

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

EAST ST. LOUIS BRANCH NAACP, *et al.*,

Plaintiffs,

v.

ILLINOIS STATE  
BOARD OF ELECTIONS, *et al.*,

Defendants.

**Civil Action No. 1:21-cv-05512**

**Circuit Judge Michael B. Brennan  
Chief District Judge Jon E. DeGuilio  
District Judge Robert M. Dow, Jr.**

**Three-Judge Court  
Pursuant to 28 U.S.C. § 2284(a)**

**Expert Report of Dr. Ryan D. Weichert**

**Professor of Geography  
University of Wisconsin-Eau Claire  
105 Garfield Ave.  
Eau Claire, WI 54701**

**Background and Qualifications**

I am a Professor of Geography at the University of Wisconsin-Eau Claire (UWEC). I have been employed at UWEC since August 2009 and have also been the Interim Director and Director of the First Year Experiences from May 2017 to August 2020. My formal education includes a B.S. (2000) in Geography from the University of Wisconsin-Eau Claire, a Masters of Applied Geography (M.A.G., 2002) in Geography from Texas State University, and a Ph.D. (2008) in Geography from the University of Nebraska-Lincoln.

For the past 13 years as a professor in Geography, my primary research and teaching experiences have focused on political/electoral geography with an emphasis in demographics, quantitative methods, and geospatial technologies. Electoral geographers are interested in understanding the spatial nature of elections. This research requires an experienced knowledge regarding political

cultures in the United States, EDI (equity, diversity, and inclusivity), demographics, and advanced expertise in geospatial technologies to aid in mapping and analyzing election-based data. In the past 13 years, I have published over twenty articles in journals, book chapters, and edited volumes on the above topics.

Recent articles highlighting these skills include analysis of elections in Wisconsin, examining the patterns and results of Hispanic voters, and analyzing over 2 million land parcels using geospatial technologies of second homeowners. Regarding redistricting, I both edited and contributed to the 2016 Atlas of Elections and was promoted to the Cartographic Editor of the forthcoming 2020 Atlas of Elections. Both editions had sections on redistricting. I also recently published a book chapter discussing the etymology of the many terms used in redistricting and gerrymandering studies. In 2019, I was invited to speak at Harvard at a conference about geography and redistricting, where I discussed the impact gerrymandering has in changing political culture. In 2020, I was awarded a book contract with Rowman and Littlefield to write a book on geography and redistricting. Specifically, this book examines how the overall discipline of geography can aid in understanding redistricting studies. This book is expected to be completed by 2023. Finally, I also published an article titled "Spatial Crime Displacement in South Chicago," that analyzed the impacts and disruptions of Black communities in South Chicago following the elimination of Robert Taylor Homes.

As a professor, much of my job dedicated to teaching. I have been teaching at my current institution for 13 years but have been teaching courses as a graduate student and professional for nearly 20 years. The courses I teach vary from semester to semester, but the courses I most often teach include human geography (the study of human phenomena on the landscape), quantitative methods (statistics), and political geography. In all my upper-level courses, such as political geography, I also teach students to use geospatial technologies, including how to use a Geographic Information System (GIS). In the spring of 2020, I taught Political Geography (GEOG 446) with a special emphasis on redistricting and gerrymandering studies. Students were taught the basics about this topic and then taught how to use a GIS to understand demographics and redistricting themselves. The final project asked students to redistrict the state of Oregon for the House of Representatives with special attention on both federal and state requirements for redistricting in Oregon.

Professionally, I continue to be active by presenting papers and posters at conferences both in the United States and abroad. Beyond research I also hold several leadership roles. Since 2018, I have been the Co-President of Research Council 15 (Cultural and Political Geography) for the International Political Science Association (IPSA). I have recently been elected as the 2<sup>nd</sup> Vice President of the International Geography Honors Society, Gamma Theta Upsilon (GTU). At my home university, I have been a member of the University Faculty Senate and was recently re-elected to my second 2-year term by my peers to serve on the University Senate's Executive Committee. In my community I have been serving on a local school district committee, the Demographics and Trends Committee, that examines the changing demographics of the local school district and the possible impacts these trends will have on enrollments throughout the district. I am often called upon to share my expert opinions on population studies and to utilize

my geospatial expertise to analyze population data. Further information regarding my research, teaching, and other professional experiences can be found on in my attached CV (Exhibit 5a).

In August of 2020, I testified as a rebuttal witness and was qualified as an expert witness in geography and geospatial technologies for the case *Western Native Voice v Stapleton*, DA 20-0394, 2020 Mont. LEXIS 2334 (2020), in the state of Montana. In this case, I was asked to write a report comparing the socio-economic differences between white and Native American populations throughout Montana. Furthermore, I was asked to identify post office locations and then compare the access to post offices by both Native American communities and non-Native communities. This required an extensive geospatial analysis, using a Geographic Information System, identifying the nearest post office and calculating the distance for over three hundred communities throughout Montana.

I have been retained by Plaintiffs in this case and am being paid \$175 an hour for my services in the creation of this report and any other needed duties.

### **Subjects of Report and Executive Summary**

I have been asked by the East St. Louis Branch NAACP, the Illinois State Conference of the NAACP, and the United Congress of Community and Religious Organizations to do the following:

1. Describe the Geography and Demographic Profile of the Metro East area of Illinois, and particularly that of St. Clair County.
2. Assess whether, and to what degree, there are socioeconomic differences between Black people and white people in St. Clair County.
3. Assess whether Illinois House of Representatives District 114 (HD 114) can be drawn as a reasonably, compact majority Black district.
4. Describe the changes to the racial demographics in Illinois House of Representatives Districts 112, 113, and 114 in the 2011, HB 2777 (2021), and SB 927 (2021) redistricting plans and whether those changes are consistent with traditional districting principles.
5. Draw a plan for HD 114 and surrounding districts that would remedy any constitutional and statutory violations and would likely elect a Black candidate of choice.

St. Clair and Madison counties in west central Illinois comprise what is commonly known as Metro East. St. Clair lies just across the Mississippi River from St. Louis, Missouri and Madison County lies to the north of St. Clair County. Historically, the city of East St. Louis developed as the largest city relying heavily on industrial development and as a major transportation hub along the many railroads that crossed the river into St. Louis, Missouri. Following similar trends as other industrialized cities in the United States, East St. Louis attracted a large Black population in the early twentieth century, in a phase known as the “Great Migration.” By 1950, East St. Louis’ population peaked, and in the decades that followed, population and industry would both decline. The resulting geography created a distinctive urban core around the city of East St.

Louis that maintained a largely Black community as white populations left for suburbs. Therefore, Metro East can be described as a Black urban core, surrounded by an outer core of less densely populated areas, extending to mainly rural and white periphery areas.

The concentration of Black populations in the urban core provides unique challenges in drawing political districts that traditionally have provided Black voters the best chance to elect candidates of their choice. State House District 114, which has been entirely in St. Clair County, has contained much of the Black urban core of the East St. Louis area in the past few redistricting cycles and consistently elected a Black representative for decades. District 113, to the immediate north and east, is largely in St. Clair and Madison Counties. District 112, which is also further north and east, rounds out the other state house districts in the Metro East area. Unlike 114, both District 113 and District 112 have smaller proportions of Black voters as both districts contain large proportions of suburban white residents.

In the past decade, the Metro East area has seen continued population decline, with St. Clair exhibiting some the largest declines in population in Illinois. Madison County also lost population, but at a much lower level than St. Clair. Census 2020 numbers indicated that District 114 had lost significant population from 2010. Overall, declines in total population were highest among Black residents, especially in the aforementioned District 114. White areas in the mainly outer core suburban communities saw varied levels of growth and decline, with the highest levels of growth around the Edwardsville areas in the northern stretches of District 112. Due to the history of the region, and as with many other similar areas in the United States, Black populations in the St. Clair County area score much lower on nearly every socioeconomic metric compared to white populations in St. Clair County. Black residents are much more likely to live in poverty, to have lower levels of educational attainment, and to earn much lower salaries than white residents in St. Clair County. The rather large disparity among both races is greater in the urban core communities around East St. Louis and declines moving east into the largely white outer core and periphery communities.

As required by law, legislators must redraw legislative districts after the most recent census. General requirements of redistricting require equal populations between districts, that districts must be generally compact, that districts should limit splitting municipalities, that districts should protect minority rights (where applicable), and, when possible, that districts should maintain communities of interest. Based on these principals, Illinois officials drew maps, not once, but twice in 2021. Because Census data was delayed, the first maps enacted into law occurred in June of 2021 (known as HB 2777) where maps were drawn based on highly variable American Community Survey (ACS) data. Due to the nature of the data, ACS data can both highly overestimate and underestimate populations. This did occur throughout Illinois. In August 2021, the legislature approved new maps in SB 927, which used 2020 Census data.

The resulting districts in both bills for the Metro East area did not follow general redistricting principles. Newly drawn districts by both HB 2777 and SB 927 largely ignored demographic patterns. Even though HD 112 was overpopulated, and HD 114 was underpopulated, the maps moved around Black population from HD 114 to HD 113 to HD 112 to improve the electoral chances of a white Democrat incumbent in HD 112 to the detriment of Black voters in HD 114.

Though population growth to the immediate east of the area occurred, new District 114 lines were drawn far to the south and east in mainly rural white areas, whose residents share little in common with urban core Black residents. As a result, the Black Voting Age Population (BVAP) dropped in HD 114 from 37.22% to 33.55%, BVAP in District 113 essentially remained steady, and BVAP in District 112 increased by about 4 percentage points.

Finally, this report creates two distinct plans:

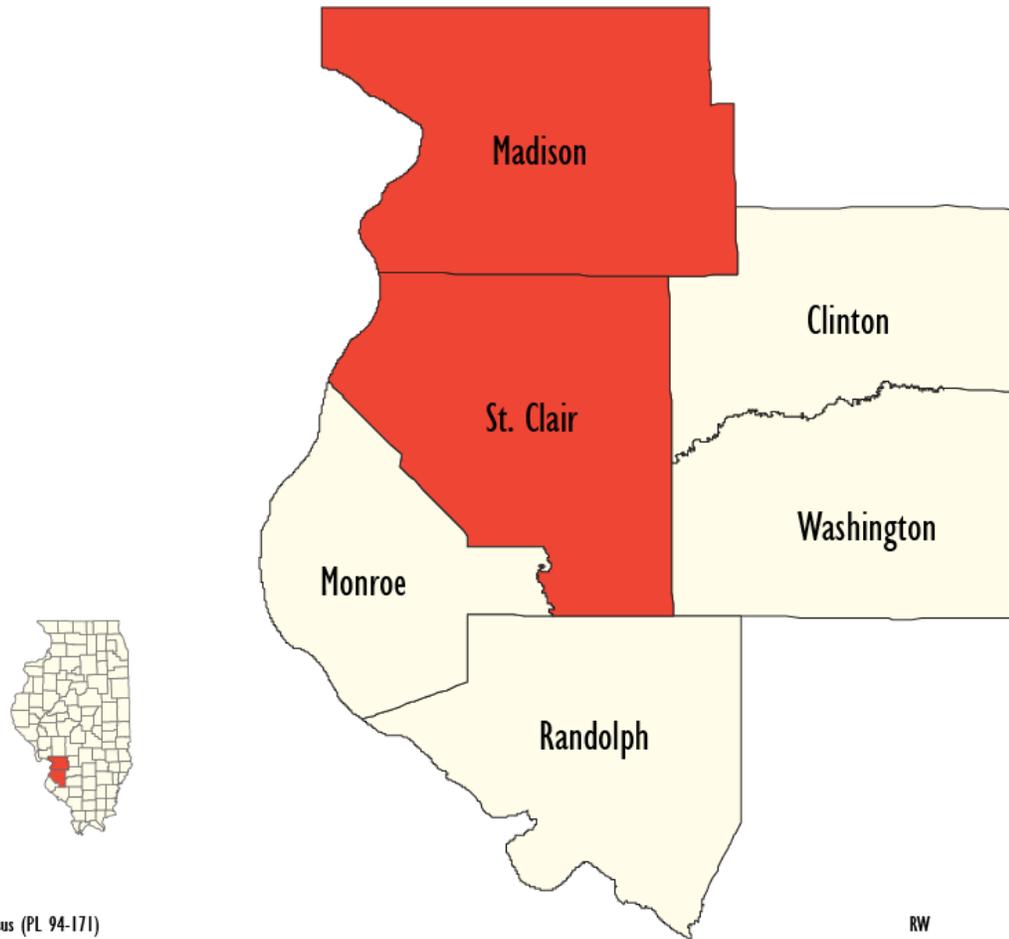
- A Liability Plan for a new District 114 created a district that met Section 2 requirements of the Voting Rights Act by containing a Black VAP of 51.51% that is both compact and takes advantage of the immediate growth to ease both offsetting declines in the west and maintain communities of interest.
- A Remedial Plan for a new District 114 was also created following patterns similar to the Liability Plan. Though this plan does not meet the Section 2 requirements, it is compact, follows one-person one-vote requirements, minimally avoids splitting municipalities, and addresses legislators' concerns such as including Scott Airforce Base in the district. Furthermore, the Black VAP of 49.45% greatly increases the chance to elect Black voters' candidate of choice compared to the SB 927 version of District 114.

To complete this report, data were primarily obtained from the United States Census. This data included 2010 and 2020 PL 94-171 Redistricting data, the 2019 American Community Survey ("ACS") Five-Year Estimates, and 2017 ACS One-Year Estimates where necessary. Additional data sources were obtained by the State of Illinois as it related to HB 2777 and SB 927. Geospatial analysis was conducted using ESRI's online redistricting software 2.36. Both the Liability Plan and Remedial Plan of State House districts were created by utilizing this software at the Census Block level. Additional figures and analyses were created using both ArcMap 10.8 and Adobe Illustrator.

### **History and Demographics of St. Clair County and the Metro East Area**

St. Clair County is found in the west central area of Illinois. This county, along with adjoining counties, including Madison County, which is directly to the north, comprise what is known regionally as Metro East (see Figure 1). The historical development in this area is tied to its geographic relationship with St. Louis, Missouri, which lies immediately west of St. Clair County across the Mississippi River. The area has followed similar economic and urban development changes that many American cities of the traditional Rust Belt have followed.

## Metro East Area, Madison and St. Clair Counties



**Figure 1: Reference map of the Metro East Area  
(Source: 2020 United States Census Bureau)**

Due to Metro East’s proximity to St. Louis, Missouri and the Mississippi River, industry quickly developed in the early twentieth century, and East St. Louis became the early urban core of the Metro East region. By 1905, aided by growth in the railroad industry, twenty-seven rail companies located their central or terminal points in East St. Louis. In the years that followed, East St. Louis was called by some, the “Pittsburgh of the West,” as nearly fifty factories were built in and around East St. Louis, manufacturing a variety of goods, including aluminum,

fertilizers, glass, and iron. Between 1900 and 1910, the population of East St. Louis nearly doubled and was the third largest city in Illinois.<sup>1</sup>

The Great Migration is a historical name for the influx of Black populations leaving the South, avoiding Jim Crow era discrimination, and moving to large urban centers in the North to find employment. As a result, from 1910 to 1917, East St. Louis's Black population nearly doubled. Though the changing racial landscape did not come without issue, it did establish the Metro East area, especially around East St. Louis, as a core Black community.

By the 1950s, East St. Louis was home to over 82,000 residents. St. Louis, Missouri, and the Metro East area would follow a similar demographic shift many northern Rust Belt cities would see in the decades to come. By the 1960s, industrialization across the United States began to slow, as the nation slowly shifted to a service-based economy. During this same time, cities throughout the country began to expand into the fringes of urban cores initiating a phase of suburbanization. Participation in suburbanization was not uniform across racial groups. Owing in great part the GI Bill, only white soldiers were afforded free housing in areas outside of traditional cities. In a process termed "White Flight," white populations fled urban areas in favor of newly established suburban neighborhoods. As a result, many cities with core industries saw steady decline in total populations due to both suburbanization and decline in the need for industry. East St. Louis saw its total population decline from a high of 82,366 in 1950 to 18,469 in 2020.<sup>2</sup>

Today the core of the Metro East area continues to be St. Clair County. Although the decline in total population in St. Clair County has not been as severe as in East St. Louis, the county has seen a persistent decline in total population during the same time. In fact, St. Clair County lost nearly 5% of its total population between 2010 and 2020, decreasing by more 12,656 people.<sup>3</sup> While Madison County's population also declined, it only saw a 1% decrease in total population of about 3,600 people over the past decade.

