I, Jowei Chen, under penalty of perjury, declare the following:

1. I was asked by plaintiffs' counsel to use the following process to select one of the 3,000 North Carolina congressional maps I previously generated in this litigation as a demonstration plan for purposes of establishing standing: (1) Start with the 1,000 maps in Simulation Set 2, all of which protect more incumbents than the 2016 Plan and split fewer counties. (2) Of these maps, identify the ones that contain a district with a Black Voting Age Population above 40%. (3) Of these maps, identify the ones that contain seven Republican districts and six Democratic districts using Dr. Thomas Hofeller's seven-election average (and thus an efficiency gap near zero). (4) Of these maps, identify the one that has the most compact districts, on average, considering both Reock and Polsby-Popper compactness. In calculating the Black Voting Age Population of each district, I include only individuals who identify as single-race African-American.

2. This process led to the selection of Plan 297 in Simulation Set 2 (hereinafter: Plan 2-297). Maps of Plan 2-297 and the 2016 Plan are below, in which each district in each plan is shaded based on Dr. Hofeller's seven-election average. Individual maps of each of Plan 2-297's and the 2016 Plan's districts (also shaded using Dr. Hofeller's seven-election average) are included at the end of this declaration.
Enacted 2016 Plan (SB 2)

13 Split Counties:
- Bladen (Districts 7 and 9)
- Buncombe (Districts 10 and 11)
- Catawba (Districts 5 and 10)
- Cumberland (Districts 8 and 9)
- Durham (Districts 1 and 4)
- Guilford (Districts 6 and 13)
- Iredell (Districts 10 and 13)
- Johnston (Districts 2 and 7)
- Mecklenburg (Districts 9 and 12)
- Pitt (Districts 1 and 3)
- Rowan (Districts 8 and 13)
- Wake (Districts 2 and 4)
- Wilson (Districts 1 and 2)

12 Split VTD's:
- P25 (Bladen Cty.)
- 14.2 (Buncombe Cty.)
- 29 (Catawba Cty.)
- CC08 (Cumberland Cty.)
- G71 (Guilford Cty.)
- FT (Iredell Cty.)
- PR26 (Johnston Cty.)
- 002 (Mecklenburg Cty.)
- 1509 (Pitt Cty.)
- 28 (Rowan Cty.)
- 16-05 (Wake Cty.)
- PRTA (Wilson Cty.)
3. Like all of the maps in Simulation Set 2, Plan 2-297 protects 13 incumbents (compared to 11 in the 2016 Plan), splits 12 counties (compared to 13 in the 2016 Plan), splits 12 VTDs (the same as the 2016 Plan), and contains districts that are equal in population to within one person. Plan 2-297 further has an average Reock compactness score of 0.464 (compared to 0.337 in the 2016 Plan) and an average Polsby-Popper compactness score of 0.301 (compared to 0.242 in the 2016 Plan).

4. The below table provides additional information about each district in Plan 2-297: (1) its population; (2) its Black Voting Age Population share; (3) its partisan score using Dr. Hofeller's seven-election average; (4) its Reock compactness score; and (5) its Polsby-Popper compactness score.

