials in Franklin County. I mean, worked for
8 them.

9 Q. All right. So, in Exhibit B, we discussed, before, that
10 the arrival rate you used is about three times larger than the
11 actual, or than -- I'm not trying to value judge this. It's
12 about three times higher than what the rate would have been, in
13 fact?

14 A. Right.

15 Q. And so that would mean, for this to accurately map peak
16 times, the peak time arrival rate would need to be about three
17 times higher than the average, right?

18 A. Right.

19 Q. So, if early voting is approximately five weeks long, a
20 week is about 20 percent, on average?

21 A. Yeah. So -- okay. So you're saying, if it's five weeks
22 long, one week is one-fifth of five weeks. Got it. Okay.

23 Q. So, for this to be accurate, the week you're modeling
24 would need to be about 60 percent of the early voting turnout,
25 right?

1 A. Okay. So, I mean -- I mean, I'm not sure exactly what
2 you're saying; but the idea of this model is that there is --
3 so about two-thirds of the period is sort of dead period. And
4 then one third of the period is this. And so -- does that
5 answer your question?

6 Q. It does, but I want to talk about it in raw numbers, or
7 in percentages, at least, what that means.

8 A. Okay.

9 Q. So, if you're using arrival rate about three times
10 higher than the average, you'd need to have turnout, during the
11 week you're modeling, about three times higher than the
12 average, right?

13 A. Okay. Let me just think.

14 Okay. So this is your arrival rate. So it's the number
15 divided by the period length.

16 Q. Yes.

17 A. And, so, if the period -- If the number stays the same
18 and the period rank goes to one third of the length, so if the
19 number that -- then the arrival rate would go up by a factor of
20 three.

21 Is that your question?

22 Q. No. I'm trying to figure out how much of the arrival is
23 happening in this limited period you're describing for this to
24 be representative.

25 A. I was thinking that it was kind of the whole -- I mean

1 approximately -- This is a very rough model, trying to give me
2 an approximation of this more complicated system, obviously,
3 much more complicated system. And, so, when I was doing this,
4 I considered what you said, and I was thinking about it,
5 actually. I wish I had written what I'm talking about now, but
6 I didn't, but I should have maybe. I wish I had.

7 I was thinking that, on this sort of first
8 approximation, there's two-thirds of the period that's unused,
9 and then one third that's this.

10 Q. Okay. And, with Williams County, since it was about
11 five times higher than the overall average arrival --

12 A. Right.

13 Q. -- the peak period would need to be close to a hundred
14 percent of the early voting turnout for Williams County to be
15 representative, right?

16 A. Well, that was my whole point. I said that the high --
17 you're calling it the peak period. I'm okay with that.

18 My idea was that, all the voters come during this
19 intense period, pretty much, and the other ones can be kind of
20 approximately neglected, for the sake of simplicity. And so
21 you're saying that the peak period, which we're calling it now,
22 would be one-fifth of the total period in Williams and
23 one-third in Franklin County. And, so, yeah, that's basically
24 what this model is approximately doing.

25 Q. Okay. Take a look at defendants' Exhibit 15 at page 11.

1 That's Dr. Hood's expert report. Visit page 10 of the report.
2 And let's zoom in on Figure 2.

3 All right. I can represent to you that this is a figure
4 from Dr. Hood's report that shows week-by-week turnout in
5 Ohio's three largest counties for early voting in 2012.

6 A. Cool. So you're saying it's -- what exhibit is it,
7 again? What report is it?

8 Q. Dr. Hood's?

9 A. Which is 11, you said?

10 Q. Yes, DX11, or look on your screen if that's easier.

11 A. Okay. Yeah. So that's -- Thank you. That's great.

12 Q. All right. So -- I'm sorry. It's DX15. Sorry. Page
13 11 is what I meant.

14 A. So it's the 15th thing, page 11. But I have it here, so
15 I'll look here.

16 Q. All right. So, in Cuyahoga, Franklin, and Hamilton in
17 the fifth week, turnouts in none of those counties is even
18 twice that 20 percent we were talking about, right?

19 A. So -- all right. What you're saying is that, this model
20 that I've used to approximate -- you know, it's basically
21 unable to do something like this. I mean, I could do them
22 separate periods doing this and then summit, but then it would
23 be harder to calibrate to the 7.7. But no matter what I did,
24 even if I put the exact real data in and used discrete event
25 simulation, this qualitative picture really wouldn't change, I

1 mean. Are you disputing -- I mean --

2 Q. But the quantitative -- you're talking about the
3 qualitative picture, but the quantitative part of it, the
4 numbers you're providing for --

5 A. You mean would it be 83, or would it be 78, or --

6 Q. Those would be significantly overstated, right?

7 A. Could be. I mean, honestly, just between you and me, I
8 don't know whether they'd be over- or under-stated, I mean
9 honestly.

10 Q. It won't just be between you and me.

11 A. I mean, I'm just saying -- you're right. But, I mean,
12 just to be honest, if I were to do a much more careful
13 analysis, using this data, which I didn't have when I did this,
14 I don't know whether it would be higher or lower because you
15 still -- you know. I'd also time the voters a little bit
16 and -- I mean, time the ballots to get that eight -- I used
17 eight in my thing, in my report. That could be right. I
18 think, honestly, it's probably more like 8.5, maybe 9, per
19 hour. So that's probably a little bit off.

20 And then so -- so, yeah. I mean, but, basically,
21 whether I use this -- first of all, the queuing theory -- there
22 is no simple model that could do this curve in Figure 2. You
23 know. You'd have to break it into separate periods and use the
24 model in separate periods, and then you'd have to -- you'd have
25 to sum the results. So it would be a lot -- it would

1 considerably more complicated.

2 Q. But your model doesn't represent this. Is that fair?

3 A. Well, it kind of does. I mean, to me, when I look at
4 this, I feel good. To me, this is -- I mean, you know. It
5 depends on what you're expecting. I mean, you know, it depends
6 on what I was doing.

7 If I was working for Honda, where they take three months
8 to make one model and they do tons of validation, you know, and
9 I actually -- and that's one of the things I'm about to start
10 working with them on, is trying to not do that. I think they
11 overdo the validation and overestimate -- over -- they put too
12 much resources in being accurate, essentially. I'm trying to
13 help them dial that back. That's actually what my proposal for
14 next year is going to be with them. Hopefully, they'll accept
15 it.

16 But my point to you is that, I look at this and say,
17 yeah, this makes me feel good about what I did, because it's
18 like one period is the rush period, the other periods are kind
19 of small, and -- you know. I mean -- yeah. You're saying --
20 I'd feel even better if that rush period was, you know,
21 four -- I mean, right now, the rush period is three times as
22 big as some of the -- most of the other periods.

23 I mean, yeah, it'd be better if the rush period was --
24 do you see what I'm saying? Actually, I mean, to me, I feel
25 like this makes me feel good about what I did.

1 Q. It's certainly not three times the average, right?

2 A. Oh, I see. Yeah. I mean, but the whole idea was to get
3 a rough picture of the thing by assuming that there's this dead
4 periods and then there's these active periods. And, to me,
5 that's when I look at this data and say, yeah, approximately
6 what's that I'm seeing.

7 Q. Okay. Let's go back to that exhibit we were on
8 previously.

9 The explanation you're providing here, you're also
10 assuming that adding early voting locations would not result in
11 more voters turning out earlier in the early voting window,
12 right?

13 A. Well, I mean, yeah. Right. I mean, that would just
14 make the waiting-line picture worse if more showed up, right?
15 I mean, so it's a conservative thing to do. But, yeah, there
16 is no assumption of earlier -- of more people coming.

17 Q. More locations could result in a more even distribution,
18 right?

19 A. Well, I mean, more locations, I think, could result in
20 more people coming, like you're saying, which would make the
21 waiting lines longer. I don't know whether they would be more
22 equal. It's an interesting question.

23 Q. Let me ask you about an example. You studied North
24 Carolina, right?

25 A. Yeah.

1 Q. And some counties in North Carolina have as many as 20
2 early voting locations, right?

3 A. Correct.

4 Q. And does North Carolina have this sort of peak pattern?

5 A. You know, they don't, actually. They don't have the
6 same kind of thing that we have here that -- they have -- they
7 have -- it's not as much as you showed me in that. It's
8 nowhere near like what you showed me there. It's considerably
9 more flattened over the early voting period.

10 Q. And North Carolina doesn't have six-hour wait times at
11 the end of early voting, does it?

12 A. No, but do you want me to comment on why that is?

13 Q. Sure.

14 A. Okay. The reason -- North Carolina has very short
15 ballots, compared to Ohio. And so it just makes election
16 administration so much easier.

17 In Ohio, we've really put ourselves in a corner by
18 having these really long ballots and slow machines, compared to
19 other places.

20 Q. They also have more even distribution of turning out for
21 early voting, right?

22 A. Yes. That also helps.

23 Q. And that's also true in New Mexico, which you've also
24 studied, right?

25 A. In New Mexico, I honestly didn't study the early voting

1 period. I studied election day. So I'm not that knowledgeable
2 about the early voting period.

3 Q. New Mexico does have multiple early voting locations per
4 county, also, right?

5 A. I think so, yes.

6 Q. All right. Now, one of your assumptions -- another
7 assumption is that voting machines are a fixed resource, right?

8 A. Right.

9 Q. And is it fair to say that you believe that's a sound
10 assumption for DRE counties, but that it doesn't necessarily
11 apply to other counties?

12 A. Yeah. I don't know. I mean, that's -- you're sort of
13 turning it into a yes/no question, where there's honestly a
14 kind of gradation.

15 Is it a lot easier to recommission and refurbish and
16 move around or potentially add booths than it is to add DRE
17 machines? I would say, yeah, it is easier.

18 Q. All right. And, again, other states do that, right?

19 A. You're saying other states -- what did you say?

20 Q. Use voting machines from early voting on election day.

21 A. So other -- so we're not talking about booths anymore?

22 So, definitely, booths get reused from -- some booths
23 are reused from early voting to election day. So that's what I
24 thought you were asking. But now you're saying, for DRE
25 machines, are they reused?

1 Q. No. I was asking about voting technologies in general.

2 A. So I only have -- I mean, this is a somewhat obscure
3 point, do they reuse them. And I only have direct knowledge of
4 that in North Carolina. And they -- I'm pretty sure they have
5 a period in between the end of -- they have a period -- When I
6 used to work here in Franklin County for project -- I did a
7 little project -- I made that project in 2008 and 2006 -- there
8 was a period in between -- I think there was a period in
9 between, so that there was a potential to reuse resources, but
10 now there is not -- there is no periods. It's voting, right
11 before, in person and voting on election day. I don't think
12 they have that in North Carolina, right?