According to 2020 Census data, the total population of St. Clair County is 257,400 people. According to the 2010 and 2020 Censuses, St. Clair County has seen a 4.69% (12,656 people)

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<sup>1</sup> Industry, ILLINOIS STATE MUSEUM, <http://www.museum.state.il.us/RiverWeb/landings/Ambot/Archives/fwp/INDUSTRY.html> (last visited Nov. 9, 2021).

<sup>2</sup> NATIONAL HISTORIC GIS, <https://www.nhgis.org/> (last visited Nov. 9, 2021)

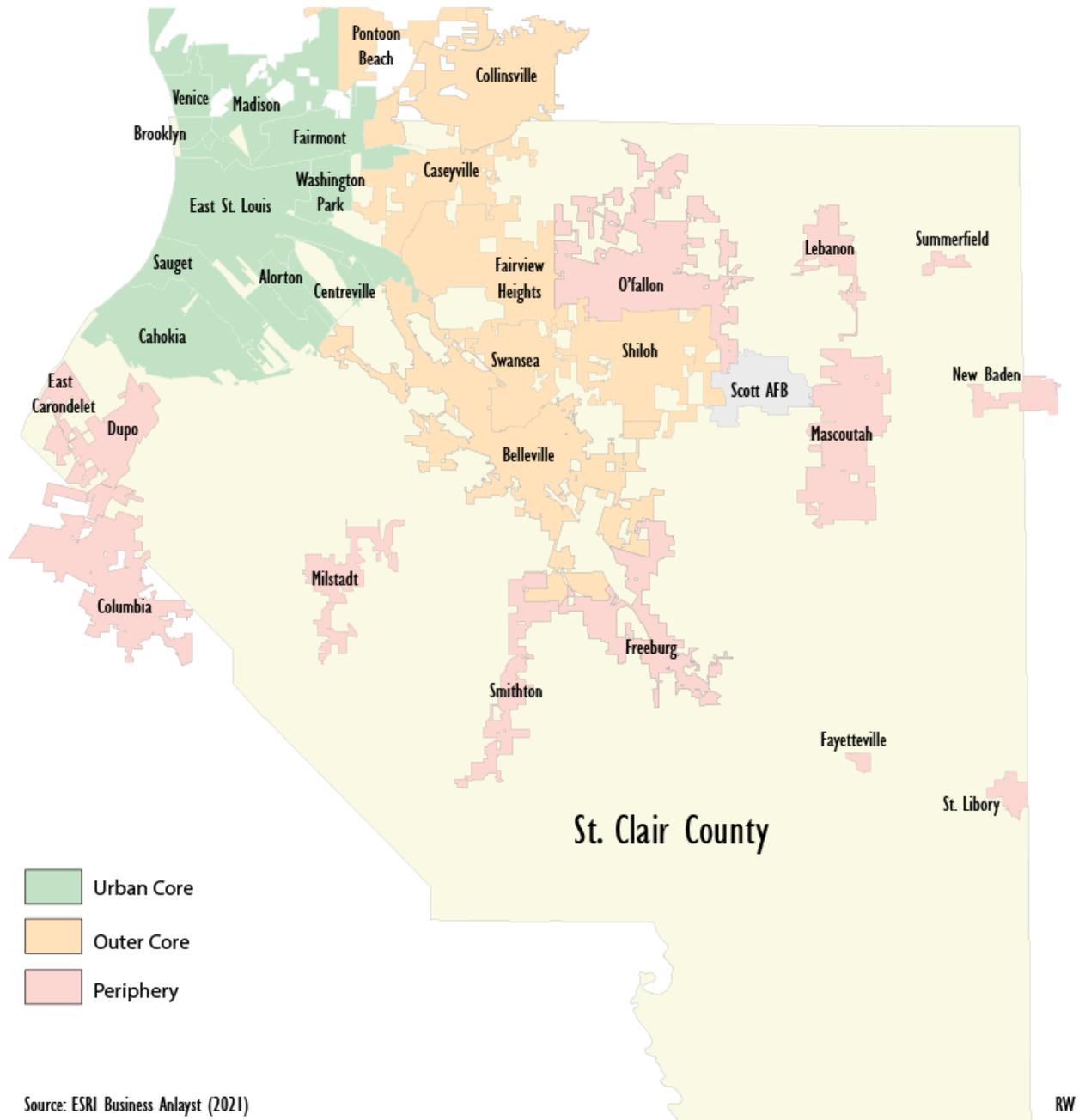
<sup>3</sup> U.S. CENSUS BUREAU, QuickFacts: East St. Louis city, Illinois, <https://www.census.gov/quickfacts/fact/table/eaststlouiscityillinois#> (last visited, Nov. 9, 2021); Jack Santrup & Janelle O'Dea, *St. Louis region's population grew just 1.2% in past decade, metro drops out of the top 20 for the first time*, ST. LOUIS POST DISPATCH, Aug. 12, 2021, [https://www.stltoday.com/news/local/govt-and-politics/st-louis-region-s-population-grew-just-1-2-in-past-decade-metro-drops-out/article\\_af3462a5-df31-54b8-880e-183fc18565d1.html](https://www.stltoday.com/news/local/govt-and-politics/st-louis-region-s-population-grew-just-1-2-in-past-decade-metro-drops-out/article_af3462a5-df31-54b8-880e-183fc18565d1.html) (last visited Nov. 9, 2021)

decline in total population, the largest of any county in Illinois. Total white population in the County declined 12.08% (21,082 people) and Black population declined by 6.97% (5,738 people) between 2010 and 2020. Regarding voting age population (VAP +18), white residents comprise 62.71% (123,608 people) of the County, and Black residents comprise 28.34% (55,868 people) of the County according to the 2020 Census Data.

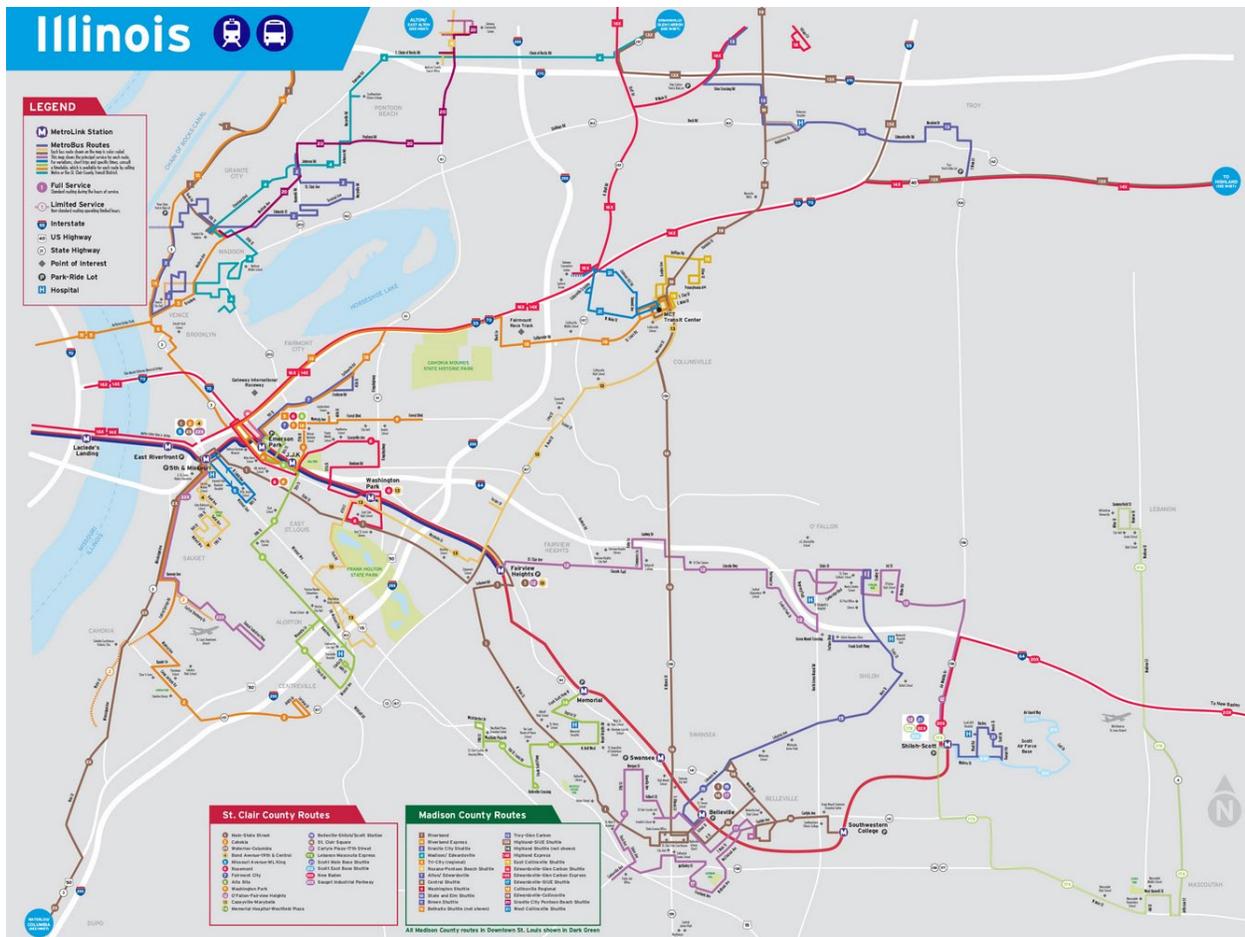
The historical geography of the Metro East area has created distinguished communities across the entire area. Urban geographers have long identified distinct zones of development radiating from an urban core. Places near the urban core generally have more in common both culturally and economically than places farther away. These areas have often been identified as urban core, outer core, and periphery. Urban core areas tend to be the places where initial settlement occurred and subsequent growth in manufacturing and industry developed. The outer core areas are found on the fringes of the urban core and tend to be the bridge between the urban core and periphery areas. In general, these areas display varying levels of suburbanization, with neighborhoods located near the urban core being more like the core than the less densely populated neighborhoods closer the periphery. Finally, the periphery areas tend to be the farthest from the urban core and often have little in common with urban core. In many areas in the United States, periphery communities tend to be small, white, and either agrarian based or wealthy bedroom communities.

For the Metro East areas, Figure 2 identifies places across St. Clair County as either urban core, outer core, or periphery communities. As can be seen, the urban core areas are found in the traditional East St. Louis area. These areas include places that were once industrial centers and, in the case of this area, are largely populated by Black residents due to historic migration patterns from the Great Migration. Urban Core communities include Cahokia, Centerville, East St. Louis, Washington Park, and Madison. Outer core communities are found on the fringes of the urban core, but often share some connection to the urban core. In the Metro East area, this includes not only Black neighborhoods, but also transportation networks such as major highways and public transportation, like the Metro East Metrolink light rail that services areas into Belleville and the bus system which includes places such as Swansea, Fairview Heights, Collinsville, and Shiloh. Figure 3 shows the public transportation routes of the Metro East area. The periphery areas in the St. Clair County represent rather small communities that are generally disconnected from the Urban and Outer Cores. These communities are what many may consider rural and are largely white. The key feature is that they share little in common with Urban Core and Outer Core areas.

## St. Clair County, Illinois Places



**Figure 2: Reference map of St. Clair County, Illinois Places  
(Source: 2020 United States Census Bureau)**



**Figure 3: Map of the Public Transportation Routes for the Metro East Area (Source: <https://www.metrostlouis.org/wp-content/uploads/2019/04/190328-Metro-Illinois-Map-1.jpg>)**

The identification of these communities into the proper designation is tied to the historical geography of the area. The urban core communities have a long deep-rooted history tied to the industrial sectors that once dominated the economic landscape. Due to the white Flight period that began in the 1950s, these areas have also developed a uniquely Black cultural identity. Exhibit 1a identifies these communities as either urban core, suburban, or rural places. Exhibit 1a also shows the total populations in 2010 and 2020, the percent white Population, percent Black Population, and the percentage change in white and Black populations over the past decade. As can be seen in Exhibit 1a, most of these communities in the urban core have larger Black populations. The suburbs are found on the edges of the Urban Core area and are a mixture of Black and white populations, but white populations are the largest population in all the communities. As identified in Exhibited 1a, although many of these areas developed as white suburban areas after the 1950s, continued changing demographics have seen increases in Black populations over the past decade. Exhibit 1b identifies the 2020 percent Black population for Census Blocks in St. Clair County. When combined with Exhibit 1a, Exhibit 1b shows the percentage Black population decreases the farther east one goes from the urban core areas.

Finally, rural communities share little in common with the urban core, are generally smaller in total populations, and are nearly all white.

### **Socioeconomic Differences between the White and Black Population in St. Clair County**

Due to the uniquely tied history of settlement to race in the area, it is important to distinguish the socioeconomic divides between the Black and white populations. These divides not only identify the differences between races in St. Clair County, but when tied to place, provide the necessary foundation in establishing communities of interest, especially between white and Black areas. Based on an analysis of socioeconomic data for St. Clair County, there is a wide socioeconomic disparity between Black and White Populations.

**Education:** Compared to white populations in St. Clair County, Black residents have lower levels of educational attainment. According to the 2019 American Community Survey (ACS) 5 Year Estimates for Black populations 25 and older, 11.88% have not graduated from high school, and only 19.86% have obtained a bachelor's degree. In comparison, only 6.64% of white adults do not have a high school degree and 30.3% have attained their bachelor's degrees (see Exhibit 2a).

**Employment:** 2019 ACS data identified that the unemployment rate for people aged 16 and above for St. Clair County was 6.7%. Comparing white populations to Black populations, white populations had an unemployment rate of 4.1% compared to 13.4% for Black residents. In relation to management positions, Black residents are less likely than whites to hold such jobs (24.23% compared to 34.77%) (see Exhibit 2b).

**Income:** The Median Household Income for Blacks in St. Clair County was \$31,261, while the Median Household Income for whites was more than double that at \$67,816. Further normalization at a per capita income rate shows that white per capita income was larger than Black per capita income at \$36,505 to \$20,495. Overall, 14.8% of St. Clair County's population is classified as below the poverty level for a twelve-month period. This rate jumps to 29.9% for Black residents as compared to 7.4% for whites. Furthermore, Black households are much more dependent on Supplemental Nutrition Assistance Program (SNAP) benefits than white households. 65% of Black households receive SNAP benefits compared to 30.1% of white Households (see Exhibit 2c and 2d).

**Households:** Black residents in St. Clair County are much more likely to be renters than homeowners as compared to white populations in St. Clair County. Nearly 63.04% of Black residents pay rent compared to only 22.52% of whites (see Exhibit 2e).

**Healthcare:** Black residents are more likely than white residents to not have health insurance. 7.2% of Black residents in St. Clair County are uninsured compared to only 6.3% of white residents. In terms of persons with a disability, Black populations have a slightly higher rate of disability at 15.2% compared to white population at 15% (see Exhibit 2f).

**The 2011 Plan, June 2021 HB 2777, and August 2021 SB 927: Districts 112, 113, and 114**

I have been asked by Plaintiffs East St. Louis Branch NAACP, the Illinois State Conference of the NAACP, and the United Congress of Community and Religious Organizations to describe the changes from the racial demographics in Illinois State House Representative Districts 112, 113, and 114 from the 2011 redistricting plan, to the June 2021 HB 2777 plan and the current September 2021 SB 927 redistricting plan to determine whether those changes are consistent with traditional districting principles.

To accomplish this goal, it is first necessary to discuss and analyze the districts created by SB 1177 (to be referred to as the “2011 plan” hereafter), those created in HB 2777, which Governor J.B. Pritzker signed into law in June 2021, and the currently proposed SB 927 districts of 112, 113, and 114 that Governor Pritzker signed into law in September 2021. Exhibit 3a is a table showing the population figures for the three plans using 2010 Census Data for the 2011 plan and 2020 Census Data for the 2011 plan, HB 2777, and SB 927 to demonstrate the change to total population and changes to racial characteristics of the respective plans.

