

# EXHIBIT E

**Supplemental Report of Dr. Kenneth R. Mayer**

*Johnson, et al., v. WEC, et al.*, No. 2021AP1450-OA  
January 7, 2022

This supplemental report provides plan metrics for the BLOC Assembly and Senate plans that included the corrections necessitated by a small number of stray Census Block assigned to incorrect districts. None of my substantive conclusions change as a result of the corrections. I do not re-report the BVAP percentages for the Black opportunity districts that were listed in my original report because those districts did not change.

**1. Overall Summary for Corrected BLOC Assembly plan:**

Population Deviation:	1.32% (unchanged)
Compactness (Reock)	0.38 (unchanged)
Core Population Retention:	84.3% (84.2% in original report)

The assembly plan has 78 municipal splits (24 cities, 42 towns, and 12 villages), and 53 county splits. These totals are reported in the tables below.

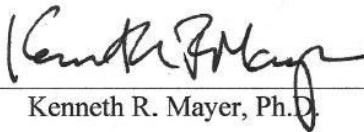
**2. Overall Summary for Corrected BLOC Senate plan**

Population Deviation:	0.96% (unchanged)
Compactness (Reock):	0.41 (unchanged)
Core Population Retention:	89.6% (unchanged)
Delayed Senate Vote	179,677 (48 additional people)

The Senate plan has 53 municipal splits (19 cities, 24 towns, and 10 villages) and 42 county splits. These totals also reported in the tables below.

In addition to plan splits, district by district plan metrics, including population, core retention, and compactness figures are reported below.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 7, 2022.

  
Kenneth R. Mayer, Ph.D.

<b>BLOC Assembly Population Deviation</b>			
<b>District</b>	<b>Population</b>	<b>Absolute Deviation</b>	<b>% Deviation</b>
1	59,834	301	0.51%
2	59,840	307	0.52%
3	59,689	156	0.26%
4	59,284	-249	-0.42%
5	59,925	392	0.66%
6	59,881	348	0.58%
7	59,408	-125	-0.21%
8	59,362	-171	-0.29%
9	59,598	65	0.11%
10	59,202	-331	-0.56%
11	59,154	-379	-0.64%
12	59,325	-208	-0.35%
13	59,857	324	0.54%
14	59,149	-384	-0.65%
15	59,846	313	0.53%
16	59,287	-246	-0.41%
17	59,473	-60	-0.10%
18	59,685	152	0.26%
19	59,478	-55	-0.09%
20	59,235	-298	-0.50%
21	59,592	59	0.10%
22	59,846	313	0.53%
23	59,591	58	0.10%
24	59,542	9	0.02%
25	59,153	-380	-0.64%
26	59,369	-164	-0.28%
27	59,213	-320	-0.54%
28	59,498	-35	-0.06%
29	59,768	235	0.39%
30	59,623	90	0.15%
31	59,266	-267	-0.45%
32	59,838	305	0.51%
33	59,506	-27	-0.05%
34	59,734	201	0.34%
35	59,317	-216	-0.36%
36	59,778	245	0.41%
37	59,820	287	0.48%

38	59,595	62	0.10%
39	59,788	255	0.43%
40	59,562	29	0.05%
41	59,913	380	0.64%
42	59,447	-86	-0.14%
43	59,573	40	0.07%
44	59,312	-221	-0.37%
45	59,208	-325	-0.55%
46	59,758	225	0.38%
47	59,799	266	0.45%
48	59,260	-273	-0.46%
49	59,492	-41	-0.07%
50	59,225	-308	-0.52%
51	59,562	29	0.05%
52	59,667	134	0.23%
53	59,215	-318	-0.53%
54	59,159	-374	-0.63%
55	59,436	-97	-0.16%
56	59,288	-245	-0.41%
57	59,863	330	0.55%
58	59,783	250	0.42%
59	59,731	198	0.33%
60	59,518	-15	-0.03%
61	59,842	309	0.52%
62	59,294	-239	-0.40%
63	59,511	-22	-0.04%
64	59,173	-360	-0.60%
65	59,177	-356	-0.60%
66	59,456	-77	-0.13%
67	59,266	-267	-0.45%
68	59,328	-205	-0.34%
69	59,307	-226	-0.38%
70	59,592	59	0.10%
71	59,501	-32	-0.05%
72	59,141	-392	-0.66%
73	59,766	233	0.39%
74	59,710	177	0.30%
75	59,766	233	0.39%
76	59,485	-48	-0.08%
77	59,449	-84	-0.14%
78	59,550	17	0.03%
79	59,431	-102	-0.17%