13 Q. Let me go back a step. You said it's an obscure point,
14 why their voting technologies can be reused from early voting
15 to election day; is that right?

16 A. Right, because it relates to some -- whether the state
17 allows early in-person voting the day before the election day.

18 Q. Well, if technology can be reused, then the resource
19 constraints, essentially, don't apply, right, because then you
20 have at your full disposal all of the election day technology
21 for early voting?

22 A. Yeah. So part of the issue relates to the certification
23 process for the machine, and part of it relates to the ease of
24 reconfiguring the machine. So, like in New Mexico, they had
25 these voting convenience centers where they're expecting people

1 from all sorts of places to be able to come and vote. So that
2 means the machine is pretty easy to reconfigure, whereas, here,
3 you know, they've already turned over the equipment. So I'm
4 not that familiar with Franklin County equipment right now.
5 But my impression is that the equipment is less reconfigurable.

6 Q. You're talking about DREs, right?

7 A. Yeah.

8 Q. All right. What about optical scans?

9 A. Optical scans, I think -- I mean, there is no big issue.
10 I mean, you have to print the ballots. And so you can have --
11 I mean, I don't think there is a big issue with reconfiguring
12 optical scanners.

13 Q. So an optical scan county wouldn't have this resource
14 constraint, then, right?

15 A. Or they still may have -- you know, they still have a
16 limited number of booths, and they may have a limited number
17 of -- and of space. So they have space constraints,
18 potentially; and they also have booth constraints, potentially,
19 but I agree that, comparatively, it's easier for them.

20 Q. Okay. So, with Williams County, for instance, they
21 wouldn't be limited, in resources, to what they use for early
22 voting, right?

23 A. I don't know. Honestly, I honestly don't know that
24 question. I did ask them some questions in my e-mail, but I
25 don't remember them answering that particular question.

1 Q. Franklin County also has increased its stock of DREs for
2 early voting, right?

3 A. You mean in planning for the next 2016 election, or you
4 mean --

5 Q. Yes.

6 A. They've increased their overall amount of DRE machines
7 considerably. How much they're going to use on early voting
8 versus how much they use on election day, I honestly don't
9 know.

10 Q. You said Franklin County has backup optical scan
11 machines?

12 A. I think so, yeah.

13 Q. And those could be used for early voting, also, right?

14 A. I mean, they are used in overflow situations, but -- so
15 I think they're used already.

16 Q. So it's fair to say that the resource constraint
17 assumption is not necessarily accurate; is that right?

18 A. I -- you know, I -- is it -- I don't know what you mean
19 by is the assumption accurate because, the thing is, it's -- it
20 appears that a lot of people around here feel it's very
21 important to vote on a DRE machine. And if you use a paper
22 ballot, sometimes you feel people are feeling, or perceiving --
23 and it may be true -- that their ballot is provisional.

24 So, I mean, DREs are the primary method for voting in
25 Franklin County. And there are a finite number of them, for

1 real. And it is a real challenge for them -- basically
2 impossible for them to reconfigure them, turn it around in a
3 day. I believe that. So I don't know.

4 You know, I see your point, but -- I'm not trying to be
5 argumentative, but there is a spectrum of how hard it is. And
6 it's pretty far on the hard end of that spectrum.

7 Q. You're talking about Franklin County again?

8 A. Yeah.

9 Q. Cuyahoga doesn't use DREs, right?

10 A. Right.

11 Q. But they're limited to one early voting location, right?

12 A. Yes.

13 Q. Now, in your analysis here, you do not account for
14 commuting time to the polling location, right?

15 A. Correct.

16 Q. And you agree that that's a factor that would be ideal
17 to consider?

18 A. I mean, it's a factor that I consider. I mean, I think
19 it's something to consider, sure.

20 Q. It's not considered in your analysis here, though,
21 right?

22 A. Right.

23 Q. So, if going from one location to two locations would
24 result in an expected increase in wait time of a little over
25 eight minutes, that means that a reduction of just five minutes

1 in commute time, each way, would result in a shorter overall
2 voting experience, right?

3 A. Well, you just slightly misspoke -- right? -- because
4 you reversed the numbers.

5 Q. Okay. Correct me.

6 A. Yeah. So the prediction is that it would go up by eight
7 minutes. Right? And if we cut the commute by more than eight
8 minutes, then the total time would be reduced.

9 Q. Okay. The total commute, right?

10 A. Yeah, if we reduced that by more than eight minutes.

11 Q. All right. And, now, your predictions for Exhibits B
12 and C are based on what's known, as you said, as the M/M/c
13 queue formula; is that right?

14 A. Correct.

15 Q. All right. And that's based on queuing theory, right?

16 A. Yes.

17 Q. And you've reviewed Dr. Yang's report; is that right?

18 A. Yes.

19 Q. All right. And, for his simulation, or for his
20 modeling, he used a simulation, right?

21 A. Correct, discrete event simulation.

22 Q. And if I call it "simulation," is that easy enough to
23 understand?

24 I'll call it "discrete event simulation."

25 A. I mean, I'm not trying to be argumentative; but, FYI,

1 there is many kinds of simulation. And the simulation center
2 at Ohio State would not give me any grants, because they don't
3 think discrete event simulation is that important to them at
4 the time.

5 Just letting you know, "discrete event simulation" is
6 not -- you know, if you use the word "simulation," nine in ten
7 think it's something else.

8 Q. Okay. Fair enough.

9 A. I wish that weren't true.

10 Q. I understand that you've said you disagree with some of
11 the assumptions in his analysis; but, given those assumptions,
12 you believe that he competently implemented the simulations he
13 did, right?

14 A. Yes.

15 Q. And in the context of election queues, simulation, if
16 it's done properly, provides more accurate results than using a
17 queuing formula, right?

18 A. Well, I mean, that's a catch-all. Honestly, that is a
19 catch-all way of talking, because, you know, the "properly"
20 is -- you know, it really is an art to make a simulation model.

21 When you make them and you really apply them to a real
22 system even as simple as voting systems, which are
23 comparatively simple, you realize there's a lot of assumptions
24 there. And so when you do it, I don't -- when you do these
25 activities and are trying to help people with these models and

1 you're really one of the few people who understands it and
2 you're trying to advise a client, I oftentimes feel it's better
3 with the queuing, because I see what it's doing better, and,
4 whereas, when you do discrete event simulation, there are just
5 all these parameters, and you feel like you have to make a lot
6 of stuff up. And so -- I mean, just as a perceptual thing, as
7 someone who does this quite a lot, and I think Muer might agree
8 with this from his personal experience, as well, that it's
9 not -- it's not like you perceive one to be more trustworthy
10 than the other.

11 And part of the reason why I used discrete event
12 simulation the second time when I gave allocations was because
13 I wanted to be transparent and help bring people in and make
14 sure we didn't make mistakes.

15 See what I'm saying?

16 Q. If Dr. Ted Allen is trying to get the most accurate
17 result possible for Exhibits B and C, he's better off using
18 simulation, than queuing formula, right?

19 A. So, if I had full access to the County and I was working
20 with them and I had a lot of time, yeah, probably, and also I
21 had somebody check me, too. I mean, I'm there to check Muer on
22 some of the work he does, and he's there to check me when I'm
23 doing work with him.

24 Q. Okay. And queuing also just provides average wait
25 times, right?

1 A. Well, the primary results of steady state queuing theory
2 inure to average waiting times, but there are other kinds of
3 results that can be accessed from steady state queuing theory.

4 Q. And, here, you're reporting average results, right?

5 A. Yeah, which is the one that most people use.

6 Q. All right. And you're doing that even though you're
7 talking about peak arrival time, right?

8 A. Yeah. In this sort of approximate and simple model,
9 I'm -- well, the model is -- there is one-third of the time, or
10 one-fifth of the time, that's active. The rest is inactive.
11 And so all of the people are coming during that time. And then
12 this is the average time of them.

13 Q. All right. And one of the problems with using average
14 wait times is that most polling locations won't be at the
15 average; they'll have a different wait time, right?

16 A. So, when you predict the average, yeah, any specific
17 instance is not likely to be the exact average, for sure.

18 Q. All right. And simulation can accommodate a much
19 broader set of assumptions than the queuing model that you
20 used, right?

21 A. Yes.

22 Q. And one of the assumptions that you use is that voter
23 arrivals are stationary; is that right?

24 A. So -- you're using a technical term. What I -- the
25 correct way -- I mean, a more -- I hate to use the word

1 "correct," but the way that I would use it is saying that the
2 arrival process is stationary. That's not the same thing as
3 saying the actual arrivals are stationary. I mean, the arrival
4 process is stationary, meaning that the process could generate
5 really big arrivals and really small arrivals and really big
6 arrivals and fluctuate quite a lot. It's a very random
7 process. You wouldn't use this in manufacturing, because it's
8 so random. And so it's a very random process, but yet the mean
9 is stationary.

10 Q. And what it cannot do is account for a change in
11 expected arrivals from hour to hour, right?

12 A. Right, unless you were to do a model for this hour, then
13 a model for the next hour, and a model for the next hour and
14 piece them together.

15 Q. And that's why you used this --

16 A. I wanted to keep it kind of simple and short and help
17 clarify. But, yeah, I think it would have been more -- I don't
18 know -- more accurate if I'd had that data from that figure
19 from the other expert. I could have had a more long -- a
20 longer way to basically give the same qualitative picture.

21 Q. Okay. And another problem with the queuing formula that
22 you use is that it doesn't account -- is that it assumes a
23 steady state, right?

24 A. Yes.

25 Q. So it can't account, for example, for the possibility

1 that there might be a line when the polling location opens?

2 A. Because there is no opening or closed -- ending in
3 steady state.

4 Q. But, in reality, at an election queue, there is an
5 opening, right?

6 A. Yes.

7 Q. And another difficulty with the queuing model you use is
8 that it assumes that service times are exponentially
9 distributed, right?

10 A. Right. Yes.

11 Q. And so the mean, or the mode number, rather, would be
12 zero, that more people spend zero minutes voting than anything
13 else?

14 A. Well, I mean, that's not how I would interpret it. I
15 would say that -- nobody spends zero minutes from an
16 exponential. The mean is considerably higher than that.

17 Q. The mode. I'm sorry.

18 A. So, I mean, nobody is actually spending zero.

19 Q. But the model treats it as though people are, right?

20 A. Nobody is spending any instantaneous number anyway, but
21 there is a lot of probability mass down near zero. That's what
22 I would say.