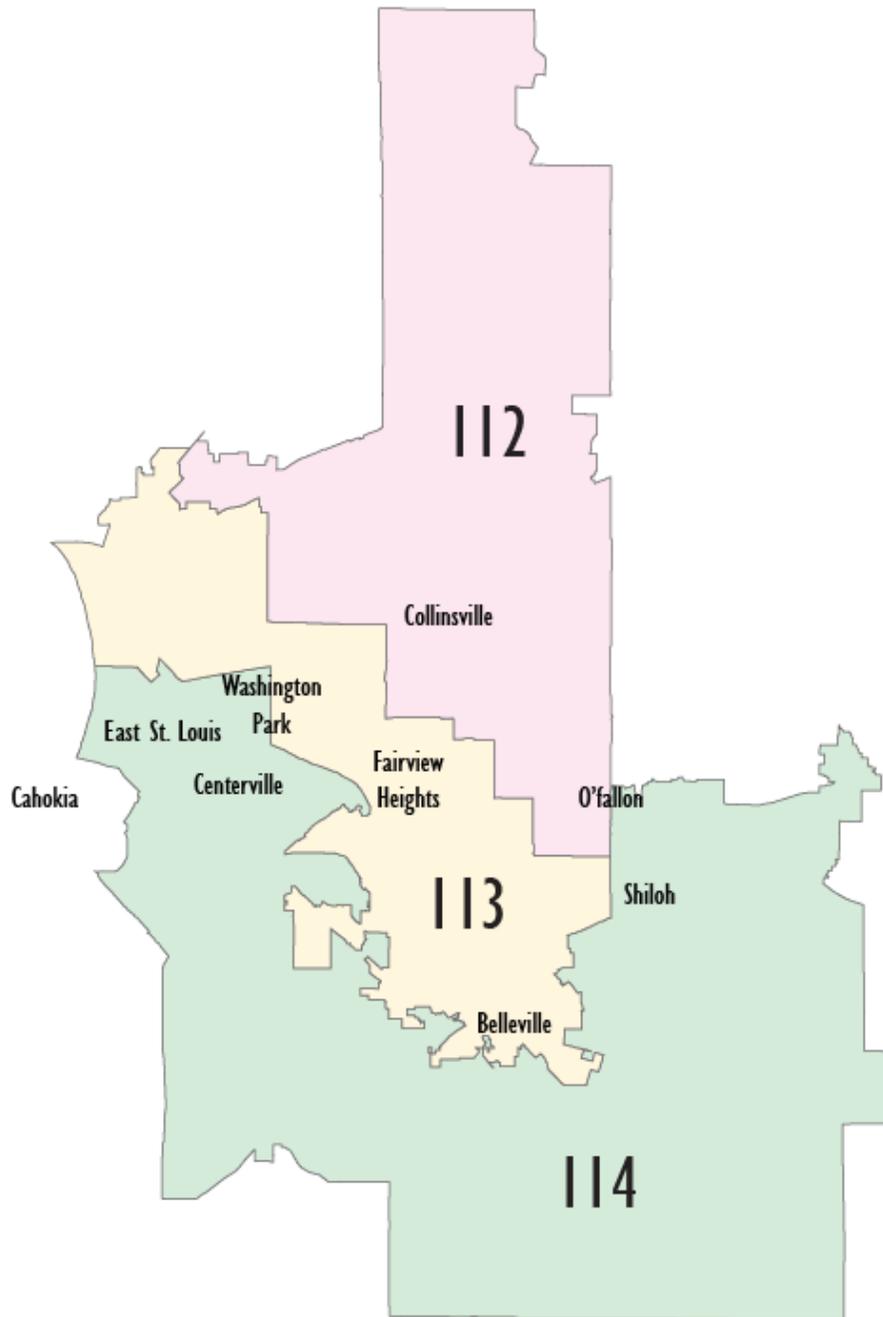
On May 27, 2011, the Illinois Legislature passed the 2011 plan and it was signed by the Governor on June 3, 2011. The 2011 plan established both State House and State Senate districts throughout Illinois. As it relates to the Metro East area, Figure 4 identifies the 2011 plan State House Districts 112, 113, and 114. Each of the districts all had equal populations of 108,734, but Black VAP differed widely between the districts. District 114 had a Black VAP of 41.85%, District 113 had a Black VAP of 24.56%, and District 112 had a Black VAP of 6.99%.

In the creation of the districts by the 2011 plan, the legislative resolution HR0385 accompanying the plan described in detail the importance of East St. Louis in District 114 as a “community of interest.” This remains essentially unchanged from the currently constituted District 114. HR0385 states, “Generally labeled as the ‘Metro East,’ this area of Illinois shares the identity of a culturally and socioeconomically diverse region with common economic challenges and a strong sense of succeeding or failing together” (349).<sup>4</sup> In essence, the inclusion of East St. Louis and surrounding areas protected the urban core Black communities and allowed Black voters equal opportunities to elect candidates of their choice. The resulting District 114 would have the largest percentage Black VAP (41.85%) of the three adjacent districts and would in the following eight years consistently elect a Black candidate (2012 to 2020). In 2020, current District 114 Representative LaToya Greenwood won re-election by a large percentage (57.1% to 42.9%), against white Republican candidate, David Barnes.

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<sup>4</sup> H.R. 0385, 97TH GEN. ASSEMB. (Ill. 2011) at 349, <https://www.ilga.gov/legislation/97/HR/PDF/09700HR0385lv.pdf>.

## 2011 Plan State House Districts 112, 113, and 114



Source: State of Illinois

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Figure 4: 2011 Plan State House Districts 112, 113, and 114 (Source: State of Illinois)

Yearly Census data is made available through the American Community Survey. The United States Census Bureau defines ACS as “a nation-wide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year.” Additionally, the Census Bureau provides that “[t]he ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period rather than for a single point in time as in the decennial census . . . The Census Bureau combines 5 consecutive years of ACS data to produce multiyear estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months.”<sup>5</sup>

Actual census data for 2020 was delayed. Although normally available in April of the year following the Decennial Census, 2020 data was not available until mid-August 2021. As a result, on June 4, 2021, Illinois Governor J.B. Pritzker signed HB 2777 establishing State House Districts for Illinois utilizing only ACS 5-Year Estimates from 2015-2019 data.

Due to the nature of the ACS data, survey results can be based on data that may be up to 4 years old, is not grounded at the Census Block level, and as a result can highly overestimate or underestimate results. Through the League of Women Voters, several redistricting experts and organizations issued a statement on the dangers of using ACS data for redistricting purposes.<sup>6</sup>

Figure 5 illustrates the HB 2777 districts for 112, 113, and 114. The resulting districts 112, 113, and 114 vastly overestimate populations in the proposed districts. Table 1 below identifies the ACS determined total population for the three districts and provides the change in total population and % Black VAP for each of the districts as compared to 2010. Using the ACS data, it was estimated that District 113 would see the largest total decline in population followed by District 114, and District 112.

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<sup>5</sup> U.S. CENSUS BUREAU, UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW 1 (2020), available at [https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs\\_general\\_handbook\\_2020\\_ch01.pdf](https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_general_handbook_2020_ch01.pdf)

<sup>6</sup> League of Women Voters, Statement on Appropriate Data for Redistricting (2020), <https://www.lwv.org/sites/default/files/202104/Statement%20on%20Appropriate%20Data%20for%20Redistricting.pdf>.

### May 2021 SB 2777 State House Districts 112, 113, and 114

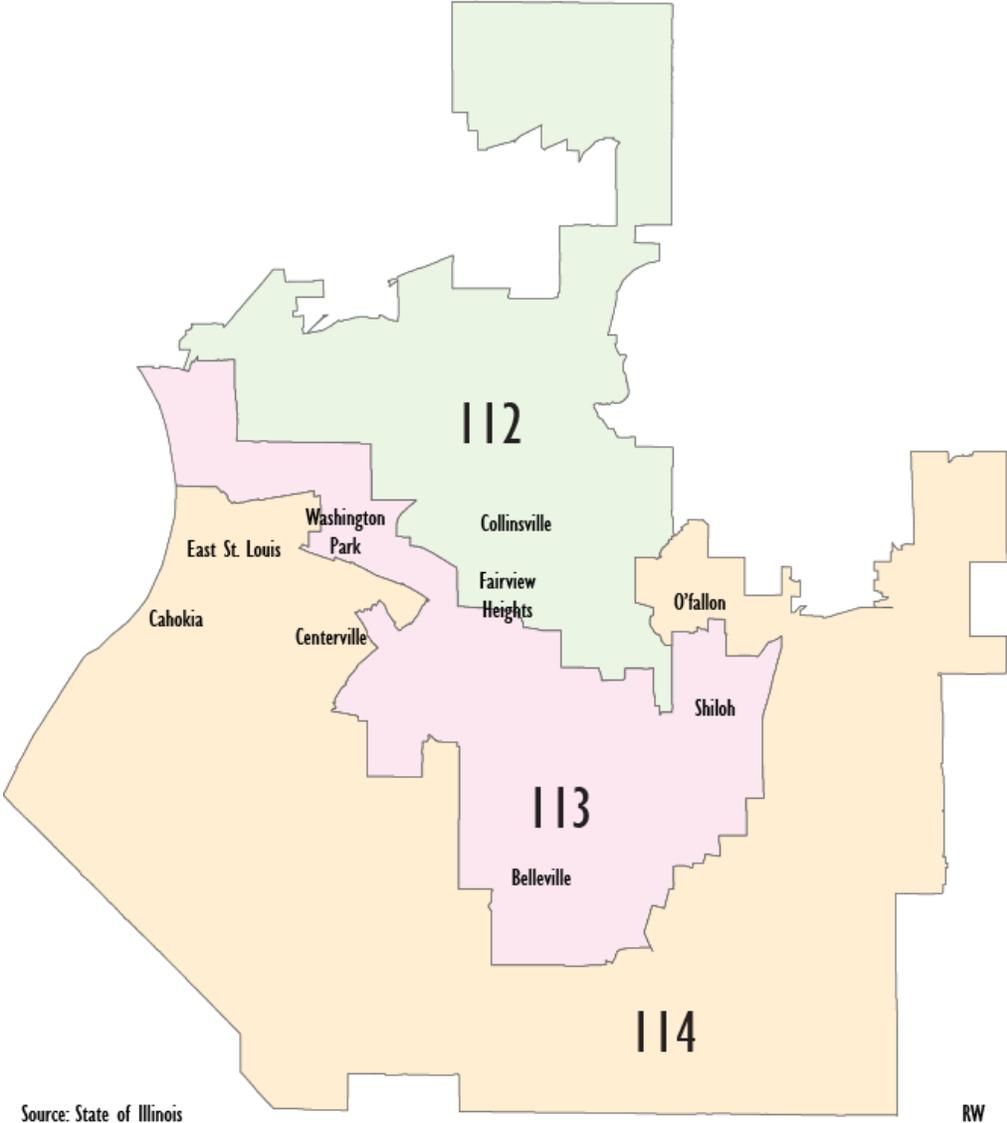


Figure 5: HB 2777 State House Districts 112, 113, and 114 (Source: State of Illinois)

HB 2777 Districts	ACS Total Population	Change in Total Pop.	% VAP Black
District 112	108,534	-200	13.30%
District 113	103,553	-5,181	27.00%
District 114	105,585	-3,149	39.40%

**Table 1: 2015-19 5 Year Estimates ACS Estimated Population Difference with HB1177 Population (Source: <https://ilhousedems.com/redistricting/wp-content/uploads/2021/05/2021-Proposed-District-Data.pdf>)**

Exhibit 3a shows the comparison of Districts 112, 113, and 114 between the 2011 plan and HB 2777, which used ACS data. As can be seen, HB 2777 District 114 expanded its boundaries to the rural areas South and East of the 2011 Plan areas of District 114, but also eliminated sections near Belleville, which were added to District 113. District 113 shed populations to District 112, and District 112 also shed several areas from the 2011 district. All in all, both Districts 113 and 114 were predicted to lose population between 2011 and the ACS 2019 data, but HB 2777 saw populations taken out of both Districts 113 and 114.

After the 2020 Census data was released, it became clear how inaccurate the ACS data was. When using HB 2777 boundaries for Districts 112, 113, and 114 but accounting for 2020 Census data, based on a target district population of 108,581 people, District 114 saw a decline in total population of 9,232 people. District 113 only saw a decline of 121 people, while District 112 saw an increase in total population of 4,738 people (see Table 2). In terms of % Black VAP, SB 2777 districts vastly overestimated Black populations in District 114. While the ACS estimates predicted a % Black VAP of 39.40%, 2020 Census data found it had dropped to 34.95%.

HB 2777	Target Population 2020	2020 Total Popopulation	Target Deviation	% VAP Black
District 112	108,581	113,319	4,738	14.19%
District 113	108,581	108,460	-121	31.16%
District 114	108,581	99,349	-9,232	34.95%

**Table 2: Population Difference with HB1177 Population and 2020 Census Data (Source: PL 94-171 2020 Data, P1 and P3)**

It was clear ACS projected that the largest declines would take place in Districts 113 and 114. When actual Census data was released, population changes in the 2011 Plan districts varied widely, but the historic patterns of population decline in the urban core areas of East St. Louis had continued. Based off the target population of 108,734 established in 2011, District 114's total population decreased by 10,950 total persons and the Black VAP dropped to 37.22%. This total drop in population was accelerated by the decline in total Black population in East St. Louis and Centerville with a total 9,994 persons. District 113 also saw declines in total population of 7,302 but saw its Black VAP increase to 30.56% by 2020. Belleville saw the largest decline of white population of 6,174 people between 2010 and 2020. District 112 saw a total increase in population of 5,771 from 2011 to 2021 to 114,505. The largest increases in total population were found in O'Fallon and to the north in Edwardsville and Glen Carbon.

Moreover, the release of the 2020 Census data made clear that some Black population had continued to migrate out from the urban core as reflected in Exhibit 3a. In the 2011 Plan, the BVAP in HD 114 decreased from 41.85% to 37.22%, whereas the BVAP in HD 113 increased from 24.56% to 30.56% and similarly increased in HD 112 from 6.99% to 10.36%.

In late August 2021, the Illinois legislature redrew State House Districts again, this time using 2020 Census data, in SB 927. In comparing the 2011 Plan and SB 927 maps, District 114 saw the largest transformation of the three districts. Exhibit 3b shows the comparison between the 2011 Plan of all three districts and SB 927. The proposed District 114 maintained East St. Louis and Centreville in the district and added Cahokia to the southwest, but as identified in the Exhibit 3b, it expanded very little to the immediate east and north and instead saw the largest expansion of the district in the far south and eastern fringes of St. Clair County. Furthermore, areas around Belleville, extending into Shiloh, were eliminated from the previous District 114 and added to the new District 113.

Exhibit 3c is a table of the demographic changes to Districts 112, 113, and 114 between 2011 and 2020. The areas around East St. Louis have seen the largest decline in total population throughout the Metro East area. Areas to the immediate east and north saw increases in total population between 2010 and 2020 (see Table 2). As identified in Exhibit 3b, the new areas of District 114 were largely white populations in southern and eastern areas of St. Clair County. Furthermore, the eliminated area designated as O 114 to N 113 had higher proportions of Black residents compared to addition of white residents in the area identified as N 114 (16.78% Black compared to 76.1% white). The addition of the area designated as N 114 and the elimination of the area designated as O 114 to N 113 decreased Black VAP from 41.85% in 2011 to 33.55%.

Exhibit 3b also shows a comparison between proposed District 113 and the 2011 district. The proposed district saw fewer changes compared to the previous District 113. The area O 113 and N 113 shared 79,519 persons. The largest addition to the district occurred in the southern areas near Belleville in the area identified as O 114 to N 113. 28,587 persons were added to that district from District 114. As identified in Exhibit 3b, although 66% of the population added in this area was white VAP, the Black VAP was 23.92%. The result of this movement increased the District 113 Black VAP from 24.92% in the previous district to 29.69% in the proposed district.