80	59,347	-186	-0.31%
81	59,618	85	0.14%
82	59,397	-136	-0.23%
83	59,323	-210	-0.35%
84	59,879	346	0.58%
85	59,467	-66	-0.11%
86	59,902	369	0.62%
87	59,751	218	0.37%
88	59,171	-362	-0.61%
89	59,530	-3	-0.01%
90	59,879	346	0.58%
91	59,732	199	0.33%
92	59,444	-89	-0.15%
93	59,448	-85	-0.14%
94	59,494	-39	-0.07%
95	59,365	-168	-0.28%
96	59,706	173	0.29%
97	59,800	267	0.45%
98	59,910	377	0.63%
99	59,690	157	0.26%

<b>BLOC Assembly Core Retention</b>		
<b>District</b>	<b>Largest Pop</b>	<b>Core Retention %</b>
1	59,834	100.0%
2	51,217	85.6%
3	56,972	95.5%
4	58,716	99.0%
5	49,272	82.2%
6	41,948	70.1%
7	49,384	83.1%
8	53,999	91.0%
9	51,976	87.2%
10	28,481	48.1%
11	31,537	53.3%
12	35,057	59.1%
13	38,847	64.9%
14	21,248	35.9%
15	52,244	87.3%
16	30,840	52.0%
17	35,423	59.6%
18	42,937	71.9%
19	39,224	66.0%
20	44,185	74.6%
21	58,547	98.3%
22	36,562	61.1%
23	41,504	69.7%
24	26,576	44.6%
25	57,986	98.0%
26	42,655	71.9%
27	42,107	71.1%
28	58,724	98.7%
29	56,089	93.8%
30	59,056	99.1%
31	29,072	49.1%
32	39,194	65.5%
33	49,318	82.9%
34	59,734	100.0%
35	55,795	94.1%
36	50,878	85.1%
37	39,801	66.5%

38	29,316	49.2%
39	32,079	53.7%
40	48,929	82.2%
41	50,484	84.3%
42	49,701	83.6%
43	55,399	93.0%
44	55,314	93.3%
45	28,592	48.3%
46	48,337	80.9%
47	54,781	91.6%
48	45,172	76.2%
49	57,869	97.3%
50	57,230	96.6%
51	43,525	73.1%
52	54,006	90.5%
53	56,713	95.8%
54	57,299	96.9%
55	59,421	100.0%
56	56,717	95.7%
57	57,937	96.8%
58	58,933	98.6%
59	44,572	74.6%
60	41,068	69.0%
61	54,315	90.8%
62	58,422	98.5%
63	57,902	97.3%
64	54,359	91.9%
65	53,481	90.4%
66	56,026	94.2%
67	59,266	100.0%
68	57,390	96.7%
69	57,131	96.3%
70	57,556	96.6%
71	56,861	95.6%
72	55,010	93.0%
73	57,600	96.4%
74	59,010	98.8%
75	55,811	93.4%
76	59,485	100.0%
77	59,347	99.8%
78	59,299	99.6%
79	51,589	86.8%

80	39,547	66.6%
81	50,437	84.6%
82	41,412	69.7%
83	30,355	51.2%
84	48,515	81.0%
85	58,654	98.6%
86	59,249	98.9%
87	57,051	95.5%
88	59,149	100.0%
89	57,642	96.8%
90	57,912	96.7%
91	59,380	99.4%
92	57,324	96.4%
93	56,288	94.7%
94	59,494	100.0%
95	58,704	98.9%
96	56,858	95.2%
97	51,789	86.6%
98	53,396	89.1%
99	52,791	88.4%