23 Q. Okay. So, for all those reasons, though, the model --
24 I'm sorry.

25 A. Go ahead. Sorry.

1 Q. This model that you're using doesn't reflect the reality
2 of election queues, right?

3 A. Yeah. So, in the sense that the voting times are
4 probably better approximated by a different distribution -- for
5 example, we sometimes use this lognormal -- and we're using the
6 exponential.

7 And the exponential is sort of more random, has a higher
8 coefficient of variation. So, in a way, it's kind of
9 overestimating, slightly, the lines. But, you know, I mean, I
10 could have done it both ways, and I don't think it
11 would -- okay. Go ahead.

12 Q. No. I was going to --

13 A. -- get a much different result.

14 Q. You've written, before, that simulation is necessary,
15 right?

16 A. In a magazine article I coauthored where we, I think,
17 were uncareful in how we talked about the need to use
18 simulation, I think we oversold that in that argument. Then,
19 in our journal article, we said, This one is valid; that one is
20 more valid. I'm more comfortable with that language.

21 Q. Okay. And in the journal article, you're saying that
22 simulation is more valid, right?

23 A. Right.

24 Q. And in the magazine article you're talking about, you
25 cited as the reasons that simulation was necessary all the

1 points we were just discussing, right?

2 A. Yes, I did.

3 Q. And, in your report, you use an average voting time of
4 seven-and-a-half minutes; is that right?

5 A. Yes, about, and eight minutes per service. So eight
6 goes into 60 about seven and a half, eight times that. So,
7 yeah. Yeah, about that.

8 Q. Okay. You assumed that there were eight users of a DRE
9 in an hour; is that right?

10 A. On average, yeah.

11 Q. Okay. And what's that based on?

12 A. So, I've been voting, myself. I timed myself in the
13 most recent election. I time myself in all elections. I've
14 timed other voters. I've done mock elections. And that's
15 about what we get, around seven minutes. Then, if there are
16 extra issues, it's about half a minute for each issue.

17 Q. Somewhere in the neighborhood of seven minutes is a fair
18 approximation of the average voting time in Ohio?

19 A. Yes, whereas -- yes, which is much longer than North
20 Carolina.

21 Q. Now, we were talking about some of the differences
22 between steady state -- I'm sorry -- between queuing formula
23 and simulation. And one of the issues with using queuing
24 formula is that it overstates the pooling effects in large
25 precincts, right?

1 A. Queuing formula overstates the pooling effect in large
2 precincts?

3 So that was one of the -- okay. Does it always do that?
4 I don't know if it always does that. I think that, in our
5 analysis based on one case study, we concluded that that's what
6 happened.

7 Q. Okay. So, in your published work, you've found that
8 queuing models overestimate the pooling effects but ignore the
9 impact of nonstationary arrivals and non-steady state queues,
10 right?

11 A. Yes.

12 Q. All right. In the Franklin County example you're using,
13 Exhibit B, those are, like, a few extremely large precincts,
14 right?

15 A. You mean -- yeah, the -- you're -- okay. Well, you're
16 speaking a little imprecisely. What you mean, I think, is that
17 Franklin County is a large county and that's the one location
18 for that county.

19 Q. So it would act like a very large precinct, in practice,
20 right?

21 A. Yes.

22 Q. And so your research indicates that this model you're
23 using overstates the pooling effects here, right?

24 A. I'm just trying to think whether that research applies
25 to this or not. See -- the research that you're talking about

1 in that paper was about election day, and election day is a
2 quite different situation.

3 See, here, this is -- these are queues with -- this is
4 one giant queue, versus -- with not that many resources, where,
5 on election day, you have a lot of smaller queues with more
6 resources. The utilizations are a lot higher.

7 So my point is that I'm pretty sure that the results
8 that you're citing in our paper are about election day. And,
9 honestly, it's quite a different situation than this in the
10 sense that this -- the queue -- the queuing models give a
11 qualitatively different picture for election day because
12 they're in a sort of different part of the parameter space than
13 this.

14 Q. The pooling effect of resources is not an election
15 specific concept, right?

16 A. No, it isn't.

17 Q. So it should apply to both early voting and election-day
18 voting, right?

19 A. Yeah. I see what you're saying, but the point is that I
20 was -- when I did this, I was surprised at how pronounced these
21 effects were because of my experience in modeling election
22 days. And that's when I learned that this is quite a different
23 part of this parameter space than what we had done previously.

24 Q. Okay. And if the pooling effects here are overstated,
25 what that means is that the differences in expected wait times

1 would be less than what this chart represents, right?

2 A. Yes. But, again, I honestly think that the intuition we
3 learned from the earlier report about the magnitude of this
4 pooling effect is, you know -- I don't know -- I don't think
5 it's that helpful. And, honestly, I wish I had -- I mean, I
6 wish now -- if I had time, maybe I'll go back and I'll do this
7 with simulation, because it's not that hard, and see if you're
8 right that it's a big difference or not.

9 Q. And, again, you're talking about -- you're talking about
10 averages here, right?

11 A. Yeah.

12 Q. All right. And one of the problems with averages is
13 that they don't account for variation from precinct to
14 precinct, and you can't measure the longest wait time, right?

15 A. I mean, the average is the average. And the longest
16 wait time is a different statistic. Well, I think what you're
17 saying is that it's hard to access information about the
18 longest wait time with queuing theory.

19 Q. Is that right?

20 A. It's harder. I mean, there are -- there are results
21 from queuing theory about quantities other than the average. I
22 didn't do it in this report, but --

23 Q. And when you have very large precincts, the longest wait
24 time can see a lot more variability than in smaller precincts,
25 right?

1 A. Let me think about that.

2 I mean, theoretically, yes, there could be more, because
3 there is more people to have a really long line, but there is
4 also the effect of pooling, which, when you have a large
5 precinct, you get a lot of large numbers that sort of pulls you
6 back. So there is sort of two effects that I see here. You
7 know. Which one is dominating, I don't know. But the thing is
8 that, definitely, when you have a large precinct, you have more
9 to lose. And that's an important effect.

10 Q. Right. And so another effect of that, for this chart,
11 is, if you're including longest wait time, again, these may be
12 closer than they are here?

13 A. Okay. Could you repeat your question? Sorry.

14 Q. Yeah. Another effect of what we were just discussing is
15 that, if you were looking at longest wait time, these numbers
16 may be closer than they are here; is that right?

17 A. So, you're saying, if the last column had been the
18 wait -- the waiting time of the person who waits the longest,
19 instead of the waiting time of the person who waits on average,
20 then you're saying that the effects would be smaller, or
21 larger? Is that what you're asking me? Is that what you're
22 asking?

23 Q. Yeah. They may be smaller, right?

24 A. The effects on the one who waits the largest --
25 honestly, I think they would be larger. I mean, I would think

1 that -- Oh, I see what you're saying, because you're saying
2 that, because when you divide it down to a small place --

3 Honestly, I have to think about that. I mean, it's not
4 obvious to me that you're right or wrong.

5 Q. Just a couple more questions on this, and I'll move to a
6 different topic. You've helped plan four elections, right?

7 A. Yes.

8 Q. And you, yourself, used simulation in three of those,
9 right?

10 A. Yes.

11 Q. You never used queuing theory in any of the elections
12 you helped plan?

13 A. Well, the one where I did that utility-based allocation,
14 it wasn't exactly using this staffing formula in my report
15 here. I wish I had used that. I think that would be better,
16 would have been better. I just thought that the utilization
17 was sort of -- when I did the examples, they looked the same to
18 me. But so you could say that that was the case where I kind
19 of used queuing periods, where I used, essentially, this
20 utilization, the row.

21 Q. And that approach, you said, was a bad idea, right?

22 A. Yeah. I think that's what we showed later. I did -- I
23 did a study with simulation of that approach at the time. And
24 I found that it -- I thought it was okay. But then when we did
25 a more careful study later, I'm now convinced that it was a bad

1 idea.

2 Q. And that's because it was not very accurate, right?

3 A. Accurate? You know "accurate" is such a catch-all word.
4 I mean, honestly, I would say that it was not desirable in the
5 sense that the -- you know, using utilization, it just doesn't
6 capture enough of the features of the model.

7 Q. Okay. But, here, you used queuing formula, right?

8 A. Yeah.

9 Q. Okay. Let's switch gears and talk about the quality of
10 the constraint, as I think you put it. And this relates to the
11 DRE minimums. First, you said that some counties are going to
12 remain above the old minimum in terms of their DRE stock; is
13 that right?

14 A. Yes.

15 Q. Now, for those counties, this change in the DRE minimum
16 has no impact at all, right?

17 A. Right.

18 Q. So it doesn't benefit them in any way and doesn't harm
19 them in any way?

20 A. Right.

21 Q. But, with this change, counties can now have the option
22 of going below what the old minimum was, right?

23 A. Right.

24 Q. And that's because one effect of this change is that the
25 number of DREs that counties are required to have has

1 decreased; is that right?

2 A. Yes.

3 Q. All right. And focusing just on the impact of any
4 reduction in DREs, any such reduction in your models will
5 result in an increase in expected wait times, right?

6 A. Unless they were near zero already, I mean, if they
7 could go from zero to zero.

8 Q. Okay. So, to the extent that they weren't at zero lines
9 before, any counties that take advantage of this new law will
10 see an expected increase in wait times, right?

11 A. Yeah. I mean near zero, not exactly zero. If they were
12 near zero, they could go from near zero to near zero, slightly
13 more, but basically zero.

14 Q. Are you aware of any counties that have near zero wait
15 times in Ohio?

16 A. No.

17 Q. All right. And let's go back to this discussion of
18 counties exceeding the minimums. The only county that you know
19 exceeds the DRE minimum is Franklin County, right?

20 A. No.

21 Q. What other county does?

22 A. From one of the declarations -- I'm trying to remember
23 which one it was, another county -- I can find out if you need
24 me to -- there was another county that also exceeded the
25 minimum, or it was projected to exceed the minimum, I believe.

1 I think I put it in my report, also.

2 Q. So your understanding is that there is Franklin County,
3 and then --

4 A. Yes. It's in my report, actually. It's in my rebuttal
5 report. So, if you want to look at it, we can look at it.

6 Q. The rebuttal report will speak for itself.

7 A. Okay.

8 Q. But, beyond that, you have no knowledge of any other
9 counties exceeding the DRE minimum?

10 A. Yes. That's what I meant, well, except that, Cuyahoga,
11 back when they used to use DRE machines and I was working with
12 them, they exceeded it.