Exhibit 3b shows the comparison between proposed District 112 and the 2011 district. The proposed district increased in size and population by expanding into District 113 including areas in Fairview Heights and Madison. This addition took 20,534 people out of the previous District 113 and moved them into the newly proposed District 112. Based on the addition of 9,582 voters, 26% were Black VAP. Additional areas added to the north included adding the Village of Glen Carbon and areas to the north of Edwardsville. This area included 24,721 people, 16,302 voters eligible to vote, in which 84% were white. The changes to District 112, especially increasing populations along the border of the proposed 113, increased Black VAP from 7.2% in 2011 to 14.5% in 2020.

When comparing both HB 2777 and SB 927 it was clear districts were drawn to bolster the electoral chances of white Democrats in Districts 112 and 113 at the expense of Black voters in District 114. Based on the demographic changes of the area, I question why a district (114) that

saw the greatest decline in population would have parts of the earlier district (the 2011 Plan) removed and placed in District 113? Furthermore, District 113 also saw population decline, but it also had portions of its older district moved into District 112, a district that had to shed population because it was overpopulated. Simply, Black populations were moved from 113 to 112 and to then balance Black populations in 113, Black populations were moved out of 114 into 113. To equalize total populations, SB 927 added areas to the relatively rural and white areas in the south and east that clearly dilutes the Black population of the district. Based on the dilution, the proposed 114 also combines vastly different populations, rural white areas in the south and east in the periphery, with the Black urban core of East St. Louis. These realities have decreased the % Black VAP, compared to 2011, decreasing the ability of Black voters to elect a candidate of their choice.

I have reviewed the deposition testimony of Jonathan Maxson in this case, completed on November 3, 2021. I understand that Mr. Maxson was the Director of Redistricting of the House Democratic Caucus and one of the authors of the districts used in SB 927. During his testimony, Mr. Maxson stated that he had the objective to “enhance the Democratic performance of the 112<sup>th</sup> District.”<sup>7</sup> His testimony confirms that the interests of Black voters in District 114 were sacrificed to improve Democratic performance of District 112 by moving Black voters in. One of the areas where the interests of Black voters was sacrificed was Washington Park, a community that is over 90% Black and that is immediately to the east of East St. Louis. Under SB 927, Washington Park would be split between HD 113 and HD 114.

Based on how Districts 112, 113, and 114 were drawn—first in May using ACS data with SB 2777 and again in August with SB 927—coupled with the deposition of one of the authors of the map, demographics and communities of interest, especially of traditional Black areas, were subordinated to improve the performance of District 112. District 114, in its current configuration, has diluted the Black population and created a district that combines groups with very little in common, as the new areas of District 114 added primarily rural and white communities to the south. The decline in the % Black VAP from 2011 will also make it more difficult for Black voters in District 114 to elect a candidate of their choice. The resulting changes in Districts 112 and 113 will most likely increase electoral success for Democrats in those districts, but at the loss to Black communities in District 114.

### **Plaintiffs’ Illustrative Plans**

I have developed two illustrative plans for the plaintiffs in this case. The first plan is a Liability Plan that addresses Section 2 of the Voting Rights Act, and the second plan is a Remedial Plan that remedies any statutory or constitutional violation. Furthermore, this Remedial Plan is designed to remedy any violation by creating a district that will restore District 114 as an effective district for Black voters to elect their candidate of choice while respecting aspects of what the legislature identified as priorities for District 114 – such as including Scott Air Force Base within the district’s boundaries.<sup>8</sup> Both illustrative plans comply with key traditional

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<sup>7</sup> Deposition Transcript of Jonathan Maxson at 204.

<sup>8</sup> H.R. 0385, 97<sup>TH</sup> GEN. ASSEMB. (Ill. 2011) at 349, <https://www.ilga.gov/legislation/97/HR/PDF/09700HR0385lv.pdf>.

redistricting criteria including compactness, contiguity, respect for communities of interest, compliance with the one-person one-vote requirement, and the non-dilution of minority voting strength.

### **Liability Plan**

Exhibit 4a provides a map for the proposed Liability Plan. As identified, this district adheres to Section 2 of the Voting Rights Act by creating a reasonably compact district with a majority Black Voting Age Population of 51.51%. Remaining populations include a white VAP of 42.16%, and a Hispanic VAP of 2.49%. Further population statistics can be found in Table 2 below.

District No.	Total Population	Target Population	Target Deviation	Target Deviation (%)	VAP Pop White	%VAP White	VAP Pop Black	%VAP Black
114	108,945	108,581	364	0.34	35,181	42.16%	42,978	51.51%

**Table 2 Population Statistics for Proposed Liability Plan District 114 (Source: ESRI Redistricting Online 2.36)**

Exhibit 4a also identifies the places that are found within Liability District 114. Like the proposed SB 927 District 114, the Liability Plan maintains the largely majority Black communities of East St. Louis, Cahokia, and Centerville, and unlike SB 927, this plan fully incorporates Washington Park and includes much of the city of Madison. Extending southward along Highways 15 and 161, much of the city of Belleville is also incorporated into the Liability District 114. As identified earlier in Exhibit 1a, although places like East St. Louis and Cahokia lost populations, the addition of Belleville (a city that grew in total population between 2010 and 2020) into the district increases both total populations. Exhibit 4b illustrates % Black VAP populations at the Census Block Level for both the Liability Plan and for the broader Metro East area. As can be seen, Black communities of interest are kept largely intact. The only place that was split was the Village of Swansea. Due to the addition of Belleville and its position as the largest city in St. Clair County, it was necessary to split Swansea to adhere to one-person one-vote requirements.

The Schwartzberg Test is a perimeter-based measure that compares a simplified version of each district to a circle. For each district, the test computes the ratio of the perimeter of the simplified version of the district to the perimeter of a circle with the same area as the original district. When comparing similar districts, the higher the number, the more compact the district. The Perimeter Test computes the sum of the perimeters of all the districts. The test computes one number for the whole plan. When comparing several plans, the plan with the smallest total perimeter is the most compact.<sup>9</sup> The Liability Plan scores a 2.19 with the Schwartzberg Test and a 71.89 with the

<sup>9</sup> Howard J. Simkowitz, Ph.D, A PRIMER ON REDISTRICTING, THE URBAN AND REGIONAL INFORMATION SYSTEMS ASSOCIATION 28 (2001), available at

Perimeter Test. On the other hand, SB 927's District 114 scored a 2.05 on the Schwartzberg Test and a 151.09 on the Perimeter Test. These results suggest the Liability Plan's District 114 is a more compact district compared to District 114 from SB 927.

The Liability Plan clearly creates a compact district that is Section 2 compliant with a Black VAP of 51.51%. The plan also combines traditional Black communities around the East St. Louis area. Moreover, the Liability Plan does not split Washington Park, as SB 927 does, and the communities and residents that have been added in urban and suburban areas south into Belleville have much more in common than the largely rural and white areas added to the south and east in SB 927. The Liability District will provide Black voters the opportunity to elect a candidate of their choice. The cohesion among Black communities may also empower citizens to address common issues among residents throughout the district.

### **Remedial Plan**

Exhibit 4c provides a map for the proposed Remedial Plan. This plan creates a remedial option that restores HD 114 as an effective district for Black voters to elect their candidate of choice, while also addressing legislative priorities, such as including Scott Air Force Base, and abiding by other redistricting principles such as one-person one-vote, compactness, adhering to municipal boundaries, and maintaining communities of interest. Furthermore, Exhibit 4d also incorporates changes to Districts 112 and 113.

Comparing districts in the Remedial Plan to those in SB 927, distinct differences and some similarities do exist. Exhibit 4d provides a comparison between both plans to show where areas overlap and change. As can be seen in Exhibit 4d, the most significant changes can be found between Remedial District 114 and SB 927's District 113. Remedial District 114 keeps the Black Metro East community centered around East St. Louis and extends East through urban and suburban areas towards Scott Airforce Base. This plan also does not split Washington Park, as does District 114 in SB 927. As previously mentioned, the inclusion of the Airforce Base was identified as a priority by the Illinois Legislature (HR 359, 84).<sup>10</sup> This plan only splits portions of Belleville but attempts to minimize disrupting any further communities of interest throughout the area. Remedial Plan 113 is perhaps the most distinct, compared to SB 927's Districts. Areas of Belleville not included in Remedial District 114 were added to Remedial District 113, and the areas of 113 that are to the north of Shiloh minimize splitting municipalities. Remedial District 112 holds similar boundaries to the North and West as compared to SB 927, with changes in the southern area that add some areas equivalent to SB 927's District 113. District 111 was not changed in either plan.

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[https://www.urisa.org/clientuploads/directory/Documents/Books%20and%20Quick%20Study/primer\\_on\\_redistricting.pdf](https://www.urisa.org/clientuploads/directory/Documents/Books%20and%20Quick%20Study/primer_on_redistricting.pdf)

<sup>10</sup> H.R. 0359, 102ND GEN. ASSEMB. (Ill. 2021) at 84, <https://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=110&GA=102&DocTypeId=HR&DocNum=359&GAID=16&LegID=136368&SpecSess=&Session=>

Table 3 provides the relevant population statistics for the proposed Remedial Districts and Table 4 provides the pertinent population statistics for the equivalent SB 927 Districts. As can be seen between the table the most significant difference is the increased % Black VAP in Remedial District 114, as it captures the overall Black core of the Metro East area. Due to the creation of this largely Black community of interest, the percent white population of the surrounding district increases.

District No.	Total Population	Target Population	Target Deviation	Target Deviation (%)	VAP Pop White	%VAP White	VAP Pop Black	%VAP Black
114	108,779	108,581	218	0.20%	35,561	43.15%	40,748	49.45%
113	108,512	108,581	-69	-0.06%	65,380	78.23%	10,918	13.06%
112	108,149	108,581	-432	-0.40%	60,247	70.50%	14,686	17.19%

**Table 3 Population Statistics for Proposed Remedial Plan Districts 112 - 114 (Source: ESRI Redistricting Online 2.36)**

District No.	Total Population	Target Population	Target Deviation	Target Deviation (%)	VAP Pop White	%VAP White	VAP Pop Black	%VAP Black
114	108,370	108,581	-211	0.19%	61,918	76.22%	27,254	33.55%
113	108,491	108,581	-90	0.08%	61,438	72.74%	25,084	29.70%
112	108,585	108,581	4	0.00%	78,232	91.26%	12,436	14.51%

**Table 4 Population Statistics for SB 927 Districts 112 - 114 (Source: ESRI Redistricting Online 2.36)**

Table 5 provides the both the Perimeter and Schwartzberg Tests for compactness. The districts are sufficiently compact. All in all, the Remedial Plan provides remedies for any constitutional violation by creating districts that also restore House District 114 as an effective district for Black voters to elect their candidate of choice while respecting aspects of what the legislature identified as priorities for 114 – such as including the Scott Airforce Base.

<u>Remedial Plan</u>			<u>SB 927</u>		
District No.	Perimeter	Schwartzberg	District No.	Perimeter	Schwartzberg
114	67.9	2.03	113	81.84	2.44
113	145.44	1.99	114	151.09	2.05
112	96.01	2.48	112	91.06	2.45

**Table 5 Compactness Statistics for Proposed Remedial Plan and SB 927 for Districts 111 – 114 (Source: ESRI Redistricting Online 2.36)**

## Conclusions

The Metro East area has a long, unique history that continues to shape the cultural geography of the area. Following similar trajectories of many Rust Belt cities over the twentieth century, East St. Louis and the areas surrounding it have seen tremendous population growth followed by

tremendous population decline. The Great Migration of Black citizens to the north looking for work in the growing industrial sectors certainly did not avoid the Metro East Area. Supported by the strength of St. Louis, Missouri across the shores of the Mississippi River, this close connection with the Gateway City helped establish East St. Louis not only as an important early industrial hub, but it also established the area as a vital hub of local Black culture in the area. As industry faded and the white population moved away from urban cores to the surrounding suburban neighborhoods, Black communities persisted but were faced with economic uncertainty and poverty.

By 2000, East St. Louis had lost nearly 70% of its total population compared to 1950 when East St. Louis stood at over 82,000 residents. The East St. Louis area has seen the greatest decline in both total population and declines in Black population. These declines extend from East St. Louis, to Cahokia, Madison, Centerville, and Washington Park. Today, East St. Louis only has a population slightly over 12,000. For Black populations throughout the Metro East area, they fall below white populations in nearly every socioeconomic metric. Yet, the largely Black populations of this area create a distinct urban core community of interest.

Outside of the urban core, populations transition from city to suburb to rural. For each movement away from the East St. Louis area, Black populations steadily decline. Residents on the outer fringes are almost entirely different than those in the urban core. Communities such as New Baden, Fayetteville, and St. Libory are much smaller, rural, and almost entirely white. Therefore, inclusion of these vastly different groups in a political unit can cause potential issues. For Black voters, the ability to elect candidates of their choice is highly dependent on whether they are surrounded with more Black voters. For the Metro East area, this concept is somewhat simple in that the history of the region has long established numerous and close-in-proximity communities of interest.

The Plaintiffs in the case provided me with four main charges: compare the socioeconomic characteristics of St. Clair County, analyze SB 2777 and SB 927 districts 112, 113, and 114 to determine if the creation of such districts has had an impact on Black voters' ability to elect candidates of their choice, create a Liability Plan that meets Section 2 requirements of the Voting Rights Act and that creates a compact district with at least 50% +1 of a minority population (in this case, a Black district), and create a Remedial Plan that creates a District that allows Black voters to elect candidates of their choice that is also compact, meets the one-person one-vote requirement, addresses any legislative concerns, and remedies any statutory or constitutional violation.

Based on the demographic shifts from 2010 to 2020, the State House Districts 112, 113, and 114 (which cover the Metro East area) all saw differing levels of population growth. The district that saw the greatest decline over the decade was District 114. This district, the largest in total Black population, saw a decline in total population of over 18,000 persons. District 113, in the central part of the Metro East area, saw little overall population growth or decline, but based on race, this area saw larger growth of Black residents and decline of white residents. District 112, to the north, saw the greatest overall increase in population between censuses.

In 2021, Illinois Democrats passed HB 2777 to draw legislative districts using highly problematic ACS 5 Year estimates from 2015 to 2019. ACS uses surveys across geographic areas and extrapolates results into population numbers. ACS data often both overestimates and underestimates areas. As a result, HB 2777 severely overestimated populations in all three proposed districts. District 114 was the most overestimated of the three.

After the release of the 2020 PL 94-171 redistricting data, it became clear how poor the ACS estimates were in these proposed districts. The ACS estimates severely overestimated District 114's total populations and Black populations. As a result, the Illinois Legislature passed SB 927 to redraw lines using 2020 PL 94-171 data. To adhere to the changes in population, SB 927 saw little change in Districts 112 and 113, but District 114 was fundamentally altered.

The proposed District 114 would still include East St. Louis and Centerville (places that lost total population). But rather than extending boundaries towards the central areas of Metro East, the proposed District 114 would retrench from the outskirts of Belleville (the largest city) and add largely white and rural populations to the south and east of the entire Metro East Area. This inclusion of mostly white populations decreased the total Black VAP of 37% in 2010 to under 34% in 2020. The addition of these areas to the south and east has the potential to decrease Black voters' chances of electing candidates of their choice.

Both HB 2777 and SB 927 represent an odd proposition regarding Metro East. To achieve the Legislature's goals to protect Democrats in Districts 112 and 113, it was necessary to shift Black population to 112 from 113 and then to 113 from 114 at the expense of Black voters in 114, even though 112 was overpopulated and 114 was underpopulated. The movement of Belleville out of District 114 further diluted Black voters in the proposed 114, a district that already lost population between 2010 and 2020. It is my opinion, based on my extensive analysis of population data and the SB 927 proposed districts 112, 113, and 114, that District 114 was altered to the detriment of the Black voters present in the proposed district. Drawing of districts should have taken into consideration the areas in closer proximity that saw increases in Black population next to areas that lost Black populations, instead of adding voters that are both farther in geographic distance and that differ culturally.