<b>BLOC Assembly Compactness</b>	
<b>District</b>	<b>Reock</b>
1	0.50
2	0.34
3	0.42
4	0.32
5	0.42
6	0.60
7	0.29
8	0.47
9	0.36
10	0.28
11	0.26
12	0.49
13	0.28
14	0.49
15	0.35
16	0.53
17	0.23
18	0.23
19	0.27
20	0.35
21	0.30
22	0.22
23	0.19
24	0.36
25	0.30
26	0.38
27	0.24
28	0.45
29	0.33
30	0.42
31	0.54
32	0.41
33	0.33
34	0.36
35	0.48
36	0.44

37	0.33
38	0.30
39	0.24
40	0.46
41	0.40
42	0.36
43	0.42
44	0.36
45	0.41
46	0.39
47	0.25
48	0.35
49	0.36
50	0.35
51	0.49
52	0.52
53	0.45
54	0.44
55	0.48
56	0.33
57	0.38
58	0.38
59	0.29
60	0.56
61	0.28
62	0.31
63	0.33
64	0.22
65	0.28
66	0.32
67	0.46
68	0.60
69	0.47
70	0.24
71	0.54
72	0.51
73	0.36
74	0.48
75	0.33
76	0.18
77	0.56
78	0.49

79	0.35
80	0.39
81	0.46
82	0.51
83	0.48
84	0.26
85	0.41
86	0.29
87	0.34
88	0.30
89	0.39
90	0.45
91	0.42
92	0.40
93	0.27
94	0.50
95	0.27
96	0.39
97	0.49
98	0.55
99	0.36

<b>BLOC MCD Splits - Assembly</b>			
<b>County</b>	<b>C/T/V</b>	<b>MCD Name</b>	<b>Number of Districts</b>
Brown	V	Bellevue	2
Waukesha	C	Brookfield	2
Racine	C	Burlington	2
Brown	C	De Pere	3
Walworth	C	Delavan	2
Eau Claire	C	Eau Claire	3
Dane	C	Fitchburg	2
Milwaukee	C	Franklin	3
Brown	C	Green Bay	4
Milwaukee	C	Greenfield	3
Rock	C	Janesville	2
Kenosha	C	Kenosha	3
Dane	C	Madison	8
Wood	C	Marshfield	2
Ozaukee	C	Mequon	2
Milwaukee	C	Milwaukee	14
Waukesha	C	New Berlin	2
Waukesha	C	Oconomowoc	3
Winnebago	C	Oshkosh	2
Racine	C	Racine	2
Sheboygan	C	Sheboygan Falls	2
Waukesha	C	Waukesha	3
Milwaukee	C	Wauwatosa	4
Milwaukee	C	West Allis	3
Outagamie	C	Appleton	4
La Crosse	T	Barre	2
Washington	T	Barton	2
Waukesha	T	Brookfield	2
Portage	T	Carson	2
Ozaukee	T	Cedarburg	3
Winnebago	T	Clayton	2
Jefferson	T	Concord	2
Waukesha	T	Eagle	2
Eau Claire	T	Eau Claire	2
Fond du Lac	T	Eden	2
Washington	T	Erin	2