13 Q. And they don't use DREs now, right?

14 A. Correct.

15 Q. And, when you say the counties are exceeding, what
16 election are you talking about?

17 A. Well, so, Franklin County, in the 2015 election, I
18 think, exceeded it. And then they're projected to massively
19 exceed it in the 2016 election.

20 Q. Projected to?

21 A. Projected in the sense that, if they follow through on
22 the plans that were in the declaration of David Payne, they
23 will.

24 Q. Do you know about what other counties are planning to do
25 for the 2016 election?

1 A. Just what I read from the declarations, from the
2 declarations of the plaintiff -- I mean of the defendants --
3 that the defendants collected.

4 Q. Okay. Now, you said that one positive aspect of the
5 change is that it accounts for the number of voters who are
6 not, or, who cast early votes four years prior, right?

7 A. Right.

8 Q. Now, the denominator in that equation for the minimum
9 has stayed the same; is that right?

10 A. You're saying relating to the service times?

11 Q. No. I'm sorry. The equation is basically the number of
12 registered voters divided by 175, right?

13 A. Yeah. Right.

14 Q. And now we subtract out of registered voters early
15 voters from four years prior; is that right?

16 A. Yes.

17 Q. So that 175 in that denominator is staying the same?

18 A. Correct.

19 Q. Do you know how that 175 was selected?

20 A. I actually don't know the details of that. I, myself,
21 have tried to contribute to a more thoughtful legislation that
22 passed the House but didn't pass the Senate.

23 Q. And the 175 should be decreased, right?

24 A. Well, I would like to put a formula kind of like
25 Equation 3, into the law, if I could.

1 Q. All right. Let's bring up Plaintiffs' Exhibit 31. And
2 you're welcome to look at it in the book, or I can pull it up
3 on the screen.

4 A. Okay.

5 Q. All right. This is Directive 2014-26. Are you familiar
6 with this?

7 A. I'm sorry. I have to read it, and it's a little hard
8 for me to read.

9 Q. I can tell you -- I'm just going to direct you to go to
10 a particular part.

11 A. I have to say I don't recall being familiar with this
12 particular directive. I have studied some of these directives,
13 but I'm not remembering this one.

14 Q. All right. And let me direct your attention to page 2.
15 And at the bottom, there, there is a sub A. Do you see that?

16 A. Yep.

17 Thank you. Good.

18 Q. All right. And so one thing this indicates, starting
19 just at the bottom of that first section, halfway through the
20 first paragraph, is that, in determining the number of
21 registered voters, a board does not have to count electors who
22 have failed to respond within 30 days to any confirmation
23 notice.

24 A. Okay.

25 Q. All right. Now, if those voters are still eligible to

1 vote, they should be included in this calculation as a sort of
2 philosophical matter, right?

3 MS. PIERCE: Objection.

4 THE COURT: Are you asking him for his philosophical
5 opinion?

6 MR. KAUL: I'm just trying to think of the word he
7 said before.

8 BY MR. KAUL:

9 Q. You described this, the new formula, as an improvement,
10 and I'm forgetting the adjective that you used.

11 A. Qualitative?

12 Q. Qualitative. Thank you. That's not close to what I
13 said, but that's a better word.

14 Do you regard -- it's a qualitative detriment to take
15 those voters out, right?

16 MS. PIERCE: Objection, Your Honor. It's outside the
17 scope of his opinion.

18 THE WITNESS: Yeah, it's kind of outside. I mean, at
19 one point, I was trying to help Franklin County decide -- make
20 decisions about how to purge the registered voter list. So I
21 learned a little bit about issues about that. But I'm not, per
22 se, an expert on those kind of decisions. But one thing I
23 learned from that process, and also from calling voters in Ohio
24 and Franklin County, is that it really is true: A lot of
25 people move around, and they're not really there.

1 BY MR. KAUL:

2 Q. Let me ask the question a different way, or we can --

3 MS. PIERCE: Objection.

4 THE COURT: There is an objection. And what is it,
5 again?

6 MS. PIERCE: It was outside the scope of his opinion.

7 THE COURT: You guys are having a really interesting
8 conversation; but, if I'm supposed to understand it, let's cut
9 to the chase.

10 MR. KAUL: Sure.

11 BY MR. KAUL:

12 Q. Here is my question: What you're saying is, there is a
13 qualitative improvement when you only focus on the voters who
14 might show up on election day, right?

15 A. Yeah. So, I mean, if we're trying to decide how
16 many welding robots we need, we take the best information we
17 can about the demand for the robots; and, if there's a reason
18 to suspect a lot of them aren't there or some of them are there
19 in terms of the demand, we put more robots in. Same thing for
20 voting equipment. And so -- I can't really read this,
21 honestly, and sort of help elucidate this issue about whether
22 this is helping, moving us qualitatively toward or away from a
23 kind of logical -- I mean an appropriate -- I hate the word
24 "appropriate" -- you know, a thoughtful approach that we would
25 use at Honda to decide about the number of machines.

1 It's possible what you're alleging is true, that if I
2 knew what this meant and thought about it I would take this
3 into account, but also -- I apologize that I don't fully
4 understand all the issues about this.

5 Q. So let me not ask you about that language, but let me
6 just ask you, generally, from a qualitative standpoint, you
7 don't want to subtract voters who might vote on election day?

8 A. Right. So you want to do a -- I don't know -- a
9 thoughtful approach to calculate the expected number of voters
10 who want to vote on election day. And, so, if people have
11 already voted, you want to take them out. It's possible you
12 also want to take out people who really don't live there
13 anymore, and so you might want to take them out for that reason
14 as well.

15 Whether this particular instrument is effective in
16 removing people who should be removed, I don't know, honestly.
17 But if it were -- if it were an effective instrument, then I
18 would say "Go with it."

19 Q. All right. In the next sentence, it says that
20 registered voters who have requested an absentee ballot can
21 also be excluded from the calculation, right?

22 A. Yeah.

23 Q. Okay. Now, we've already said that you can exclude the
24 number of people who voted absentee four years earlier, right?

25 A. Right.

1 Q. So this is double counting, right?

2 A. It depends on how it's implemented. It could be
3 implemented in a way that would be double counting, yes, I
4 mean, from my reading of the law; but I don't know whether an
5 official would do that. I don't think they would.

6 Q. What's that based on --

7 A. Well, like when I was --

8 Q. -- your expertise?

9 A. Well, see the thing is, back when I planned the election
10 in 2008 and 2006, we actually knew how many people had already
11 voted, and we actually did the allocation using a lot of
12 information about the people who already voted. And we were
13 very accurate, I thought. I mean, Mr. Damschroder, his
14 projection was very good, and the data we had was very good. So
15 we certainly didn't double count anybody. We took the best
16 information and used it.

17 Q. You didn't subtract out the number who voted four years
18 earlier?

19 A. Right. And we did it both in terms of registered and
20 what was called likely voters back then. So, back then, they
21 used to differentiate between the two. And I think that this
22 highlighted clause sort of relates to that difference as well.

23 Q. All right. I'm going to shift gears again. I'd like to
24 ask you about your experience studying voting queues and what,
25 if any, role that experience played in your analysis in this

1 case.

2 A. Okay.

3 Q. So you mentioned, before, that you had studied some
4 particular elections; is that right?

5 A. Yes.

6 Q. All right. And which elections were those?

7 A. So, in a retrospective sense, I've studied three pretty
8 disastrous elections: 2004, Franklin County; 2012, Central
9 Florida; and 2012, Sandoval County, New Mexico.

10 Q. All right. And did you also study North Carolina's 2014
11 election?

12 A. Yes, I did. I did study that as well, yeah, but it
13 wasn't one of the three disasters.

14 Q. All right. So let's start with the 2004 Franklin County
15 election. Franklin County, in 2004, had lines that exceeded
16 seven hours, right?

17 MS. PIERCE: Objection, Your Honor.

18 THE COURT: Are you asking him to assume that or --

19 MR. KAUL: I'm asking what he knows.

20 MS. PIERCE: This is way -- it's outside the scope of
21 his opinions offered in this case.

22 THE COURT: It's cross.

23 THE WITNESS: So the exhibit that we looked at earlier
24 had lines that were over five hours. I heard that they were
25 reported at over seven, but I don't think it was in that

1 report, in that plot that we were just looking at not long ago.

2 BY MR. KAUL:

3 Q. Okay. And African-Americans were reported to have
4 waited 30 minutes longer, on average, in Franklin County, than
5 other voters, right?

6 A. Yes.

7 Q. And some voters in Ohio waited more than ten hours to
8 vote in 2004, right?

9 A. I honestly don't -- I -- I don't believe that they
10 waited more than ten hours. Did they? I mean, if you have
11 direct evidence, I'm interested. But, I mean, if I look back
12 at that report that you handed me a minute ago, it had the poll
13 closing times, and the latest one was just over five hours.

14 Q. Do you know if you said that in one of the articles that
15 we were talking about earlier?

16 A. Hmm. I might have. I mean, I might have been going off
17 of a report in the newspaper. But if you go off of the data in
18 this chart, it's only five.

19 Q. Okay. That's just Franklin County closing times.

20 A. Okay. What was your question? I apologize.

21 Q. That some voters waited ten hours in Ohio to cast a
22 ballot in 2004.

23 A. Oh, I see your point.

24 Right now, I don't remember that, but I believe
25 it's -- it's possibly true.

1 Q. And that election is part of what spurred the enactment
2 of some of the provisions that you're -- well, the DRE
3 provision you're opining on now, right?

4 A. I mean, as a matter of history, honestly, I don't know
5 this particular -- see, you're talking about the law, the
6 history of law in Ohio, and whether the negative occurrence in
7 2004 is what spawned the current law. And honestly -- I
8 honestly don't know that's true. I mean, I know that it
9 spurred me to do my analysis, and I tried to suggest changes to
10 the law, and I don't know whether the current law was also from
11 that or not.

12 Q. All right. Does your analysis take that history into
13 account in any way?

14 A. Yeah. I mean, sure. I mean, I didn't put it in my
15 report, as you mentioned earlier, but I could have. And, you
16 know, looking at this figure from my earlier report made me
17 feel pretty confident that using queuing theory is not a
18 terrible thing to do, and that's probably why I did it. I
19 could have put it in as backup, but I just didn't do it.

20 Q. All right. In making the judgment about whether this is
21 a qualitative improvement, you didn't consider that, right?

22 A. Well, okay. So my earlier experience -- so basically
23 what happened in my understanding of 2004 was, some places had
24 very long ballots, twice as long as other places, and yet
25 people are not using smart queuing theory or simulation

1 inspired allocations. So they had really long lines in the
2 places with really long ballots. And that's basically what
3 drew -- caused all this variation.