This report offers two separate solutions to rectify the issues created by the drawing of District 114 under the SB 927 plan. The first plan is a Liability Plan that addresses Section 2 of the Voting Rights Act by creating a Minority Majority district which provides, in this case, Black citizens with a greater chance to election candidates of their choice. This plan, unlike SB 927, adds areas that saw both total population growth and growth of Black populations in the immediate areas east of East St. Louis, Cahokia, Centerville, and Washington Park. This Liability Plan is 51.51% Black VAP, compact, adheres to municipal boundaries, and protects communities of interest. This plan identified areas in Madison to the north of East St. Louis and into Belleville to the south of East St. Louis and Centerville. This creation of a Section 2 compliant district increases the likelihood that Black voters can elect candidates of their choice.

The second plan is a Remedial Plan that meets the one-person one-vote requirement, is compact, unites Black communities of interest, addresses priorities identified by the Illinois legislature by

including Scott Airforce Base in the district, all while having sufficient Black population to elect a Black candidate of choice. This plan follows similar logic at the Liability Plan and adds areas immediately east of East St. Louis that gained in total population. This plan only splits Belleville to the south and adheres to other municipal boundaries like Swansea and Shiloh.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 10, 2021.

A handwritten signature in black ink that reads "Ryan Weichelt". The signature is written in a cursive style with a prominent flourish at the end of the last name.

Dr. Ryan Weichelt

## **Appendix A: Redistricting Resources and Methodologies**

I collected all socioeconomic data comparing Black population and white Population from the United States Census at <https://data.census.gov>. The data was based on the 2019 American Community Survey 5 Year Estimates, 2017 ACS 1 Year Estimates, 2010 PL 94-171 Redistricting Data, and 2020 PL 94-171 Redistricting Data.

I prepared all figures and exhibits using an online geographic information system called ESRI Redistricting Online 2.36.

Data regarding total populations, voting age populations, and race were based on both Census 2010 and 2020 PL 94-171 redistricting data at the census block level provided by the ESRI online redistricting software and downloaded from the United States Census Bureau.

I assigned census blocks to the appropriate precincts and data was aggregated by ESRI Online. The ESRI Online software aggregates and recalculates population data concurrently as blocks are assigned to specific districts. This process provides information about population deviations as well as voting age population data and racial makeup of each district.

The block data and subsequent boundaries used by the ESRI Online software were created by the United Census TIGER (Topologically Integrated Geographic Encoding and Referencing) files. A census block is the smallest geographic tabulation area related to each decennial census. Census block sizes vary in both total population and area depending on population density. Blocks tend to be geographically smaller in urban areas and larger in less populated rural areas. Census blocks tend to be bounded by visible boundaries like streets, rivers, and railroads.

The block-level population data I used are based on the 2010 and 2020 PL 94-171 data files. The PL 94-171 data file is published in electronic format and is the complete count population file designed by the Bureau of the Census for use in legislative redistricting. The file contains basic data on the population for all ages and voting age population found in units of census geography such as states, counties, municipalities, townships, reservations, school districts, census tracts, census block groups, and census blocks.

## Exhibits to the Expert Report of Ryan Weichelt

Place	Tot Pop 2010	White	Black	% White 10'	% Black 10'	Tot Pop 2020	White	Black	% White 20'	% Black 20'	% Dif White	% Dif Black
East St. Louis	27,006	219	26,378	0.81%	97.67%	18,469	222	17,536	1.20%	94.95%	0.39%	-2.73%
Venice	1,890	61	1,768	3.23%	93.54%	1,498	39	1,421	2.60%	94.86%	-0.62%	1.31%
Centreville	5,309	88	5,121	1.66%	96.46%	4,232	68	3,969	1.61%	93.79%	-0.05%	-2.67%
Brooklyn	749	17	703	2.27%	93.86%	649	15	604	2.31%	93.07%	0.04%	-0.79%
Alorton	2,002	19	1,955	0.95%	97.65%	1,566	33	1,453	2.11%	92.78%	1.16%	-4.87%
Washington Park	4,196	427	3,599	10.18%	85.77%	2,592	413	2,017	15.93%	77.82%	5.76%	-7.96%
Cahokia	15,241	5,232	9,484	34.33%	62.23%	12,096	2,745	8,593	22.69%	71.04%	-11.64%	8.81%
Madison	3,891	1,511	2,153	38.83%	55.33%	3,171	854	2,001	26.93%	63.10%	-11.90%	7.77%
Sauget	159	148	9	93.08%	5.66%	141	125	6	88.65%	4.26%	-4.43%	-1.41%
Fairmont	2,635	705	18	26.76%	0.68%	2,265	424	1	18.72%	0.04%	-8.04%	-0.64%
Belleville	44,478	30,345	11,231	68.22%	25.25%	42,404	24,171	13,596	57.00%	32.06%	-11.22%	6.81%
Fairview Heights	17,078	11,123	4,518	65.13%	26.46%	16,706	9,146	5,215	54.75%	31.22%	-10.38%	4.76%
Shiloh	12,651	8,702	2,732	68.79%	21.60%	14,098	8,486	3,571	60.19%	25.33%	-8.59%	3.73%
Swansea	13,430	10,349	2,209	77.06%	16.45%	14,386	9,286	3,268	64.55%	22.72%	-12.51%	6.27%
Collinsville	25,579	21,186	2,544	82.83%	9.95%	24,366	17,727	3,548	72.75%	14.56%	-10.07%	4.62%
Caseyville	4,245	3,579	417	84.31%	9.82%	4,400	2,999	499	68.16%	11.34%	-16.15%	1.52%
Pontoon Beach	5,836	5,091	386	87.23%	6.61%	5,876	4,545	542	77.35%	9.22%	-9.89%	2.61%
O'Fallon	28,281	21,279	4,372	75.24%	15.46%	32,289	22,344	5,200	69.20%	16.10%	-6.04%	0.65%
Lebanon	4,418	3,457	710	78.25%	16.07%	4,691	3,438	725	73.29%	15.46%	-4.96%	-0.62%
East Carondelet	499	433	47	86.77%	9.42%	390	329	35	84.36%	8.97%	-2.41%	-0.44%
Mascoutah	7,483	6,562	374	87.69%	5.00%	8,754	6,979	532	79.72%	6.08%	-7.97%	1.08%
Dupo	4,138	3,929	95	94.95%	2.30%	3,996	3,429	196	85.81%	4.90%	-9.14%	2.61%
New Baden	3,349	3,083	92	92.06%	2.75%	3,428	2,929	91	85.44%	2.65%	-6.61%	-0.09%
Summerfield	451	420	14	93.13%	3.10%	347	312	6	89.91%	1.73%	-3.21%	-1.38%
Smithton	3,693	3,598	38	97.43%	1.03%	4,006	3,759	36	93.83%	0.90%	-3.59%	-0.13%
Freeburg	4,354	4,257	17	97.77%	0.39%	4,582	4,274	41	93.28%	0.89%	-4.49%	0.50%
Millstadt	4,011	3,919	8	97.71%	0.20%	4,071	3,786	22	93.00%	0.54%	-4.71%	0.34%
Columbia	9,707	9,340	33	96.22%	0.34%	10,999	10,210	59	92.83%	0.54%	-3.39%	0.20%
St. Libory	615	596	1	96.91%	0.16%	628	601	1	95.70%	0.16%	-1.21%	0.00%
Fayetteville	366	345	0	94.26%	0.00%	302	258	0	85.43%	0.00%	-8.83%	0.00%

**Exhibit 1a: Population Numbers for Urban Core (in Green), Outer Core (in Orange), and Periphery (in Pink) Communities in St. Clair County, Illinois (Source: U.S. Census Bureau 2010 and 2020 PL 94-171 Data)**

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2020 Percent Black Voting Age Population for St. Clair County Census Blocks

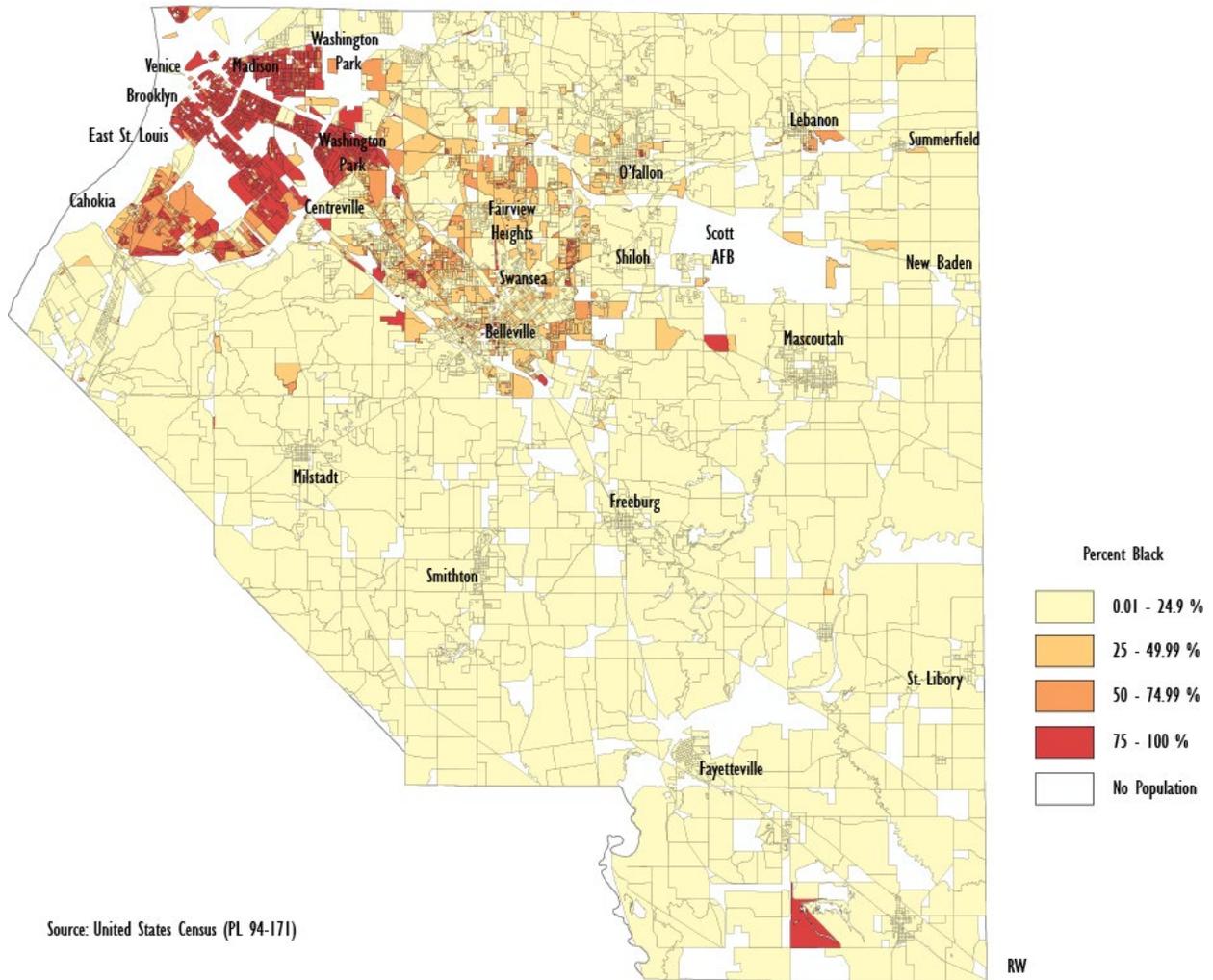


Exhibit 1b: 2020 Percent Black Voting Age Population for St. Clair County Census Blocks (Source: 2020 PL 94-171 Data)

Exhibits to the Expert Report of Ryan Weichelt

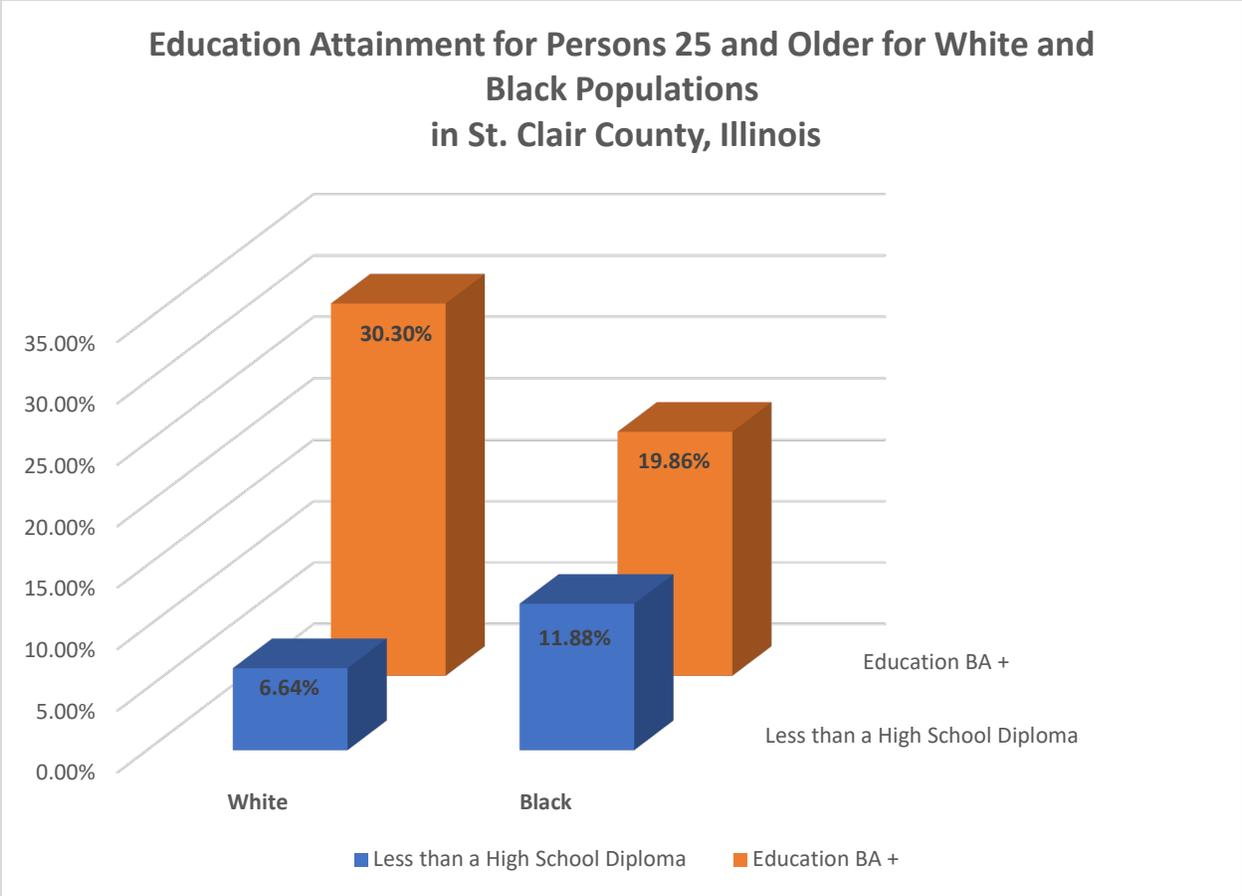
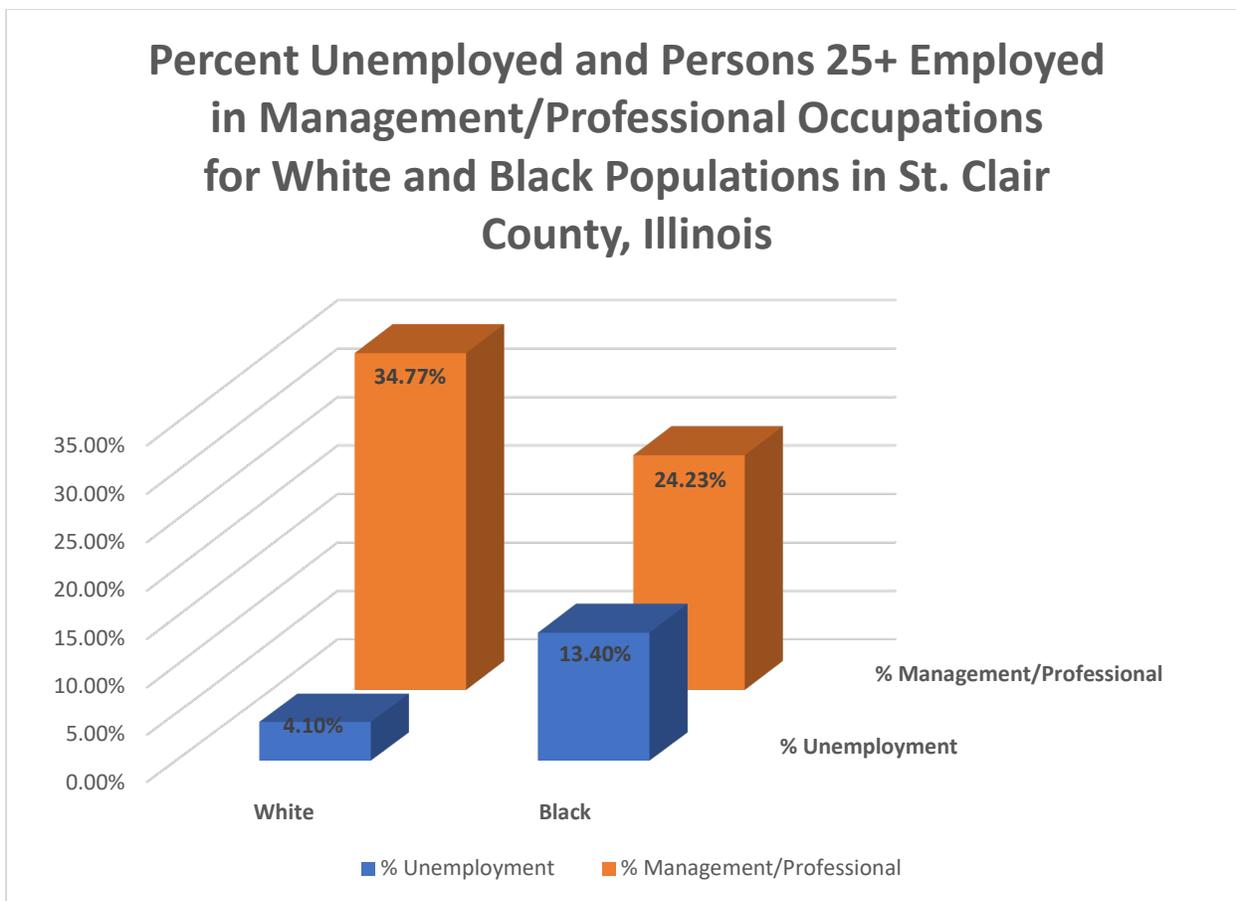