Fond du Lac	T	Fond du Lac	2
Waukesha	T	Genesee	3
Ozaukee	T	Grafton	2
Outagamie	T	Grand Chute	2
Outagemie	T	Greenville	2
Washington	T	Jackson	2
Jefferson	T	Koshkonong	2
Manitowoc	T	Kossuth	2
Brown	T	Ledgeview	2
Waukesha	T	Lisbon	3
Dane	T	Madison	2
Manitowoc	T	Meeme	2
Fond du Lac	T	Metomen	2
Dane	T	Middleton	2
Waukesha	T	Mukwonago	2
Waukesha	T	Muskego	2
La Crosse	T	Onalaska	2
Winnebago	T	Oshkosh	2
Dane	T	Pleasant Springs	2
Winnebago	T	Poygan	2
Fond du Lac	T	Ripon	2
Dodge	T	Rubicon	2
La Crosse	T	Shelby	2
Kenosha	T	Somers	2
Washington	T	Trenton	2
Eau Claire	T	Washington	2
Waukesha	T	Waukesha	3
Marathon	T	Weston	2
Sheboygan	T	Wilson	2
Winnebago	T	Winneconne	2
Brown	T	Wrightstown	2
Brown	V	Bellevue	2
Walworth	V	Bloomfield	2
Winnebago	V	Fox Crossing	2
Brown	V	Howard	3
Outagamie	V	Little Chute	2
Dodge	V	Lomira	2
Waukesha	V	Menomonee Falls	3
Racine	V	Mount Pleasant	3

Kenosha	V	Pleasant Prairie	2
Washington	V	Richfield	2
Kenosha	V	Somers	2

<b>BLOC County Splits - Assembly</b>	
<b>County</b>	<b>Number of Districts</b>
Adams	3
Brown	8
Burnett	2
Calumet	5
Chippewa	3
Clark	3
Columbia	3
Dane	14
Dodge	6
Douglas	2
Dunn	4
Eau Claire	3
Fond du Lac	6
Forest	2
Green	3
Iowa	2
Jackson	3
Jefferson	5
Kenosha	4
La Crosse	3
Lafayette	2
Manitowoc	4
Marathon	5
Marinette	2
Marquette	2
Milwaukee	18
Monroe	3
Oconto	3
Oneida	2
Outagamie	7
Ozaukee	4
Pepin	2
Pierce	2
Polk	2
Portage	3
Racine	6

Richland	3
Rock	4
Sauk	4
Sawyer	2
Shawano	4
Sheboygan	4
St. Croix	5
Trempealeau	2
Vilas	2
Walworth	7
Washburn	2
Washington	6
Waukesha	14
Waupaca	2
Waushara	3
Winnebago	7
Wood	4



<b>BLOC Senate Population Deviation</b>			
<b>District</b>	<b>Population</b>	<b>Absolute Deviation</b>	<b>% Deviation</b>
1	179363	765	0.43%
2	179090	492	0.28%
3	178368	-230	-0.13%
4	177681	-917	-0.51%
5	178852	254	0.14%
6	178445	-153	-0.09%
7	178305	-293	-0.16%
8	178979	381	0.21%
9	177735	-863	-0.48%
10	178889	291	0.16%
11	178610	12	0.01%
12	178829	231	0.13%
13	179203	605	0.34%
14	178922	324	0.18%
15	178093	-505	-0.28%
16	178817	219	0.12%
17	178279	-319	-0.18%
18	178041	-557	-0.31%
19	178587	-11	-0.01%
20	179032	434	0.24%
21	178647	49	0.03%
22	177806	-792	-0.44%
23	177901	-697	-0.39%
24	178234	-364	-0.20%
25	179242	644	0.36%
26	178484	-114	-0.06%
27	178396	-202	-0.11%
28	178599	1	0.00%
29	179120	522	0.29%
30	178580	-18	-0.01%
31	178624	26	0.01%
32	178565	-33	-0.02%
33	179400	802	0.45%

<b>BLOC Senate Core Retention</b>		
<b>District</b>	<b>Largest Population</b>	<b>% Core Retention</b>
1	172935	96.42%
2	165375	92.34%
3	168344	94.38%
4	112385	63.25%
5	128094	71.62%
6	123666	69.30%
7	154583	86.70%
8	123555	69.03%
9	160570	90.34%
10	178115	99.57%
11	142520	79.79%
12	169929	95.02%
13	144101	80.41%
14	156980	87.74%
15	142540	80.04%
16	162494	90.87%
17	160815	90.20%
18	170533	95.78%
19	178587	100.00%
20	145544	81.29%
21	171511	96.01%
22	171115	96.24%
23	175563	98.69%
24	173072	97.10%
25	175494	97.91%
26	178131	99.80%
27	155863	87.37%
28	148697	83.26%
29	175784	98.14%
30	176670	98.93%
31	175450	98.22%
32	177642	99.48%
33	166559	92.84%