4 The variation can be fairly well predicted by a queuing
5 model. It can be slightly better predicted by a simulation
6 model. So that's my experience. And I said: Okay. Then what
7 are the implications of that?

8 Well, one of the implications is -- surprise,
9 surprise -- applied waiting-line analysis works pretty well.
10 And the implications are that this step, you know, can be
11 viewed as part of a process towards a more ideal formula.

12 I mean, whether you -- whether -- however we get there,
13 I'm happy. But this is a step towards that.

14 Do you see what I'm saying? Does that answer your
15 question?

16 Q. Yeah. Let me ask you about a different topic.

17 One of the things you talk about in your report, your
18 rebuttal report, is the effect of the elimination of golden
19 week on election day and other early voting turnout, right?

20 A. You're talking about in my North Carolina report, or the
21 one here?

22 Q. Here.

23 A. I didn't opine on golden week.

24 Q. I'm sorry. Well, you opined on whether the challenged
25 provisions would result in an increase in election day voters,

1 right?

2 A. In the rebuttal report, I suggested that it might cause
3 a reduce in the burden on election day considering all of the
4 changes. So one of them was this golden week elimination,
5 which would tend to increase the turnout on election day, with
6 all other things equal. And some of the other changes were
7 also involved, too. And so whether, on balance, it's increased
8 or decreased, I said that it's not totally clear.

9 Q. Okay. And so some number of voters would have voted on
10 golden week if it hadn't been eliminated in 2016, right?

11 A. I believe that, yes.

12 Q. All right. And those voters will, instead, have to do
13 one of three things, right, which are --

14 A. Not vote, vote later in the early voting period, vote by
15 absentee ballot, or vote on election day.

16 Q. Okay. Four things?

17 A. Yeah.

18 Q. So, to the extent that the voters are voting later in
19 the early voting period or on election day, that's going to
20 mean longer lines on election day and later in the early voting
21 period, right?

22 A. Yes, it could, if all other things are -- generally
23 speaking, more people means more lines. I mean, the details of
24 how they arrive matter, of course, too. But, in general, more
25 people means expected longer lines.

1 Q. And you studied other states that had reductions in
2 early voting and the impact on the lines in those states,
3 right?

4 A. Yes.

5 Q. All right. Now, Florida reduced its early voting prior
6 to the 2012 election, right?

7 A. Yes.

8 Q. All right. And you found that that --

9 A. No. No. No. It was prior to the 2014 election.
10 Right. So they reduced early -- oh, no. Yeah. No. No. No.
11 They didn't -- they reduced in between 2012 and 2014. I think
12 that's when it happened.

13 Q. Fair to say that Florida reduced it at some point in
14 time?

15 A. Oh! We're talking about Florida? I thought you said
16 North Carolina. I apologize.

17 Okay. You're saying Florida reduced its early voting.

18 Okay. Sorry. Go ahead.

19 Q. And you found that that caused over 200,000 people not
20 to cast ballots, right?

21 A. Okay. So what caused it? What I think caused it,
22 honestly, is not having enough booths, and also not having the
23 booths in the right places where they had longer ballots. So
24 it was a lot like 2004 here.

25 Now, how did that happen? It could have been

1 attributable to a legal history that I'm not an expert -- I
2 mean, honestly, I don't know much about.

3 Q. But you found that 200,000 people didn't vote because of
4 the long lines?

5 A. I do think that that's about -- that's because of their
6 awareness of the lines. It's possible even more people didn't
7 vote because of other experiences.

8 Q. All right. And, when you studied North Carolina, you
9 were studying a reduction in early voting days, right?

10 A. Yes.

11 Q. All right. And, there, you found that, in a midterm
12 year, tens of thousands of people didn't vote due to long lines
13 resulting from a reduction in early voting, right?

14 A. Yes. I mean, just to clarify, there is a big difference
15 between there and here. As you know, over half the people vote
16 early in-person there, whereas, relatively, a very small
17 fraction vote here early in-person.

18 Q. The number of people who will be deterred from voting
19 here will be smaller? Is that the conclusion?

20 A. Yeah. That's mainly why I think that -- yeah, that's
21 what I think.

22 Q. And one of the ways that a voter might assess how long a
23 line is is by the actual physical length of the line, right?

24 A. Yeah.

25 Q. And you're going to have the longest physical lines when

1 you have one early voting location, right?

2 A. Oh, I see what you're saying.

3 Well, no. What do you mean by -- no. No. I
4 mean -- see, think about it this way: If you have a hundred
5 machines and you have 80 people, you have no lines; but, if you
6 take those hundred machines and you divide them into ten
7 locations and take the same 80 people, you'll have some places
8 that have pretty long lines because, by chance, those 80 people
9 will be bunched up in some of those places. So you'll go from
10 a situation where you have no lines to a situation where you
11 have some long lines.

12 That's basically -- I mean, honestly, what I just taught
13 you is something that almost everybody who teaches waiting-line
14 analysis or simulation mentions to his students.

15 Q. You're talking about the wait time, right?

16 A. No. I'm talking about the total length. Like, so, if
17 you have 80 people, a hundred machines, no line at all, zero
18 people waiting. You then take those machines, you spread them
19 out, you spread out the people, some places are overloaded.
20 They have a line. So you go from no line to some line.

21 Q. But, in Ohio at early voting locations, there are
22 lengthy lines.

23 A. Yeah. Okay. I see what you're saying.

24 Oh! So what you're saying is, in the situation where
25 the arrival rate is quite high, like as I simulated here -- so

1 what's your question?

2 Q. You're going to have much longer lines when you just
3 have one early voting location, right?

4 A. I see what you're saying.

5 No. I mean, I don't know why you'd say that. I think
6 it's the exact same -- I mean, honestly, I'm not trying to be
7 argumentative. But, just FYI, no. If you spread it, it's the
8 same thing. It's that -- I mean, we have really long lines in
9 Franklin County with one thing, but imagine if we took the same
10 resources and same voters. The physical lines would be
11 actually longer.

12 Q. And that's with all the assumptions we talked about
13 before, right?

14 A. Yeah, I know. But if you use simulation or agent-based,
15 it's the same deal.

16 Q. All right. Now, you studied DREs. And I think you
17 talked earlier about DRE failure rates?

18 A. Yes.

19 Q. And you said that you thought it was less than ten
20 percent?

21 A. Okay. So, I mean, I reminded myself that the federal
22 election commission has set standards that they expect less --
23 about ten percent or less of the machines will have a failure.
24 And they've wind it so that you fail once every, I think,
25 somewhere around 163 hours. So that's their sort of standard

1 and their goal.

2 Now, how they define that is an interesting question. I
3 mean, did they count papers running out or paper jams as those
4 failures? It's a little less clear to me.

5 So does that answer your question?

6 Q. It does. And, actually, I'd forgotten one other
7 question on the previous thread, and I'll come back to this.

8 You actually, based on those experiences you described,
9 were able to quantify how many voters don't vote because of
10 long lines, right?

11 A. I -- yeah. I mean, I attempted to estimate, roughly
12 speaking, that effect: How many people didn't vote because of
13 the lines.

14 Q. And what did you find?

15 MS. PIERCE: Objection, Your Honor.

16 THE COURT: Well, I want to know the answer now. So,
17 sorry.

18 MS. PIERCE: Okay.

19 THE WITNESS: Okay. So there is a -- so here in
20 America we have some fraction, I mean, you know, a large number
21 of people who don't vote. And I don't know a lot of the
22 reasons why they're not voting. I'm not an expert on that.
23 I'm only an expert on cases where there are long lines and the
24 effect of the lines. So there are other reasons why people
25 aren't voting that I'm not aware of.

1 But what I found was, by studying Franklin County here
2 in 2004 and then also studying Central Florida and then also
3 sort of confirming with Sandoval County, that people tend to
4 drop off as you make them wait longer. And it's between two
5 and four percent of the people tend to drop off.

6 BY MR. KAUL:

7 Q. For what length of a line?

8 A. Per hour.

9 Q. Okay. Per hour?

10 A. Yeah.

11 Q. So, if you have a two-hour wait, what does that mean?

12 A. Four percent.

13 Q. Four-to-eight percent?

14 A. Right.

15 Q. And a three-hour wait is 12 to -- well, six to twelve
16 percent, and so forth?

17 A. You're right. But, now, you see the thing is, percent
18 of what?

19 So what I studied was election day. And, election day,
20 the voters are -- it's their only chance to vote. So they
21 maybe have different properties than during early voting. And
22 also what I did was -- it's two-to-four percent of the people
23 eligible to vote on election day. So those are subtracting out
24 the people that already voted and people that aren't
25 registered. It's two-to-four percent of that.

1 So how to take that two-to-four percent rule and apply
2 it in early voting is not totally clear to me, because, for one
3 thing, the people might, you know, drop out and come back and
4 vote again. And the other thing is that they might be willing
5 to wait longer because it's during a more convenient time for
6 them.

7 So, honestly, I don't have a rule yet, because I don't
8 have any great data that I could use to study early voting
9 dropouts and that phenomena, and I honestly don't know much
10 about it.

11 Does that answer your question?

12 Q. It does. And, just to be clear, the way you determine
13 that is, you realize that the precincts with the longest lines
14 have the lowest turnout, right?

15 A. Yeah.

16 Q. And that's because voters left the lines?

17 A. Yeah. And that -- so what happened in the two elections
18 that I studied, they had very, very variable ballot lengths.
19 They have long and highly variable ballot lengths. So that was
20 the main driver: That, some places, they just didn't provision
21 enough, because they had really long ballots, and they just had
22 this, you know, head-count formula, which I really don't -- I
23 think is unfortunate; and they -- and so they just
24 under-provisioned. And so that was the cause. And then the
25 people dropped out.

1 Q. All right. Let me switch back to DREs, then.

2 A. Sure.

3 Q. You were talking about what the failure rate was.

4 A. Yes.

5 Q. And you were explaining how you got to the less than ten
6 percent.

7 A. Yes.

8 Q. Can you explain that?

9 A. Okay. So, when I was doing the work for Franklin
10 County, and also Cuyahoga County, we had access to actual
11 machines. And so we had -- the machines, themselves, keep
12 records of how often they're up and how often they're down.
13 And so that was the data I used in the simulation models I did,
14 I developed, with a different person, not Muer, at that time.
15 And so that's one source of information.