Exhibit 2a: Education Attainment for Persons 25 and Older for White Black Populations in St. Clair County, Illinois (Source: ACS 2019 5 Year Estimates, C15002)

Exhibits to the Expert Report of Ryan Weichelt



**Exhibit 2b: Percent Unemployed and Persons 25+ Employed in Management/Professional Occupations for White and Black Populations in St. Clair County, Illinois (Source: ACS 2017 1 Year Estimates, B24010)**

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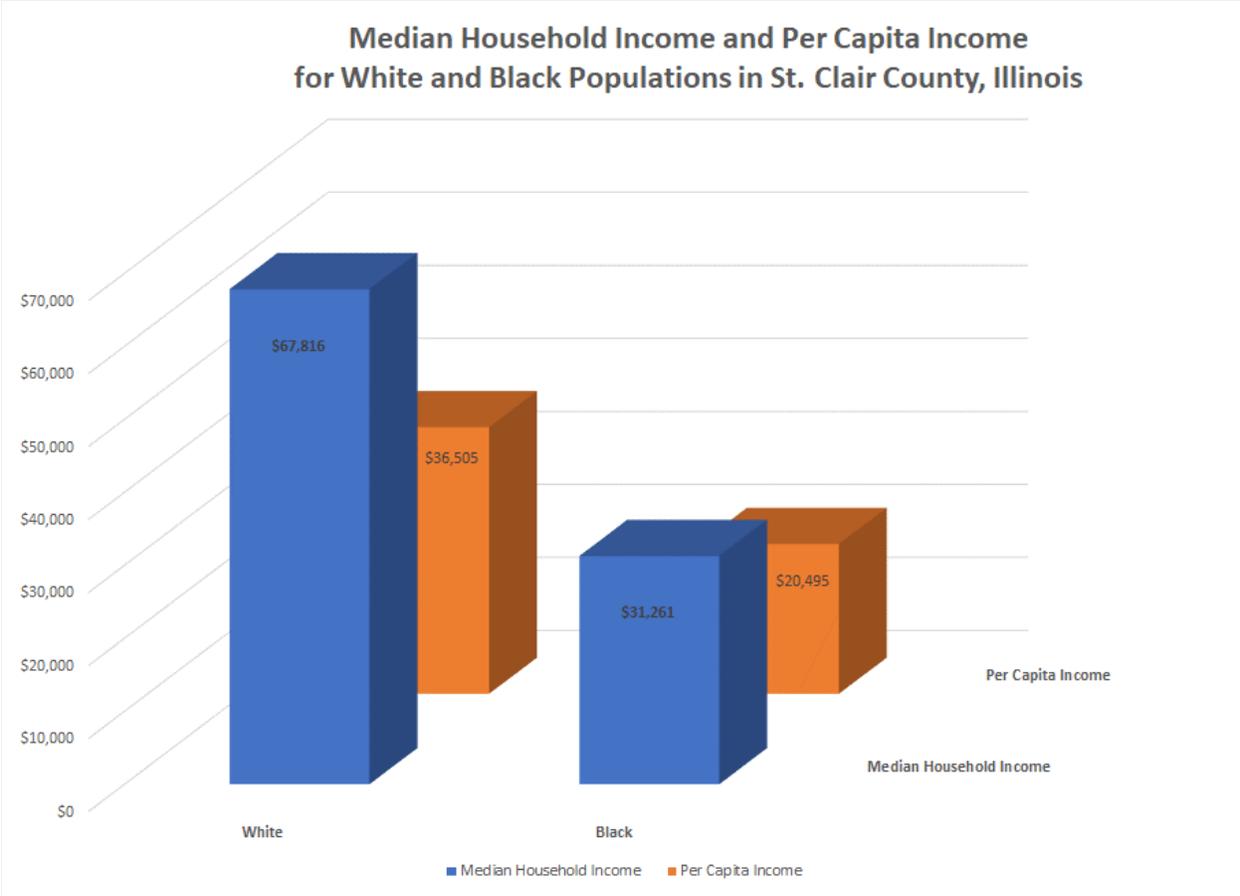


Exhibit 2c: Median Household Income and Per Capita Income for White and Black Populations in St. Clair County, Illinois (Source: S1902 and S1903)

Exhibits to the Expert Report of Ryan Weichelt

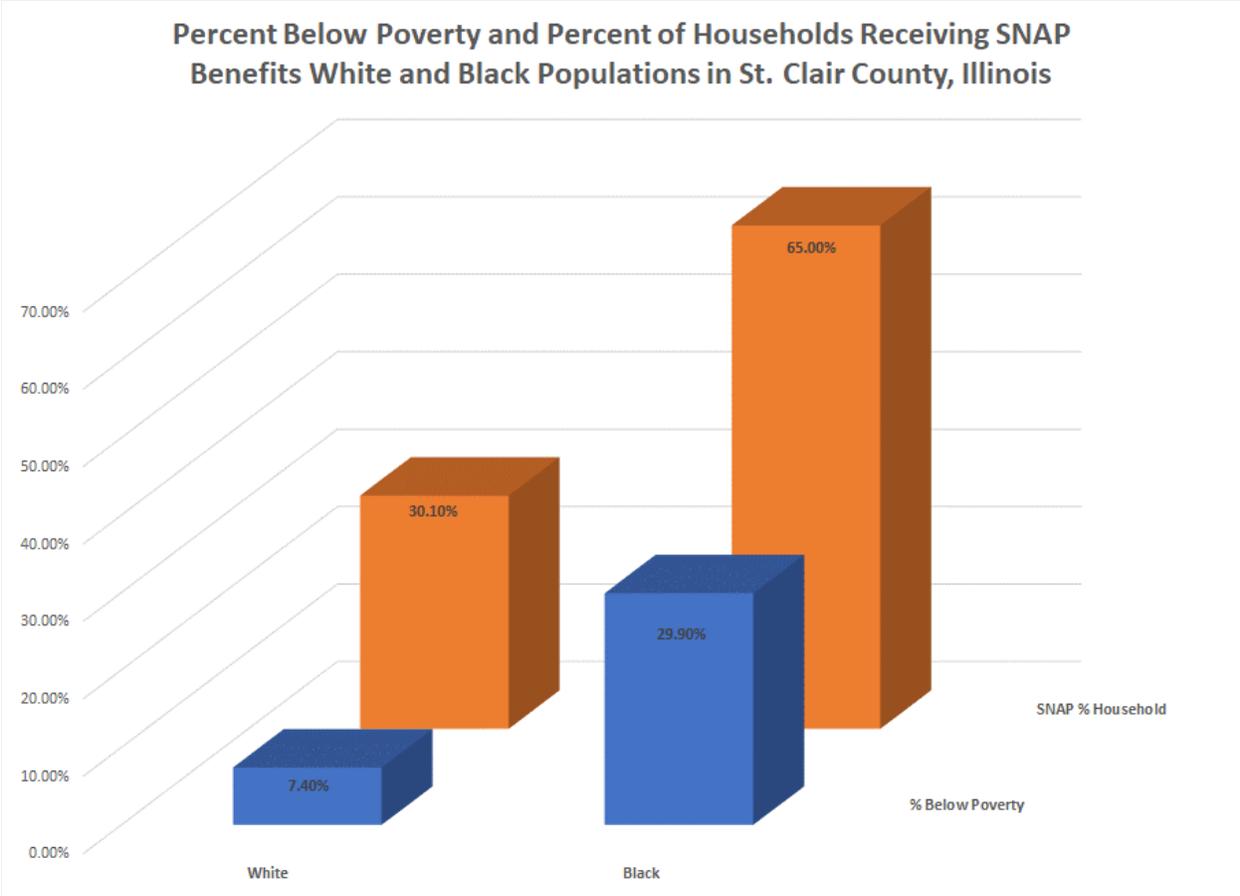


Exhibit 2d: Percent Below Poverty and Percent of Households Receiving SNAP Benefits White and Black Populations in St. Clair County, Illinois (Source: 2017 ACS 1 Year Estimates, S2201)

Exhibits to the Expert Report of Ryan Weichelt

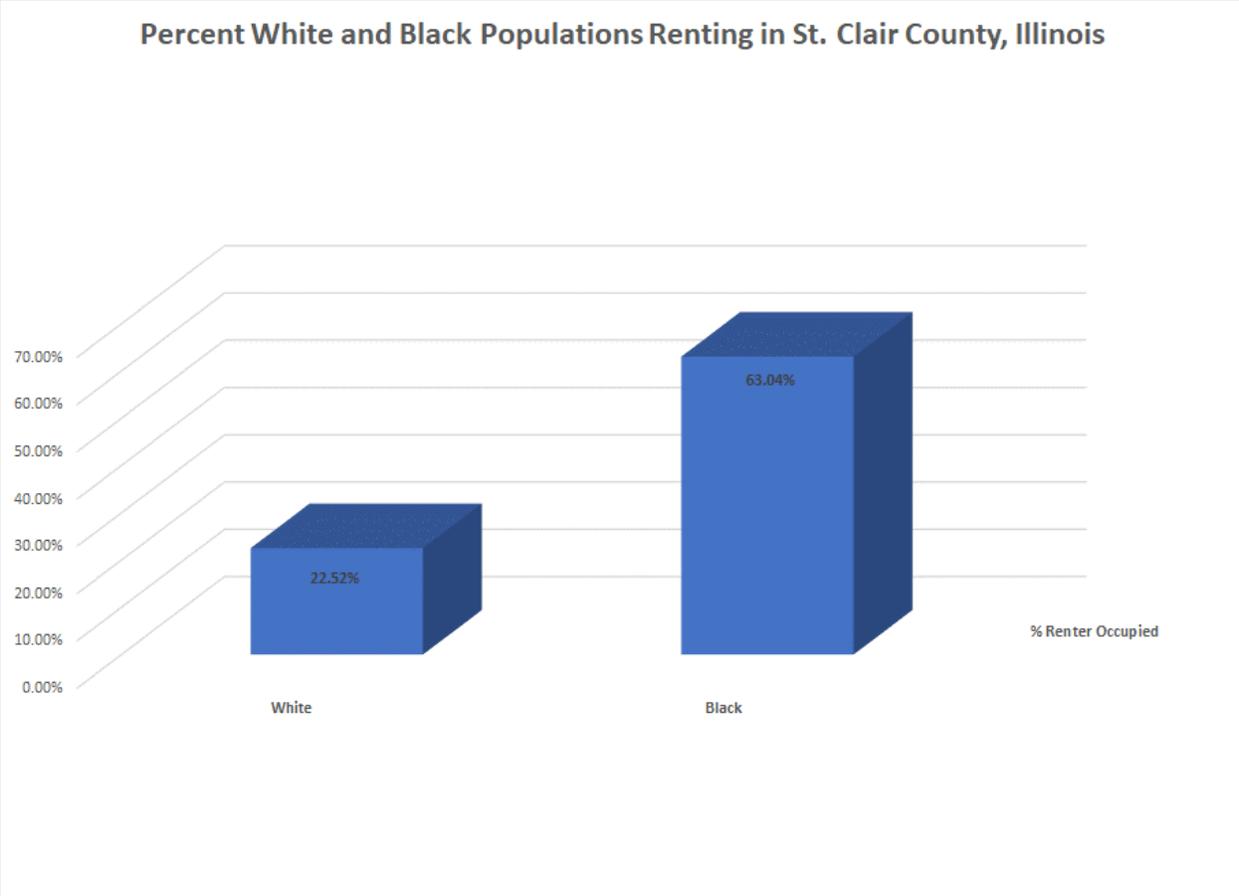


Exhibit 2e: Percent White and Black Populations Renting in St. Clair County, Illinois (Source: B25003)