<table>
<thead>
<tr>
<th>District</th>
<th>Total Population</th>
<th>Black Voting Age Population</th>
<th>District's Republican Vote Share (Hofeller Formula)</th>
<th>Reock Score</th>
<th>Polsby-Popper Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>733,498</td>
<td>3.88%</td>
<td>52.62%</td>
<td>0.320</td>
<td>0.324</td>
</tr>
<tr>
<td>2</td>
<td>733,499</td>
<td>10.16%</td>
<td>63.62%</td>
<td>0.553</td>
<td>0.325</td>
</tr>
<tr>
<td>3</td>
<td>733,499</td>
<td>27.79%</td>
<td>45.82%</td>
<td>0.516</td>
<td>0.237</td>
</tr>
<tr>
<td>4</td>
<td>733,499</td>
<td>19.06%</td>
<td>57.77%</td>
<td>0.574</td>
<td>0.448</td>
</tr>
<tr>
<td>5</td>
<td>733,498</td>
<td>8.53%</td>
<td>63.86%</td>
<td>0.359</td>
<td>0.276</td>
</tr>
<tr>
<td>6</td>
<td>733,499</td>
<td>22.60%</td>
<td>49.30%</td>
<td>0.522</td>
<td>0.320</td>
</tr>
<tr>
<td>7</td>
<td>733,499</td>
<td>22.99%</td>
<td>51.49%</td>
<td>0.481</td>
<td>0.248</td>
</tr>
<tr>
<td>8</td>
<td>733,499</td>
<td>28.24%</td>
<td>46.43%</td>
<td>0.396</td>
<td>0.245</td>
</tr>
<tr>
<td>9</td>
<td>733,498</td>
<td>18.75%</td>
<td>52.18%</td>
<td>0.551</td>
<td>0.300</td>
</tr>
<tr>
<td>10</td>
<td>733,499</td>
<td>22.75%</td>
<td>47.40%</td>
<td>0.393</td>
<td>0.249</td>
</tr>
<tr>
<td>11</td>
<td>733,498</td>
<td>22.60%</td>
<td>36.78%</td>
<td>0.418</td>
<td>0.269</td>
</tr>
<tr>
<td>12</td>
<td>733,499</td>
<td>41.42%</td>
<td>40.84%</td>
<td>0.465</td>
<td>0.327</td>
</tr>
<tr>
<td>13</td>
<td>733,499</td>
<td>20.79%</td>
<td>54.43%</td>
<td>0.490</td>
<td>0.343</td>
</tr>
</tbody>
</table>
5. Plaintiffs' counsel also provided me with a list of North Carolina precincts, in each of which either an individual plaintiff or a member of the League of Women Voters of North Carolina lives. The below table specifies the following information about each of these precincts: (1) in which district in the 2016 Plan the precinct is located; (2) what this district's partisan score is using Dr. Hofeller's seven-election average; (3) in which district in Plan 2-297 the precinct is located and (4) what this district's partisan score is using Dr. Hofeller's seven-election average.
Table 2:
Precincts in which League of Women Voters of North Carolina Plaintiffs and Members Reside:

<table>
<thead>
<tr>
<th>County:</th>
<th>Precinct Name:</th>
<th>Precinct’s District in Enacted Plan (SB 2):</th>
<th>Republican Vote Share of Precinct’s District in Enacted Plan (Hofeller Formula):</th>
<th>Precinct’s District in Plan 297 of Simulation Set 2:</th>
<th>Republican Vote Share of Precinct’s District in Plan 297 of Simulation Set 2 (Hofeller Formula):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington</td>
<td>PLYMOUTH 1</td>
<td>1</td>
<td>31.17%</td>
<td>12</td>
<td>40.84%</td>
</tr>
<tr>
<td>Martin</td>
<td>JAMESVILLE</td>
<td>1</td>
<td>31.17%</td>
<td>12</td>
<td>40.84%</td>
</tr>
<tr>
<td>Wake</td>
<td>20-11</td>
<td>2</td>
<td>56.20%</td>
<td>11</td>
<td>36.78%</td>
</tr>
<tr>
<td>Wake</td>
<td>01-04</td>
<td>4</td>
<td>37.68%</td>
<td>10</td>
<td>47.40%</td>
</tr>
<tr>
<td>Forsyth</td>
<td>074</td>
<td>5</td>
<td>56.15%</td>
<td>6</td>
<td>49.30%</td>
</tr>
<tr>
<td>Guilford</td>
<td>NCGR2</td>
<td>6</td>
<td>54.46%</td>
<td>6</td>
<td>49.30%</td>
</tr>
<tr>
<td>Wayne</td>
<td>13</td>
<td>7</td>
<td>53.42%</td>
<td>12</td>
<td>40.84%</td>
</tr>
<tr>
<td>Moore</td>
<td>EUREKA / WHISPERING PINES</td>
<td>8</td>
<td>55.13%</td>
<td>8</td>
<td>46.43%</td>
</tr>
<tr>
<td>Mecklenburg</td>
<td>86</td>
<td>9</td>
<td>56.04%</td>
<td>3</td>
<td>45.82%</td>
</tr>
<tr>
<td>Catawba</td>
<td>WEST NEWTON</td>
<td>10</td>
<td>58.17%</td>
<td>2</td>
<td>63.62%</td>
</tr>
<tr>
<td>Burke</td>
<td>DREXEL 01</td>
<td>11</td>
<td>57.11%</td>
<td>2</td>
<td>63.62%</td>
</tr>
<tr>
<td>Mecklenburg</td>
<td>20</td>
<td>12</td>
<td>36.63%</td>
<td>3</td>
<td>45.82%</td>
</tr>
<tr>
<td>Guilford</td>
<td>G31</td>
<td>13</td>
<td>53.71%</td>
<td>6</td>
<td>49.30%</td>
</tr>
</tbody>
</table>
6. While I have carried out this analysis with respect to Plan 2-297, the results would be very similar under any of the maps I generated with seven Republican districts and six Democratic districts using Dr. Hofeller's seven-election average. Under any of these maps, many Democratic voters, in many parts of North Carolina, would be placed in districts with significantly different partisan compositions than their districts under the 2016 Plan.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.