16 Now, Franklin County, and Cuyahoga, have since changed.
17 Now Franklin is using different machines, I think. I don't
18 know the details of them. So my old data is kind of out the
19 window, and then I fall back on this federal mandates, or -- I
20 wouldn't say they're mandates. They're more like guidelines,
21 is my understanding. Expectations, I guess.

22 Q. Okay. So you're assuming what the breakdown rate is
23 based on the guidelines; is that right?

24 A. I'm not assuming. I'm just telling you what the
25 guidelines are. I'm trying to give you a picture, dramatize

1 what they mean.

2 Q. And you do suspect, though, that breakdown rates
3 increase as DREs age, right?

4 A. I honestly don't know that for a fact. I mean, a lot of
5 things do wear out, for sure. And it's possible, but I don't
6 have -- I honestly don't know.

7 Q. Do you remember saying in your deposition that you
8 suspected that?

9 A. Okay. No, I don't remember it, but I believe I might
10 have said that, sure.

11 Q. I'll leave it at that.

12 All right. So, going back to what you've learned in
13 your experience and whether you applied that to this case, you
14 said you consulted with Franklin County before, right?

15 A. Yes.

16 Q. And also Cuyahoga County?

17 A. Right.

18 Q. And they were over the DRE minimum when you were working
19 with them?

20 A. Yeah.

21 Q. And, despite that, with Franklin County, you recommended
22 that they increase the DRE number that they had, right?

23 A. I don't think I -- did I? I don't think I did a
24 factual -- see, the work -- see, when you're working with a
25 county, generally speaking, the counties don't get to pick -- I

1 mean, they can lobby for more funds and more resources; but the
2 project that I did was trying to take fixed resources and
3 allocate them thoughtfully, so basically put more of them in
4 places with long ballots than they would otherwise.

5 Q. I'm going to take a look at your deposition transcript.
6 Okay?

7 A. Okay. Sure.

8 Q. I'll bring you a copy.

9 A. But I might have. I'd have to remember.

10 MR. KAUL: May I approach, Your Honor?

11 THE WITNESS: Okay. Wow!

12 MR. KAUL: Can we bring it up on the screen, page 174?
13 Let's start with Line 13. Actually, let's go to Line 8.

14 BY MR. KAUL:

15 Q. I asked: Did you recommend that they exceed the
16 minimums?

17 And this is in reference --

18 A. No. You see -- what you just asked recently -- I mean,
19 you can check the record -- is, did I recommend that they
20 exceed what they were at before. That's what I thought you
21 just said.

22 Q. Yep.

23 A. Do you see what I'm saying?

24 Q. That is what I asked.

25 A. So I do recommend that they exceed the minimums. I did

1 recommend that they exceed the minimums. But they were
2 exceeding the minimums. I don't remember recommending that
3 they exceed what they were at at the time.

4 Q. Let's take a look, then.

5 So I asked if you recommended that they exceed the
6 minimums. And you said: I think that I did recommend in one
7 case they go beyond where they already were, and I think they
8 might have done it.

9 Why would you recommend exceeding the minimum?

10 Answer: Well, it wasn't exceeding -- I mean, I think
11 before and after my changes they were in excess of minimum.
12 But why did I recommend that they exceed where they were?
13 Because we simulated the election, and we were getting lines
14 that they probably would not like. And so we -- we showed it
15 to me. And we said, Okay, let's move up, please.

16 A. I remember that now. I remember saying it. I remember
17 doing it, too.

18 Q. Okay. So, you did -- so, even though they were above
19 the minimum, you recommended that they go further above?

20 A. Yes.

21 Q. Okay. And that was the old minimum?

22 A. Right.

23 Q. Did that experience play into your analysis in this
24 case?

25 A. I mean -- I don't know exactly what you mean by that.

1 Q. Did you factor that experience into whether you thought
2 that the change in the DRE formula was, qualitatively, a
3 positive step?

4 A. Yeah. I mean, sure. I mean, I was aware of what I said
5 before, and I am aware of -- yeah, I mean -- I mean, what -- my
6 experience before made me think that -- that county -- I mean,
7 Franklin County went from machines that were really fast to
8 vote on to machines that were pretty -- are pretty slow to vote
9 on. And so, you know, for that county, I think they should
10 definitely be above the minimums, for Franklin County, where we
11 are. But if somebody were still using the open-face machines
12 that we used to have here, if they were handicap compliant,
13 then, you know -- do you see what I'm saying?

14 So, just because they had this one experience here in my
15 knowledge about this place, I experienced, working here,
16 machines that were a lot faster. I mean, those were the two
17 thousand -- 2004 was a disastrous election, but the machines
18 were fast. If they'd run the election in 2004 with the slow
19 machines they have now, it would have been much worse than it
20 was.

21 Do you see what I'm saying?

22 But, then, I could imagine other counties using the 2004
23 machines, in which case they might be over-proficient.

24 Q. Another thing that you've determined based on your
25 experience is that a long line is one that's longer than 30

1 minutes, right?

2 A. I think that's a reasonable definition.

3 Q. Okay. Did you take that into account in deciding
4 whether the DRE formula is, qualitatively, an improvement?

5 A. See, it depends on how you understand it. If you
6 understand it as a minimum that people aren't really following
7 because they -- I mean, honestly, people here in Franklin
8 County don't care what the minimum is. They want to run an
9 election and not be in trouble from really long lines.

10 So, if you consider that the minimum is sort of
11 irrelevant, at least to Franklin County, this doesn't really
12 affect mine at all. Do you see? It doesn't change my thinking
13 about it.

14 Q. Okay. That same logic would have been true in 2003,
15 right?

16 A. Okay. Well, okay. So what do you mean by that? I'm
17 sorry.

18 Q. That people planning an election didn't want to have
19 extremely long lines and to get in trouble.

20 A. Yes.

21 Q. In your rebuttal, you disagree with Dr. Yang's --

22 THE COURT: Weren't the voting lines, all over the
23 country, much longer than normal in 2004?

24 MR. KAUL: Dr. Allen?

25 THE COURT: I mean, that year was an aberration; was

1 it not?

2 THE WITNESS: Well, it was definitely an aberration
3 for the experience of Franklin County. The people -- when I
4 went in and interviewed the people, they were like, We've never
5 seen this before; it just sort of took us out of the blue.

6 THE COURT: That's what I remember reading in the
7 paper, anyway.

8 THE WITNESS: Yeah.

9 BY MR. KAUL:

10 Q. The 2008 presidential election had higher turnout,
11 nationally, than 2004, right?

12 A. Yes.

13 Q. And do you know of anywhere in the country that had
14 lines in 2004 as long as Ohio had?

15 A. No. I don't think anyone did.

16 Q. Okay.

17 A. So in your --

18 THE COURT: Is any of that due to the poll worker --
19 the knowledgability of the poll workers?

20 THE WITNESS: So -- yeah. I went in, and I studied
21 this exact issue. And I considered poll workers and other
22 sources of possible problems.

23 THE COURT: Because they're volunteers. A good many
24 of them are volunteers.

25 THE WITNESS: Yeah, and there is also a lot of

1 turnover, and they're aging and stuff. Those are issues.
2 Honestly, that's a big concern for the election officials, the
3 poll workers.

4 In my analysis, basically, what I found is that the
5 lines were almost all in places, or, were basically all in
6 places where they had long ballots. And that means that the
7 poll worker really wasn't causing it, because the poll worker
8 doesn't care if it's a short ballot or a long ballot. It was
9 caused by a shortage of resources, or DRE machines, in the
10 places with the long ballots. And so --

11 THE COURT: Was it taking longer to read the issues
12 and so forth?

13 THE WITNESS: Exactly. So they had this kind of
14 strange law at the time that you weren't allowed to spend more
15 than five minutes, but the average was, like, eight minutes
16 when you time them. So, obviously, nobody was following that
17 particular law at the time.

18 And so what happened was, I went in there -- actually,
19 as soon as they told me about laws and they told me how they
20 did the allocation, I immediately realized, from teaching this
21 waiting-line analysis course, that they probably weren't taking
22 into account the variable ballot length. And then I said:
23 Wait a minute.

24 So I went in wondering are they trying to discriminate
25 against people on purpose; are they, you know, bad people. And

1 I got to know them a little bit. And, you know, I like them;
2 and I don't think they were doing that.

3 So then I figured out, wait a minute. When they do this
4 allocation, it's so many per people; so, if there are more
5 people, you do more machines. That's not what you should do.
6 You shouldn't do that. At Honda, they don't do that. If they
7 have more parts, they -- you know, they take into account how
8 long it takes to process the parts. So you need the number of
9 parts and how long it takes to process, both. And so I told
10 them how to do that, and I'm trying to get the whole country to
11 do it, honestly: That you should take into account the
12 variable ballot.

13 That's not an issue everywhere. It's just an issue
14 here, Virginia, California -- I mean California, Florida, where
15 they have long ballots and variable length, whereas, in North
16 Carolina -- they have really short ballots -- they don't have
17 this issue. They have other issues.

18 BY MR. KAUL:

19 Q. All right. So you said one of the problems in 2004 was
20 that there were an insufficient number of machines in the
21 precincts that had long lines, right?

22 A. Yes.

23 Q. And does the new law take into account ballot length?

24 A. No.

25 Q. And you said that part of the problem was that people

1 were taking eight minutes to vote?

2 A. Actually, some of the places, the average time is 12
3 minutes. So, some places, the average time was seven minutes.
4 In some places, it's over 12. So, literally, some places have
5 twice-as-long ballots as others. And nobody seems to know
6 this.

7 I mean, our ballots are really long. They're like
8 taking a test, and some of them are much longer than others.
9 And that's really important. They should take that into
10 account. And I'm trying to get people to do that.

11 THE COURT: And are you talking about places in Ohio,
12 or are you talking about places throughout the country?

13 THE WITNESS: I'm talking about, right here in
14 Franklin County, one precinct, seven minutes, on average. Go
15 one precinct over, 12-and-a-half minutes, on average. It's
16 kind of amazing that way. And so that's the big -- I mean, to
17 me, that's one of the main issues to consider.

18 BY MR. KAUL:

19 Q. All right. You talked about reasons you thought that
20 the allocation was the way it was in 2004?

21 A. Yeah.

22 Q. Let me show you another exhibit. This is Exhibit 3 from
23 your deposition. Let me direct your attention to page 1084,
24 the second page. And there is a -- about a third of the way
25 down the left-hand column there is a line beginning with "Some

1 voters."