Exhibits to the Expert Report of Ryan Weichelt

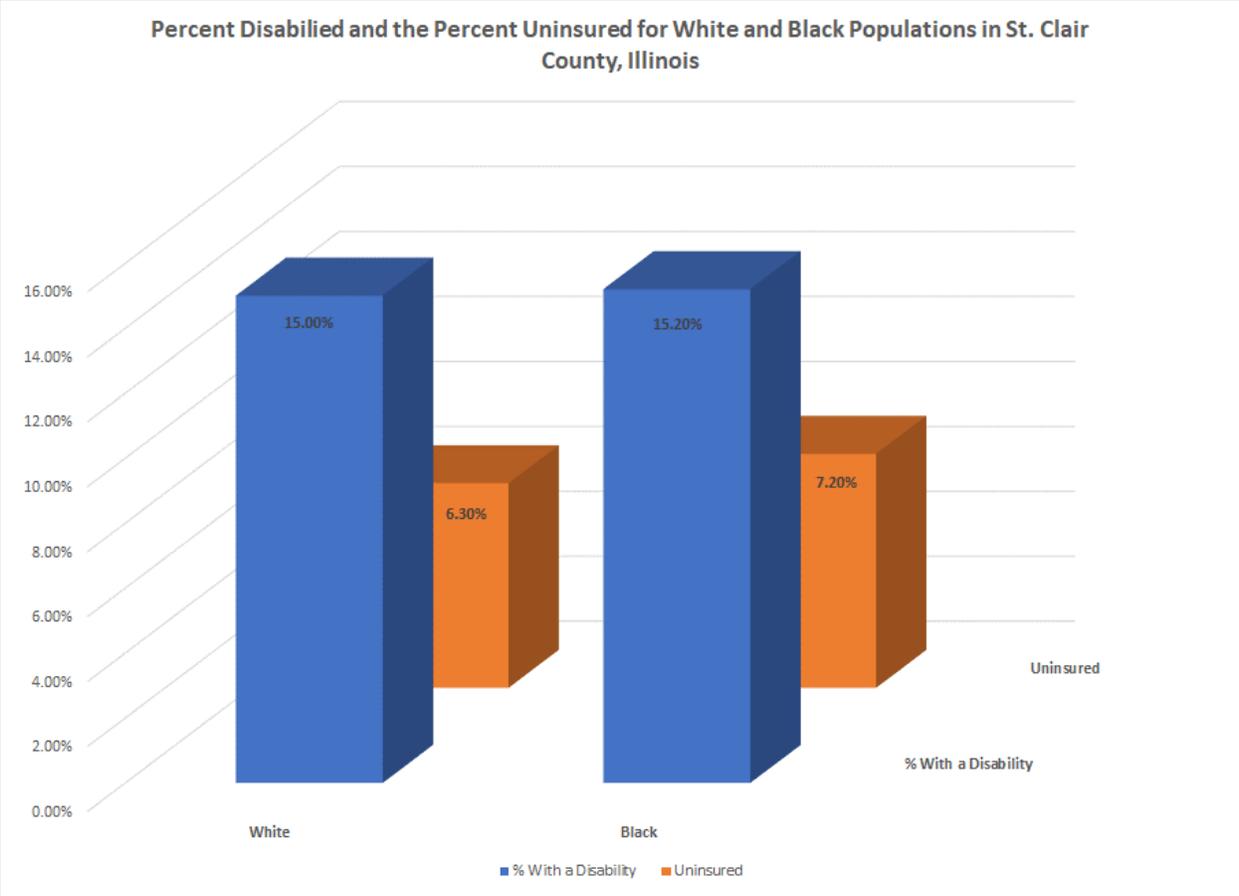


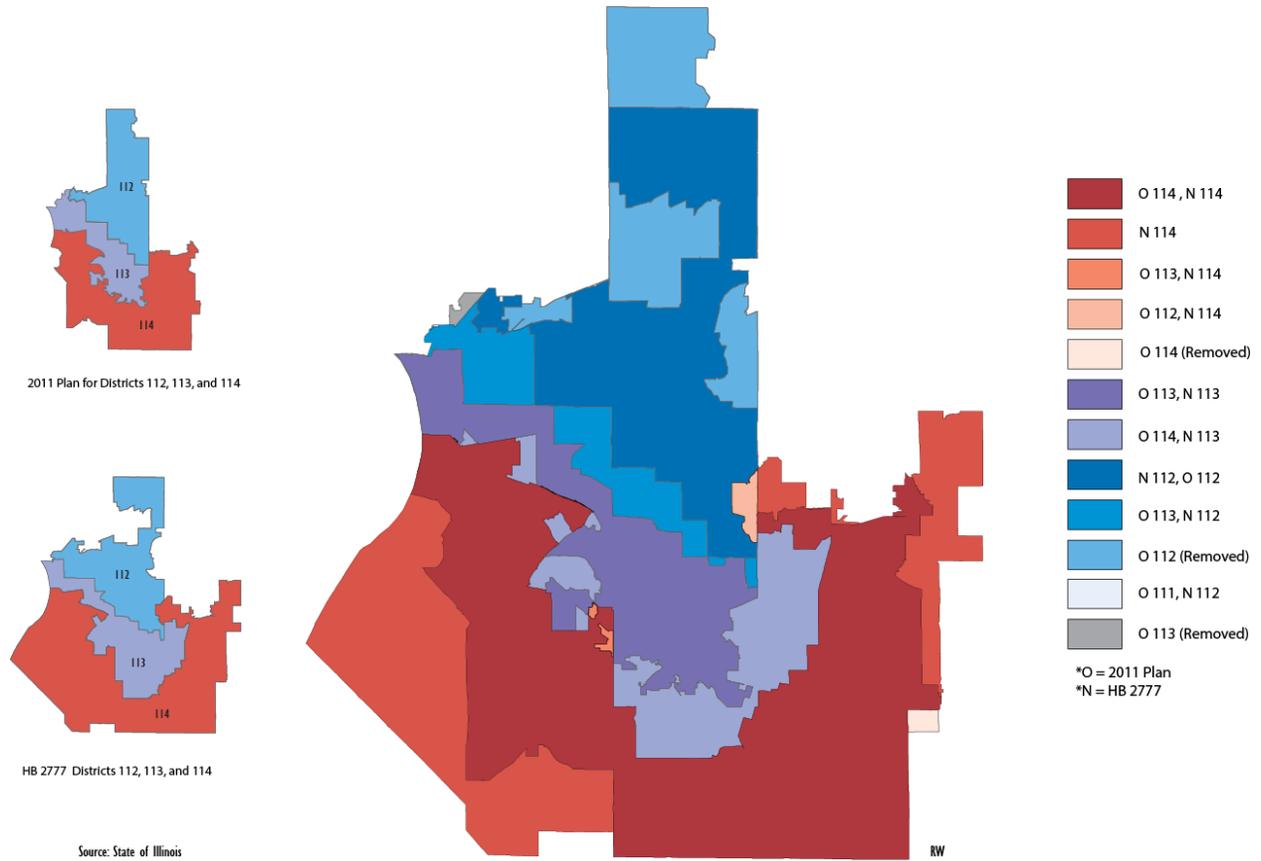
Exhibit 2f: Percent Disabled and the Percent Uninsured for White and Black Populations in St. Clair County, Illinois (Source: S1810)

**Exhibits to the Expert Report of Ryan Weichelt**

<b>2011 Plan Districts (2010 Census Data)</b>	<b>Total Pop.</b>	<b>Total White Pop.</b>	<b>Total Black Pop.</b>	<b>Total Voting Age Pop. (VAP)</b>	<b>Total White VAP</b>	<b>Total Black VAP</b>	<b>% White VAP</b>	<b>% Black VAP</b>
District 114	108,734	54,950	48,159	79,528	42,805	33,282	53.82%	41.85%
District 113	108,734	69,766	29,178	83,104	56,783	20,412	68.33%	24.56%
District 112	108,734	92,572	8,248	84,577	73,708	5,913	87.15%	6.99%
<b>2011 Plan Districts (2020 Census Data)</b>								
District 114	97,784	51,627	37,389	73,900	40,828	27,508	55.25%	37.22%
District 113	101,432	55,735	33,093	79,183	46,751	24,201	59.04%	30.56%
District 112	114,505	88,178	12,349	90,323	71,503	9,361	79.16%	10.36%
<b>2021 HB 2777 Districts (2020 Census Data)</b>								
District 114	99,349	55,109	35,993	74,300	43,161	25,969	58.09%	34.95%
District 113	108,460	59,954	36,085	84,354	49,965	26,284	59.23%	31.16%
District 112	113,319	81,962	16,737	89,424	66,980	12,689	74.90%	14.19%
<b>2021 SB 927 Districts (2020 Census Data)</b>								
District 114	108,370	61,918	37,751	81,234	48,509	27,254	59.72%	33.55%
District 113	108,491	61,438	34,437	84,464	51,158	25,084	60.57%	29.70%
District 112	108,585	78,232	16,359	85,721	63,918	12,436	74.57%	14.51%

Exhibits to the Expert Report of Ryan Weichelt

Comparison of the 2011 Plan for State House Districts 112, 113, & 114 and  
 HB 2777 State House Districts 112, 113, & 114



**Exhibit 3b: Comparisons of the 2011 Plan State House District 112, 113, and 114 and HB 2777 State House Districts 112, 113, and 114**

Exhibits to the Expert Report of Ryan Weichelt

Comparison of the 2011 Plan for State House Districts 112, 113, & 114 and  
SB 927 State House Districts 112, 113, & 114

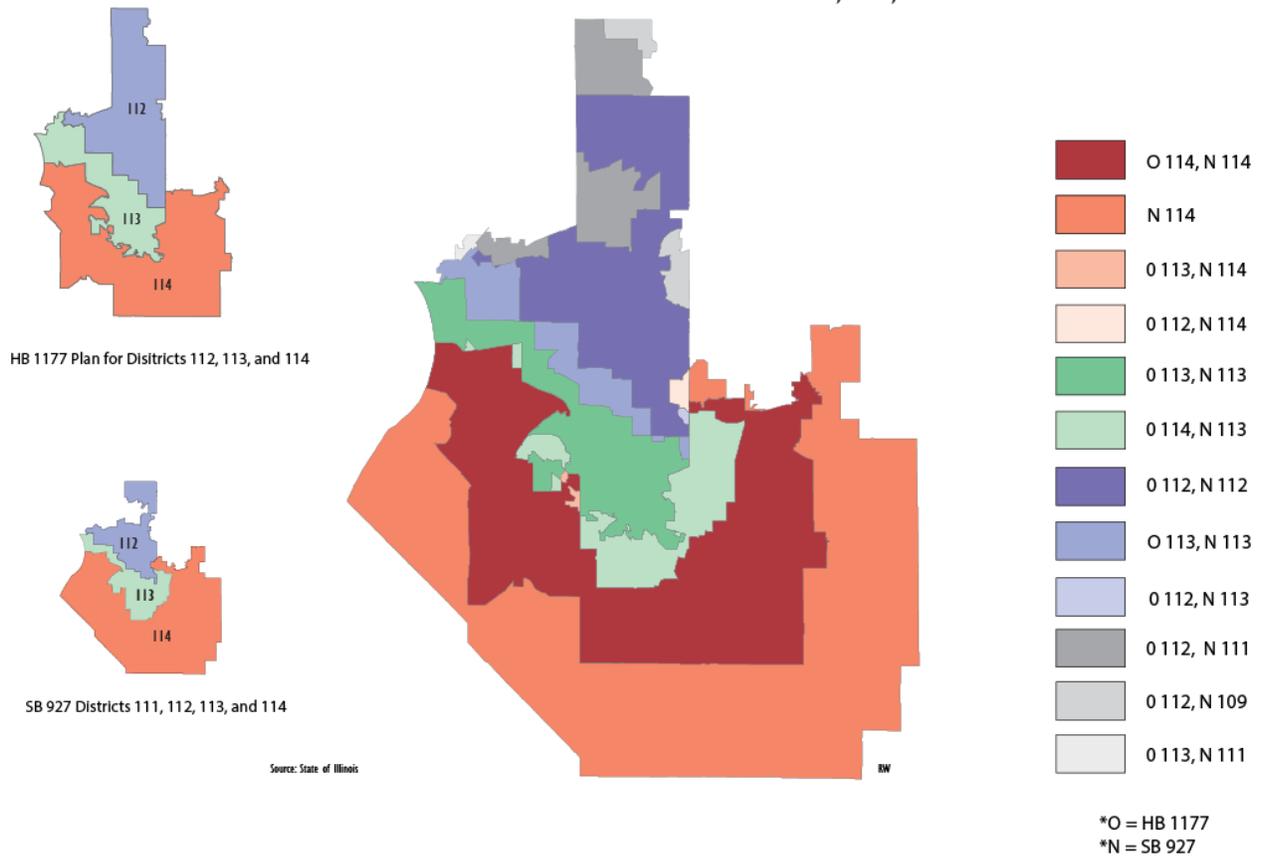


Exhibit 3b: Comparisons of the 2011 Plan and the SB 927 (2021) Plan

**Exhibits to the Expert Report of Ryan Weichelt**

<b>Map Reference</b>	<b>TP</b>	<b>White</b>	<b>Black</b>	<b>TPVAP</b>	<b>VAP White</b>	<b>VAP Black</b>	<b>% VAP Black</b>	<b>% VAP White</b>
O 114, N 114	69,138	33,594	30,209	51,893	26,297	22,244	42.87%	50.68%
N 114	37,528	27,217	7,182	28,234	21,506	4,739	16.78%	76.17%
O 113, N 114	258	33	216	203	28	170	83.74%	13.79%
O 112, N 114	1,446	1,074	144	904	678	101	11.17%	75.00%
O 113, N 113	79,519	43,185	27,208	62,196	36,444	19,781	31.80%	58.60%
O 114, N 113	28,587	17,986	7,168	21,956	14,492	5,252	23.92%	66.00%
O 112, N 113	385	267	61	312	222	51	16.35%	71.15%
O 112, N 112	87,953	66,553	10,759	69,705	54,301	8,216	11.79%	77.90%
O 113, N 112	20,534	11,626	5,571	15,944	9,582	4,198	26.33%	60.10%
O112, N 111	24,721	20,284	1,385	19,402	16,302	993	5.12%	84.02%
O 112, N 109	2,141	1,832	66	1,762	1,528	54	3.06%	86.72%
O 113, N 111	1,166	924	110	884	729	64	7.24%	82.47%