<b>BLOC Senate Compactness</b>	
<b>District</b>	<b>Reock</b>
1	0.30
2	0.56
3	0.66
4	0.34
5	0.40
6	0.37
7	0.47
8	0.28
9	0.39
10	0.37
11	0.40
12	0.53
13	0.46
14	0.34
15	0.38
16	0.43
17	0.39
18	0.51
19	0.49
20	0.43
21	0.48
22	0.46
23	0.42
24	0.35
25	0.39
26	0.46
27	0.33
28	0.38
29	0.25
30	0.32
31	0.32
32	0.45
33	0.54

<b>BLOC MCD Splits - Senate</b>			
<b>County</b>	<b>C/T/V</b>	<b>MCD Name</b>	<b>Districts</b>
Brown	V	Bellevue	2
Waukesha	C	Brookfield	2
Racine	C	Burlington	2
Brown	C	De Pere	2
Eau Claire	C	Eau Claire	2
Dane	C	Fitchburg	2
Milwaukee	C	Franklin	2
Brown	C	Green Bay	2
Milwaukee	C	Greenfield	3
Rock	C	Janesville	2
Dane	C	Madison	2
Wood	C	Marshfield	4
Ozaukee	C	Mequon	2
Milwaukee	C	Milwaukee	2
Waukesha	C	New Berlin	2
Waukesha	C	Oconomowoc	2
Racine	C	Racine	2
Fond du Lac	C	Ripon	2
Milwaukee	C	Wauwatosa	2
Milwaukee	C	West Allis	2
Waukesha	T	Brookfield	2
Ozaukee	T	Cedarburg	2
Jefferson	T	Concord	2
Waukesha	T	Eagle	3
Eau Claire	T	Eau Claire	2
Fond du Lac	T	Eden	2
Washington	T	Erin	2
Waukesha	T	Genesee	2
Ozaukee	T	Grafton	2
Jefferson	T	Koshkonong	2
Manitowoc	T	Kossuth	2
Brown	T	Ledgeview	2
Waukesha	T	Lisbon	2
Outagamie	T	Little Chute	2
Waukesha	T	Mukwonago	2
Dane	T	Pleasant Springs	2
Winnebago	T	Poygan	2
Dodge	T	Rubicon	2

Kenosha	T	Somers	2
Eau Claire	T	Washington	2
Waukesha	T	Waukesha	2
Sheboygan	T	Wilson	3
Winnebago	T	Winneconne	2
Brown	T	Wrightstown	2
Walworth	V	Bloomfield	2
Brown	V	Howard	3
Washington	V	Jackson	2
Dodge	V	Lomira	2
Waukesha	V	Menomonee Falls	2
Racine	V	Mount Pleasant	6
Kenosha	V	Pleasant Prairie	3
Washington	V	Richfield	2
Kenosha	V	Somers	2

<b>BLOC County Splits - Senate</b>	
<b>County</b>	<b>Number of Districts</b>
Adams	3
Brown	3
Burnett	2
Calumet	3
Chippewa	2
Clark	2
Columbia	3
Dane	6
Dodge	4
Dunn	4
Eau Claire	2
Fond du Lac	4
Green	3
Jackson	3
Jefferson	3
Kenosha	3
Manitowoc	2
Marathon	3
Marinette	2
Milwaukee	7
Monroe	3
Oconto	3
Outagamie	4
Ozaukee	3
Pierce	2
Polk	2
Racine	4
Rock	2
Sauk	2
Sawyer	2
Shawano	3

Sheboygan	2
St. Croix	3
Trempealeau	2
Vilas	2
Walworth	4
Washington	3
Waukesha	8
Waupaca	2
Waushara	2
Winnebago	3
Wood	3