2 All right. Now, first of all, you were a coauthor of
3 this article, right?

4 A. Yes.

5 Q. And this was copyrighted in 2013?

6 A. Yes.

7 Q. Beginning with "Some voters," can you read this into the
8 record?

9 MS. PIERCE: Objection, Your Honor.

10 THE WITNESS: Sorry, I can't find it. We're looking
11 on page 1084, "Some voters," first column?

12 MR. KAUL: May I approach?

13 THE COURT: Yes. The objection is --

14 MS. PIERCE: Outside the scope of the opinions offered
15 in this case and the relevance of 2004 to the case at hand.

16 THE WITNESS: Here it is. Found it.

17 THE COURT: And why are we getting him to read this?

18 MR. KAUL: This is inconsistent with the statement he
19 just gave, Your Honor.

20 THE WITNESS: I don't think it's inconsistent.

21 So I said here -- it says here that some voters waited
22 for more than ten hours to cast their votes, and we cited this
23 Power and Slevin.

24 So what I said earlier was that, in Franklin County, I
25 think that there was more, like, five hours. But that's not

1 inconsistent with this, because this is all over Ohio, and
2 we're citing somebody else.

3 BY MR. KAUL:

4 Q. Could you read through the last line, through
5 "African-American," into the record?

6 A. The last line of the same paragraph?

7 Q. Yes. So from "Some voters" all the way through the last
8 line, "African-Americans."

9 A. Okay. You want me to go with this whole paragraph?
10 Okay.

11 In the 2008 presidential election, the majority of
12 precincts in Franklin County, Ohio, which includes Columbus,
13 had average waiting times of less than five minutes, while a
14 few had average waiting times, estimated using simulation and
15 confirmed through observed poll closing times, of greater than
16 five hours. See Levine and McPhee and Vinella. Perhaps even
17 more disturbing were the post-election allegations made that
18 systematic policy decisions occurred to suppress certain voting
19 segments in key states. Mebane and Tanner. The opaque nature
20 of the current allocation methods can lead to charges of
21 systematic bias and partisan politics. Flaherty 2008. For
22 instance, the U.S. Department of Justice investigated claims
23 that the Board of Elections in Franklin County, quote,
24 systematically assigned fewer voting machines in polling places
25 serving predominantly black communities as compared to its

1 assignment of machines in predominantly white communities, end
2 quote. During the 2004 election (Tanner 2005, Mebane 2006),
3 Mebane 2006 concludes the allocation of voter machines in
4 Franklin County was clearly biased against voters in precincts
5 with high proportions of African-Americans. Difficulties on
6 election day were --

7 Q. That's all that I want you to read.

8 MS. PIERCE: Objection, Your Honor, and motion to
9 strike. Hearsay. Prejudicial. Outside the scope of his --

10 THE COURT: He is a coauthor of the article. He is on
11 the stand, reading his article.

12 MS. PIERCE: But these are quotes from other authors,
13 Your Honor. And it's not inconsistent with anything he's
14 mentioned.

15 THE COURT: How is it inconsistent?

16 MR. KAUL: He's testified a moment ago that he came to
17 the conclusion that there was no bad motive in the assignment
18 of voting machines and that he met the people, liked them, and
19 thought that they were doing their best, and it was simply
20 because of the formula that the voting machines were allocated
21 the way they were here. Here, he's citing authority indicating
22 to the contrary.

23 MS. PIERCE: Your Honor, that's clearly hearsay.

24 THE COURT: You're talking about an election that was
25 12 years ago that was administered by some of the same people

1 that are still involved, but not all.

2 MR. KAUL: I'm impeaching his statement, Your Honor.

3 MS. PIERCE: Your Honor, there is nothing inconsistent
4 here. These are not his opinions.

5 MR. KAUL: It's an article he wrote.

6 THE COURT: I'm going to sustain the objection here.

7 BY MR. KAUL:

8 Q. All right. Now, in your rebuttal report, Dr. Allen, you
9 identify some reasons that you believe that voters will not
10 shift from early voting to election-day voting; is that right?

11 A. Yes, or might not shift. I mean, I didn't say I think
12 that they won't shift for sure. I said that it's something to
13 consider.

14 Q. Okay. And you don't consider yourself an expert on
15 voter behavior, do you?

16 A. Only in relation to the response to very long waiting
17 lines.

18 Q. Okay. So that wouldn't be relevant to this question,
19 would it?

20 A. Yeah, I agree.

21 Q. Okay. But you did talk about this in your rebuttal
22 report, right?

23 A. Yes, because I wanted to point out -- I mean, Muer
24 doesn't know anything about the psychology of voters that I
25 don't know, and yet he'd lined up some references. And I

1 thought, well, let's be fair and try and line up references,
2 say something different.

3 Q. Okay. And you wrote in your report that evening and
4 weekend hours had increased from 2010 to 2016, right?

5 A. Yes, I think I said that.

6 Q. Okay. And, actually, evening hours have decreased from
7 2012 to 2016.

8 A. So you're telling me that's a fact, and you're asking me
9 to agree?

10 Q. Yes.

11 A. I honestly don't know, but I believe you because during
12 the deposition you showed me, carefully mapped out, the two
13 different hours. And so I -- I remember that, yes.

14 Q. Okay. And evening hours are one of the busiest times
15 for voters, right?

16 A. Could be. You know, I mean, it depends on what day.
17 And we were just looking at the times over the periods, the
18 days, but if you could also look at plots over the times, you
19 know, different days might have different -- like, for example,
20 Saturdays might be a quite different pattern than election day.

21 Election day, often there is a rush at the end of the
22 day.

23 Q. Now, you also talked about a trend toward early voting.
24 And that's in Paragraph 13 of your rebuttal report.

25 A. Okay.

1 Q. Can we pull that up?

2 A. My rebuttal report?

3 Q. Yes. I'm sorry.

4 A. It's right there. Okay. Good.

5 Q. This is where you say the second factor is the general
6 trend.

7 A. Okay.

8 Q. And, in particular, you cite the figures for 2008
9 through 2014's even-numbered-year elections, right?

10 A. Okay.

11 Q. And, in 2008, there were just over 700,000 non-election-
12 day voters?

13 A. Yes.

14 Q. And that was a presidential election year?

15 A. Yes.

16 Q. In 2010, that number went up by over 300,000 even though
17 it was a midterm, right?

18 A. Yes.

19 Q. And then, in 2012, it went up another 800,000 or so,
20 right?

21 A. It didn't go up. It went to -- it went to 864,000.
22 Right.

23 Q. No. You're looking at 2014. 2012.

24 A. Oh, okay. I'm sorry.

25 Oh, I see what you're saying. Yes.

1 Q. So, in 2010 -- 2008, 2010, 2012, there is a significant
2 upward trend in early voting usage, right?

3 A. Yes.

4 Q. And then, in 2014, the number dropped significantly,
5 right?

6 A. Yes.

7 Q. And do you know when the challenged provisions went into
8 effect?

9 A. In between those elections, I believe.

10 Q. Okay. And, notably, from 2008 to 2010, the actual raw
11 number went up, right, --

12 A. Yes.

13 Q. -- even though it went from a presidential to a midterm?

14 A. Yes.

15 Q. Okay.

16 THE COURT: Was it a gubernatorial?

17 MR. KAUL: Yes.

18 THE WITNESS: Yes.

19 BY MR. KAUL:

20 Q. And do you know how turnout in 2010 compared to 2008,
21 overall?

22 A. It was down.

23 Q. Now, going back to your opinion about -- I think you
24 said that the changes may not result in an increase in
25 election-day voting; is that right?

1 A. Right.

2 Q. But your view is that prohibiting counties from
3 including pre-paid postage on unsolicited absentee ballots will
4 result in a decrease in absentee ballot usage, right?

5 MS. PIERCE: Objection. Mischaracterizes.

6 THE WITNESS: So you're saying that change --

7 THE COURT: Wait. Okay.

8 How so?

9 MS. PIERCE: He's testified that his rebuttal report
10 was directed at Dr. Yang's conclusion that voters will shift to
11 election day. He said in his rebuttal report that the opposite
12 could be true; not that it will happen; it could be true.

13 THE COURT: It's cross. I'm going to let him do it.

14 Restate your question, if you would.

15 BY MR. KAUL:

16 Q. Your view is that the rule of prohibiting counties from
17 including pre-paid postage on unsolicited absentee ballots will
18 result in a decrease in absentee ballot usage, right?

19 A. You're asking for my opinion now, and during the
20 deposition, whether that change, by itself --

21 Q. Yes.

22 A. -- would generally tend to -- you would think,
23 logically, would decrease early voting by absentee?

24 Logically, I would say as a citizen, not as an expert on
25 human opinions or human behavior, yes, that one change, by

1 itself, would tend to drive people away from no-fault absentee
2 ballot.

3 Q. And sending unsolicited absentee ballots to all
4 registered voters rather than a subset would result in greater
5 absentee ballot submission, right?

6 MS. PIERCE: Objection, Your Honor. Outside the scope
7 of his expertise, which he's clearly testified he's not an
8 expert in voter behavior and has not offered an opinion as to
9 any of these things.

10 MR. KAUL: His rebuttal report addresses this topic at
11 length. So, to the extent that they're relying on that, I
12 think it's fair cross.

13 MS. PIERCE: Your Honor, his rebuttal report addresses
14 Dr. Yang's conclusions, not any of this.

15 MR. KAUL: It's Dr. Yang's conclusion that there will
16 be an increase in election day turnout. So that's the same
17 topic.

18 THE COURT: Sustained.

19 BY MR. KAUL:

20 Q. All right. Let me ask you about -- we've talked about
21 whether the DRE machines may affect wait times. You said
22 ballot length can also affect wait times?

23 A. Yes.

24 Q. And increasing the length of provisional ballots can
25 result in increased wait times, right?

1 MS. PIERCE: Objection, Your Honor. Same objection.
2 He's offered no opinion on provisional ballots.

3 MR. KAUL: He's offered a lot of opinions on ballot
4 length, Your Honor.

5 MS. PIERCE: Because counsel asked him. He did not
6 offer --

7 THE COURT: Why do you focus on provisional here?

8 MR. KAUL: I'm going to ask about absentee next, but I
9 was just trying to break it down.

10 MS. PIERCE: Your Honor, the scope of his expert
11 opinions were confined to early --

12 THE COURT: Sustained.

13 BY MR. KAUL:

14 Q. All right. Let me ask you about one other topic, which
15 is how you got involved in the case.

16 A. Sure.

17 Q. You testified on direct examination that you were first
18 approached about being an expert for the plaintiffs in this
19 case, right?

20 A. Yeah. I hope I said "possibly." I'm not sure it was
21 formally offered to me.

22 Q. Okay. And one of the reasons you decided not to work
23 with the plaintiffs is that, given that you're a professor at
24 Ohio State, you thought it would be awkward to be on the
25 opposite side of the Secretary, right?