This 11th day of July, 2018.

[Signature]
Jowei Chen
District 1 of Plan 2–297
District 2 of Plan 2–297

Legend:

🌟 PRECINCT: 40_WEST NEWTON (CATAWBA COUNTY)
⚠️ PRECINCT: 0001_DREXEL 01 (BURKE COUNTY)
District 4 of Plan 2–297

- Hudson
- Pittenger
- McHenry
District 5 of Plan 2–297

- Asheville
- Surry
- Yadkin
- Rowan
- Davie
- Iredell
- Mecklenburg
- Forsyth
- Adams

District 2
- Alleghany
- Watauga
- Wilkes
- Surry
- Yadkin

District 3
- Forsyth
- Davidson
- Davidson

District 4
- Rowan
- Davie
- Iredell

District 5
- Surry
- Davidson
- Alamance

District 6
- Stokes
- Rockingham
- Wilkes

Counties:
- Burke
- Catawba
- Cleveland
- Cabarrus
- Gaston
- Lincoln
- McDowell
- Avery
- McDowell
- Polk
- Rutherford
- Catawba
- Cleveland
- Cabarrus
- Gaston
- Lincoln
- McDowell
- Avery
- McDowell
- Polk
- Rutherford
District 7 of Plan 2–297

6
- Stokes
- Forsyth
- Davidson
- Davie
- Union
- Union

7
- Rockingham
- Caswell
- Person
- Alamance
- Orange
- Alamance

8
- Randolph
- Chatham
- Lee
- Lee
- Hoke
- Robeson

9
- Person
- Union
- Stanly
- Moore
- Cumberland
- Cumberland

10
- Person
- Union
- Stanly
- Moore
- Cumberland
- Cumberland

11
- Forsyth
- Davie
- Union
- Union
- Orange
- Orange

12
- Forsyth
- Davie
- Union
- Union
- Orange
- Orange

13
- Forsyth
- Davie
- Union
- Union
- Orange
- Orange

14
- Forsyth
- Davie
- Union
- Union
- Orange
- Orange
Legend:

★ PRECINCT: EUR–WP_EUREKA/WHISPERING PINES (MOORE COUNTY)
District 12 of Plan 2−297

Legend:

- **PRECINCT: J_JAMESVILLE (MARTIN COUNTY)**
- **PRECINCT: 13 (WAYNE COUNTY)**
- **PRECINCT: P1_PLYMOUTH 1 (WASHINGTON COUNTY)**
District 1 of the 2016 Enacted Plan

Legend:

🌟 PRECINCT: P1_PLYMOUTH 1 (WASHINGTON COUNTY)
△ PRECINCT: J_JAMESVILLE (MARTIN COUNTY)
District 2 of the 2016 Enacted Plan

Legend:

[*] PRECINCT: 20–11 (WAKE COUNTY)
District 3 of the 2016 Enacted Plan
District 4 of the 2016 Enacted Plan

Legend:

* PRECINCT: 01–04 (WAKE COUNTY)
District 6 of the 2016 Enacted Plan

Legend:

PRECINCT: NCG2R (GUILFORD COUNTY)
District 7 of the 2016 Enacted Plan

Legend:

* PRECINCT: 13 (WAYNE COUNTY)
Legend:

🌟 PRECINCT: 40_WEST NEWTON (CATAWBA COUNTY)
District 11 of the 2016 Enacted Plan

Legend:

🌟 PRECINCT: 0001_DREXEL 01 (BURKE COUNTY)
District 12 of the 2016 Enacted Plan

Legend:

* PRECINCT: 020 (MECKLENBURG COUNTY)
District 13 of the 2016 Enacted Plan

Legend:

PRECINCT: G31 (GUILFORD COUNTY)