1 A. Yes.

2 Q. So, instead, you recommended somebody who you thought
3 was very good?

4 A. I did.

5 Q. And that was Dr. Yang?

6 A. Yes.

7 Q. Now, when you were first approached by the State about
8 being involved in the case, it was not one of the lawyers who
9 approached you, right?

10 A. Actually, first, I did get -- I think I got an e-mail
11 from -- I could be wrong about the exact history of the
12 timeline, but my impression was that I got an e-mail from
13 Ms. Pierce, and then I got an e-mail from Matthew Damschroder.
14 But I may not have answered her e-mail, or, you know, I didn't
15 get to it. And so it could be that she approached me first, or
16 it could be that he approached me first. I'm honestly not
17 sure.

18 Q. All right. But the first conversation you had was with
19 Mr. Damschroder, right?

20 A. I think what happened is, she called me and left a
21 message on my voice-mail at school, but it was during a period
22 of break, and so I didn't check it for a long time. Then I
23 finally got back to her, and she was like, Well, you -- and so,
24 so, yeah, I think she first approached me, and then Damschroder
25 approached me.

1 Q. Okay.

2 A. Sorry about that.

3 Q. But Mr. Damschroder is the one you actually had the
4 first conversation with, right?

5 A. Yeah, I think so.

6 Q. And you had --

7 A. Probably.

8 Q. I'm sorry?

9 A. Probably. I mean, honestly, I'm not sure.

10 Q. And the two of you got lunch?

11 A. Correct.

12 Q. And you had previously done paid consulting work for
13 Franklin County when Mr. Damschroder was Director of the
14 Franklin County Board of Elections, right?

15 A. Correct.

16 Q. And between when you'd done that work for Franklin
17 County and when you got lunch with Mr. Damschroder, the two of
18 you had not spoken, right?

19 A. I don't think we spoke, but I think we corresponded via
20 e-mail.

21 Q. And when you got lunch, you talked about your recent
22 research on waiting lines in the electoral context, right?

23 A. Yes.

24 Q. And you told him that you'd actually been planning to
25 contact him because you thought you were about ready to

1 operationalize some of the work you had been doing, right?

2 A. Correct.

3 Q. And it was then, and it still is, your hope to work with
4 the State of Ohio to implement some of the work that you and
5 others have been doing; is that right?

6 A. Yes, and other states, too.

7 Q. And that method that you're trying to get people to
8 adopt, that uses simulation, right?

9 A. I mean, the one that I'm currently planning, I mean,
10 yes, it does. But, honestly, whether we finally push people
11 towards simulation or push people towards Equation 3 in my
12 report, it's not for sure.

13 Q. And doing that sort of -- doing an allocation for a
14 state would provide very fertile ground for research papers,
15 right?

16 A. I mean, it would be -- it would be even more
17 than -- yes, it would. I'd say yes.

18 Q. You were going to say it's more than that?

19 A. It could be more -- I mean, it's more important than
20 -- I mean, research papers are important, but trying to help
21 the world is more important.

22 Q. And you know that Mr. Damschroder is the Chief of Staff
23 to the Secretary of State, right?

24 A. I actually didn't know that that was his title. I
25 thought he was just Assistant Secretary of State.

1 Q. You knew he was a senior official; is that fair?

2 A. I knew -- yes. I guess that counts as senior.

3 MR. KAUL: All right. No further questions.

4 - - -

5 REDIRECT EXAMINATION

6 BY MS. PIERCE:

7 Q. Dr. Allen, I'm going to take you all the way back to the
8 beginning of your cross-examination.

9 You mentioned that you authored an expert report, or
10 expert reports, I think, plural, in recent North Carolina
11 litigation, right?

12 A. Yes.

13 Q. You personally authored those reports, right?

14 A. Yes.

15 Q. And did you also author the report you submitted in this
16 case?

17 A. Yes.

18 Q. Okay. Is there anything in your North Carolina reports
19 that are inconsistent with your conclusions in this case?

20 A. I don't think so, no.

21 Q. When does early voting end in North Carolina in relation
22 to election day?

23 A. My impression is that there is a gap in time between the
24 two, whereas, here, there is none.

25 Q. Is there anything about the new DRE provisioning law

1 that would prevent counties from exceeding that minimum number?

2 A. No.

3 Q. Is there anything that would prevent counties from using
4 your superior allocation methods to allocate voting machines on
5 election day?

6 A. No.

7 Q. Is there anything that would prevent counties from
8 taking into consideration variable ballot lengths among their
9 precincts?

10 A. No.

11 Q. In the short run, are you aware of any DRE counties in
12 Ohio that will be reducing their DRE machine stock?

13 A. No.

14 Q. So they will have the same number of DRE machines to
15 allocate on election day, then, as they have had in the past?

16 A. The ones that I am aware of, that is true, unless there
17 is some unexpected attrition of machines.

18 Q. Do you know anything about the competitiveness of the
19 races in 2010 in Ohio versus the competitiveness of the races
20 in 2014 in Ohio?

21 A. Yeah. So, I mean, not being a political expert, but
22 just being someone who is interested in public policy, the
23 races in 2014 were very uncompetitive. And that was a very low
24 turnout election around the country; whereas, in 2010, they
25 were -- they were -- there was considerably more interest.

1 And, in fact, surprisingly, in 2015, there was more turnout
2 than in 2014.

3 Q. And why did you use queuing theory, instead of
4 simulation, in this case?

5 A. So, I -- I thought about both, and I thought about the
6 nature of the need here. And one of the -- so, also, I'm
7 working by myself. And that is a concern. And if you do work,
8 complicated calculation, particularly with simulation, the
9 opportunity for mistakes is not -- something to consider. But
10 I also thought about the need, or desire, to try and get a
11 transparent formula and talk about what an ideal allocation
12 would be. And one of the unfortunate aspects of discrete event
13 simulation and agent-based models and Markov chains, too, is
14 they don't give you this nice, intuitive equation that you can
15 then say, okay, that is, roughly speaking, ideal. And so that
16 was one of the needs in this case. And so that's why I used
17 it.

18 MS. PIERCE: Just one second, Your Honor.

19 Thank you, Dr. Allen. No further questions.

20 THE COURT: Josh?

21 MR. KAUL: Nothing further, Your Honor.

22 THE COURT: Doctor, thank you so much. It's been an
23 interesting afternoon.

24 THE WITNESS: Well, thank you very much, Judge Watson.

25 THE COURT: You may step down.

1 THE WITNESS: Thank you.

2 THE COURT: And you don't anticipate recalling him,
3 correct?

4 MS. PIERCE: No, Your Honor.

5 THE COURT: All right. Very good. Thank you. Bless
6 you.

7 So who's next on the hit parade?

8 MS. PIERCE: We don't have any other witnesses here
9 today, Your Honor.

10 THE COURT: Doggone it.

11 MS. PIERCE: We're disappointed, too.

12 THE COURT: You don't?

13 Okay. So, tomorrow morning, then, with your expert?

14 MR. SPIVA: It's actually a fact witness, Your Honor.

15 THE COURT: Who is it?

16 MR. SPIVA: Brad Cromes, who is on the Portage County
17 Board of Elections. He should be fairly short.

18 THE COURT: All right. And then what do you have?

19 MR. VOIGT: Your Honor, we have Ms. Poland and
20 Mr. Ward and Sean Trende, and also Matt Damschroder, as well.
21 And I think we're planning on having Matt, Mr. Damschroder,
22 come in on Wednesday. I can't imagine we would be able to get
23 to him tomorrow, and Sherry Poland on Wednesday, too.

24 THE COURT: Very good.

25 MR. VOIGT: If --

1 THE COURT: Go ahead.

2 MR. VOIGT: With the Court's permission, I wanted
3 to -- I had promised a citation, earlier --

4 THE COURT: Yes.

5 MR. VOIGT: -- related to -- we discussed the
6 distances to the various declarants. And Mr. Conover's
7 declaration that sets forth the as-the-crow-flies distances is
8 Defendants' Exhibit 71. I didn't have that handy when I spoke
9 earlier.

10 THE COURT: All right.

11 MR. VOIGT: And if I may just add two comments that I
12 neglected to mention earlier about that -- I think I already
13 mentioned this earlier in the proceeding in a prior day, but I
14 didn't mention it today; but those depositions were not
15 designated as trial depositions. And, as a result, the way we
16 defended the depositions differed from the way they would have
17 been had they been trial depositions. We did not cross-examine
18 as we would have had they been designated as trial depositions.

19 THE COURT: Have you made an effort to bring these
20 people in?

21 MR. SPIVA: Not the ones that we're trying to
22 designate, I think, for the most part, Your Honor. But what I
23 would say is that, you know, again, Rule 32 is clear. I mean,
24 it doesn't require it to be designated as trial depositions.
25 As a matter of fact, they did actually do a fair amount of

1 cross-examination, or examination, of a number of these
2 witnesses. But, I mean, we ended up taking, I think, 27, 28,
3 depositions of the declarants.

4 We have brought in, I think, some of them. And others
5 who weren't declarants, the defendants are bringing in some of
6 them. But at some point -- you know, we didn't want this trial
7 to become a three-week trial, Your Honor. And given that the
8 rule is clear that, if they're unavailable, that, you know, it
9 is admissible as evidence, we didn't see the need to do that.

10 THE COURT: I'll let you know in the morning.

11 MR. SPIVA: Okay. Thank you.

12 THE COURT: Okay.

13 MR. SPIVA: Your Honor, one thing -- I think I had
14 mentioned that I could provide a legal citation about the
15 distance between Google distance versus the as-the-crow-flies
16 distance. I'm happy to do that, either e-mail it to you
17 tonight or --

18 THE COURT: Let's do that.

19 MR. SPIVA: Okay. All right. Thank you, Your Honor.

20 THE COURT: Make sure they get it, too.

21 MR. SPIVA: Yes, absolutely.

22 THE COURT: All right.

23 (Proceedings were adjourned for the day at 4:27 p.m.)

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C E R T I F I C A T E

We, Lahana DuFour and Denise Errett, do hereby certify that the foregoing is a true and correct transcript of the proceedings before the Honorable Michael H. Watson, Judge, in the United States District Court, Southern District of Ohio, Eastern Division, on the date indicated, reported by us in shorthand and transcribed by us or under our supervision.

s/Lahana DuFour
Lahana DuFour, RMR, CRR
Official Federal Court Reporter

s/Denise Errett
Denise Errett, FCRR
Official Federal Court Reporter