**Exhibit 3c: Demographic Changes to Districts as Displayed in Exhibit 3b**

Exhibits to the Expert Report of Ryan Weichelt



Exhibit 4a: Comparison of the Proposed Liability District 114

Exhibits to the Expert Report of Ryan Weichelt

2020 Percent Black Voting Age Population for Selected Metro East Census Blocks and the Liability Plan

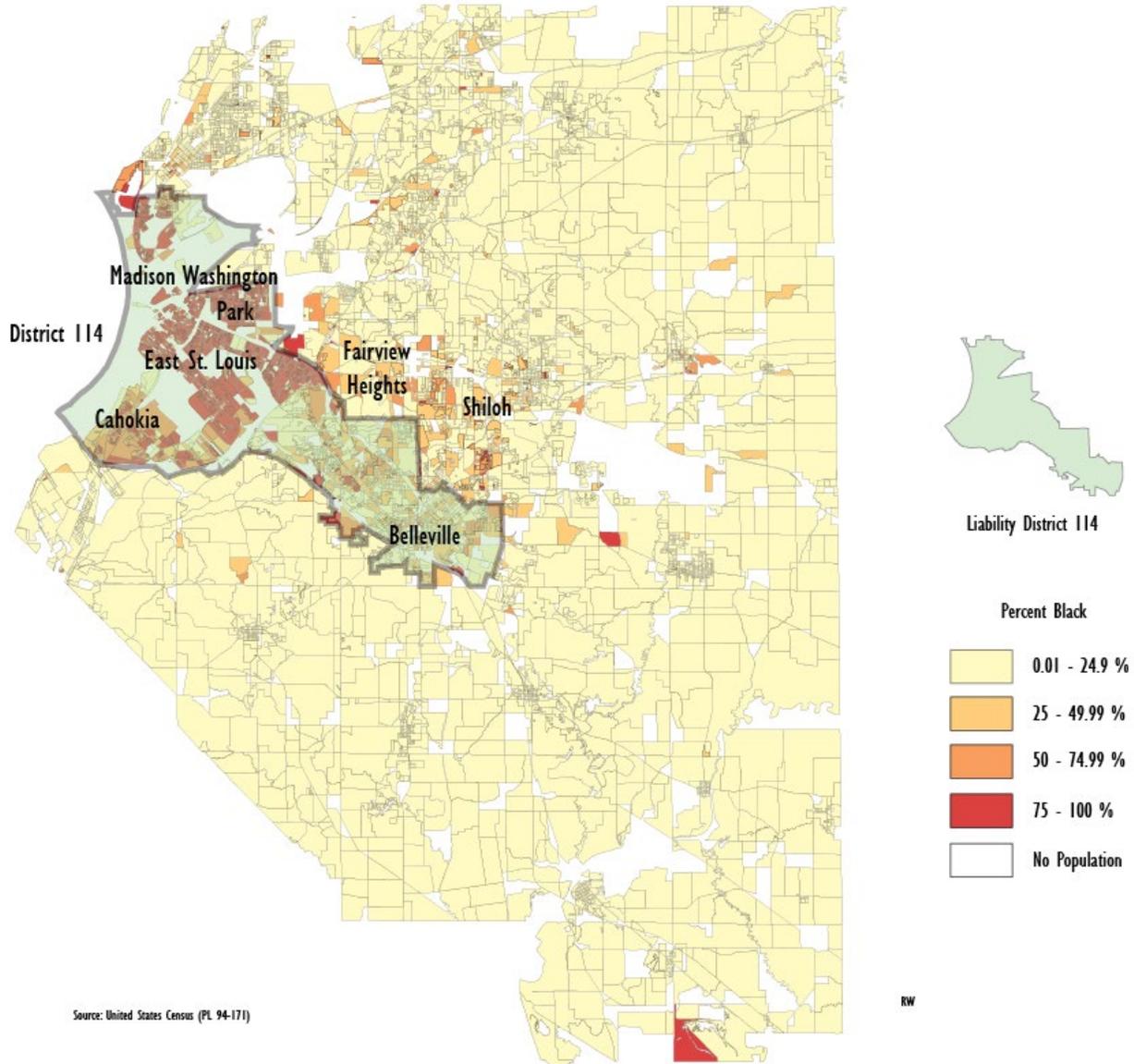
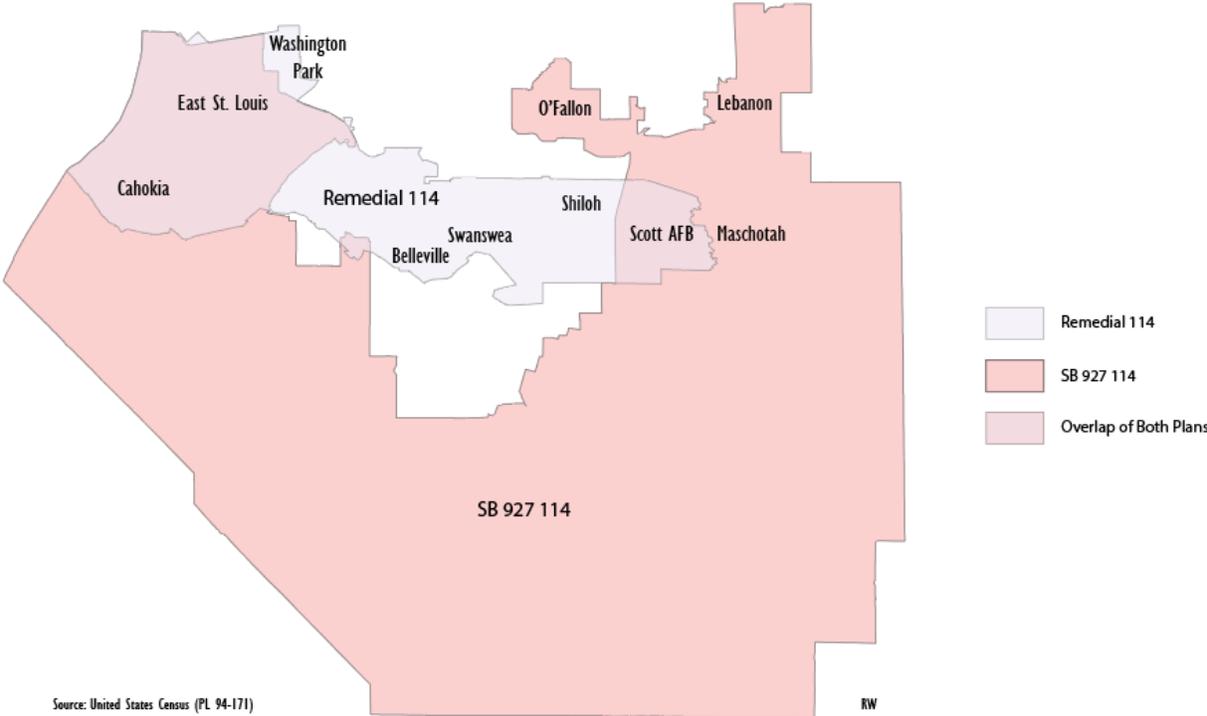


Exhibit 4b: 2020 Percent Black Voting Age Population for St. Clair County Census Blocks and the Liability Plan

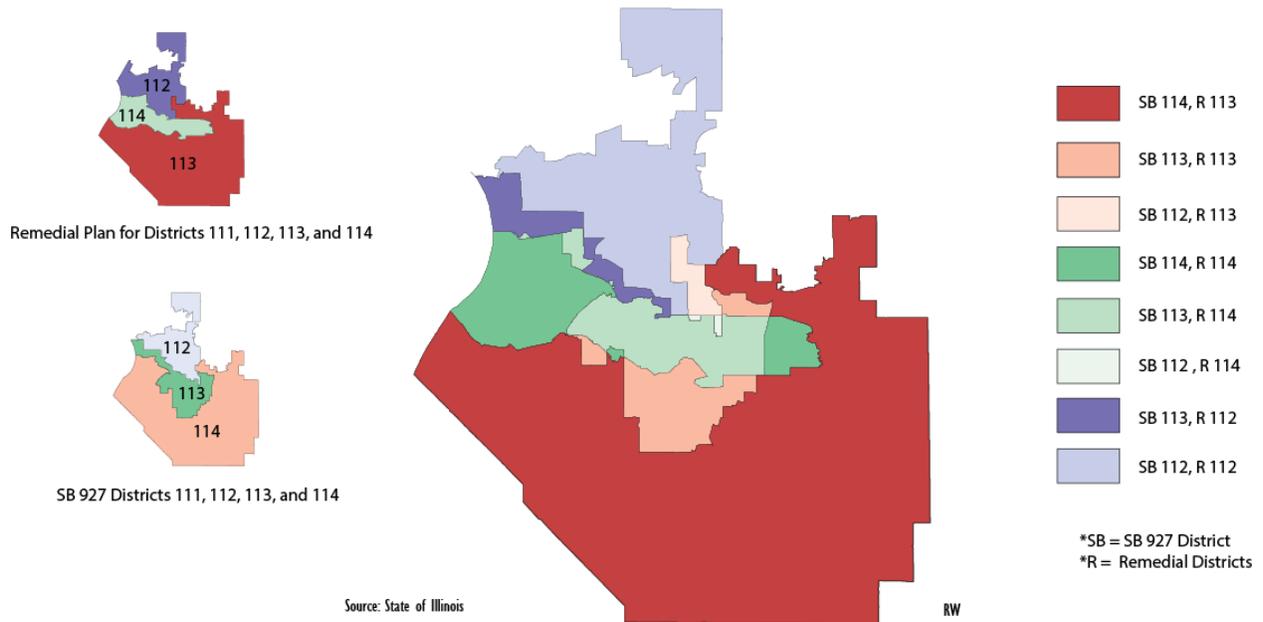
Exhibits to the Expert Report of Ryan Weichelt

Comparison of the Proposed Remedial District 114 and the SB 927 State House District 114



**Exhibits to the Expert Report of Ryan Weichelt**

Comparison of the Remedial Plan for State House Districts 112, 113, & 114 and  
SB 927 State House Districts 112, 113, & 114



**Exhibit 4d: Comparisons of the Remedial Plan for State House District 111, 112, 113, and 114 with HB 927 State House Districts 111, 112, 113, and 114**

**Exhibits to the Expert Report of Ryan Weichelt**

**Exhibit 5a – Curriculum Vitae**

**CURRICULUM VITAE**

Ryan Douglas Weichelt  
University of Wisconsin-Eau Claire  
Department of Geography and Anthropology  
258 Phillips Hall  
Office Phone: (715) 836 – 4426  
Personal Phone: (715) 972 - 0896  
Email: weicherd@uwec.edu or weicherd@gmail.com

EDUCATION:

Ph.D., University of Nebraska-Lincoln, August 2008.

Dissertation Title: Scale Factors in Hispanic Voting Behavior

Dissertation Advisor: Dr. J. Clark Archer

Master of Applied Geography, Texas State University–San Marcos December 2002.

Thesis Title: Defining a Political Place: The Voting Culture of South Texas Hispanics. Thesis

Advisor: Dr. Fred Shelley.

Bachelor of Science, Magna Cum Laude, University of Wisconsin–Eau Claire May 2000:

Major: Geography Minor: Political Science

ACADEMIC EXPERIENCE:

Professor of Geography, University of Wisconsin-Eau Claire, 2021 - Present

Associate Professor of Geography, University of Wisconsin-Eau Claire, 2016 – 2021

\*Sabbatical 2020 - 2021

Assistant Professor of Geography, University of Wisconsin-Eau Claire, 2009 - 2015

-Human Geography (Geog 111)

-Human Geography Online (Geog 111)

-Economic Geography (Geog 155)

-Conservation of the Environment (Geog 178)

-First Year Experience (IDIS 187)

-Business Geographics (Geog 352)

-Geography of Migration (Geog 367)

-Geography of the Appalachia (Geog 368)

-Geography of New York City (Geog 368)

-Geography of the Texas Hill Country (368)

-Quantitative Methods (Geog 328/370)

-Capstone Seminar in Geography (Geog 401)

-Political Geography (Geog 446)

-Urban Geography (Geog 470)

Visiting Instructor, University of Central Oklahoma, 2008 – 2009

-World Regional Geography (Geog 2303)

**Exhibits to the Expert Report of Ryan Weichelt**

- Conservation of Natural Resources (Geog 3703)
- Geography of Europe (Geog 3123)
- Political Geography (Geog 3503)
- Urban Geography (Geog 4603)

Visiting Instructor, Nebraska Wesleyan University, Fall 2007

- Physical Geography (Geog 51)

Instructor and Graduate Teaching Assistant, University of Nebraska, 2004 – 2008

- Quality of the Environment (Geog 181)
- Elements of Physical Geography (Geog 155)

Instructor, Dana College, Spring 2006

- Introduction to Geography (Geog 202)

Lecturer, Texas State University, Spring 2003

- Introduction to Criminal Justice (CJ 1310)

Teaching Assistant, University of Wisconsin-Eau Claire

- Human Geography (Geog 111)
- Conservation of the Environment (Geog 178)
- Introduction to World Politics (Pols 122)
- Model United Nations (Pols 201)

ADMINISTRATIVE EXPERIENCE

Director of First Year Experiences for the University of Wisconsin-Eau Claire, July 2019 to August 2020

Interim Director of First Year Experiences for the University of Wisconsin-Eau Claire, May 2017 to June 2019

Geospatial Board Chairman, Geography and Anthropology Department, August 2016 to the August 2020

Faculty Senate Executive Committee, University of Wisconsin – Eau Claire, September 2019 – to Present

Faculty Representative, University of Wisconsin – Eau Claire, Faculty Senate, September 2015 to the present

2<sup>nd</sup> Vice President, Gamma Theta Upsilon, January 2021 to the present.

West Lakes Regional Councilor for Gamma Theta Upsilon, January 2017 to the 2020.

Search Committee Chair for Tenure Track Faculty, Geography and Anthropology Department, August 2017 – December 2017

**Exhibits to the Expert Report of Ryan Weichelt**

PUBLICATIONS:

- 2023 - Weichelt, Ryan. *Redistricting, Gerrymandering, and Geography*. Rowan and Littlefield: Lanham, MD. *Under Contract*.
- 2022 - Weichelt, Ryan, J. Clark Archer, Robert Shepard, Robert Watrel, and Jill Archer. "The Intertwined Geographies of the Pandemic and the U.S. Presidential Election of 2020: COVID-19 Prevalence and Donald Trump." Ed. Stanley Brunn. *The Geographies of COVID-19*. Springer Nature: Switzerland. *Anticipated 2022*.
- 2022 - Weichelt, Ryan. "Trump, Biden, and Wisconsin." Eds. Barny Warf and John Heppen. *Geographies of the 2020 Election*. Routledge: Abingdon, United Kingdom. *Anticipated 2022*.
- 2022 - French, Kenneth and Ryan Weichelt. "Political Ramifications of the Jacob Blake Shooting in Kenosha, Wisconsin on the 2020 Presidential Election." Eds. Barny Warf and John Heppen. *Geographies of the 2020 Election*. Routledge: Abingdon, United Kingdom. *Anticipated 2022*.
- 2021 - Watrel, Robert, Ryan Weichelt, Erin Fouberg, John Heppen, Fiona Davidson, Clark Archer, Fred Shelley, Ken Martis. Editors of the *Atlas of the 2020 Elections*. Rowman and Littlefield: Lanham, MD. *Anticipated March 2022*.
- 2021 - Weichelt, Ryan. "Latinos and 2020 Election." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2020 Elections*. Rowman and Littlefield: Lanham, MD. *Anticipated March 2022*.
- 2021 - Weichelt, Ryan. "Overview of the 2020 Senate Elections." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2020 Elections*: Rowman and Littlefield: Lanham, MD. *Anticipated March 2022*.
- 2021 - Weichelt, Ryan. "A "Blue Wave," the 2018 Congressional Elections." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2020 Elections*: Rowman and Littlefield: Lanham, MD. *Anticipated March 2022*.
- 2021 - Weichelt, Ryan. "The Geography of Wisconsin Election Results and the 2020 Presidential Election." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2020 Elections*: Rowman and Littlefield: Lanham, MD. *Anticipated March 2022*.
- 2021 - Weichelt, Ryan. "Overview of the 2020 Senate Elections." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2020 Elections*: Rowman and Littlefield: Lanham, MD. *Anticipated March 2022*.
- 2021 - Weichelt, Ryan. "Misinformation and the Geography of Voting Machines in Wisconsin." *Journal of Political Geography*.
- 2021 - Weichelt, Ryan and Ezra Zeitler. "Second Home Ownership and Public-School Funding in Wisconsin's Northwoods." *Geographical Review*. 1-26.

**Exhibits to the Expert Report of Ryan Weichelt**

- 2020 - Weichelt, Ryan. "Trump's Populist Rhetoric and Wisconsin." Ed. Barney Warf. *Political Landscapes of Donald Trump*. Routledge: Abingdon, United Kingdom.
- 2020 – Weichelt, Ryan. "In Memoriam of Ron Johnston." *Geopolítica(s)*: Vol. 11 (1): 21-23.
- 2019 - Weichelt, Ryan and Gerald Webster. 2019. "The Language of Reorganizing Electoral Space." Eds. Stanley Brunn and Roland Kehrein. *Handbook of the Changing World Language Map*: 1 - 27. Springer Nature: Switzerland.
- 2018 - Weichelt, Ryan. "Un impulso para la Geografía Electoral: el uso de tecnologías geoespaciales para el análisis del voto de las comunidades hispanas en Estados Unidos." *Geopolítica(s)*: Vol. 9 (1): 11-34.
- 2018 - Watrel, Robert, Ryan Weichelt, Erin Fouberg, John Heppen, Fiona Davidson, Clark Archer, Fred Shelley, Ken Martis. 2018. Editors of the *Atlas of the 2016 Elections*. Rowman and Littlefield: Lanham, MD.
- 2018 - Weichelt, Ryan. 2018. "Latinos and 2016 Election." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2016 Elections: 166 - 170*. Rowman and Littlefield: Lanham, MD.
- 2018 - Weichelt, Ryan. 2018. "Comparison of Wisconsin Voting Districts: 2016 to 2012." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2016 Elections: 247 - 248*. Rowman and Littlefield: Lanham, MD.
- 2018 - Weichelt, Ryan. 2018. "The U.S. Senate after the 2016 Election." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2016 Elections: 210 - 213*. Rowman and Littlefield: Lanham, MD.
- 2018 - Weichelt, Ryan. 2018. "Obamacare and the 2016 Election." Eds. Robert Watrel, Ryan Weichelt, et. al. *Atlas of the 2016 Elections: 224 - 225*. Rowman and Littlefield: Lanham, MD.
- 2016 - Hupy, Christina, Ryan Weichelt, Cyril Wilson, and Joseph Hupy. *STEM and GIS in Higher Education*. 2016. "Extending Into STEM: The Geospatial Education Initiative": 95 – 106. ESRI Press.
- 2014 - Weichelt, Ryan. 2014. "Latinos and the 2012 Election." Eds. Fred Shelley, J. Clark Archer, et. al. *Atlas of the 2012 Presidential Election: 192 – 194*. Roman and Littlefield: Lanham, MD.
- 2014 - Weichelt, Ryan. 2014. "The 2012 Wisconsin Gubernatorial Recall Election." Eds. Fred Shelley, J. Clark Archer, et. al. *Atlas of the 2012 Presidential Election: 261 – 265*. Roman and Littlefield: Lanham, MD.
- 2014 - Melsness, David and Ryan Weichelt. 2014. "Spatial Crime Displacement in Chicago's South Side." *Geographic Bulletin*: Vol 55: 63 – 80.
- 2014 - Middlesworth, Laura and Ryan Weichelt. 2014. "A Spatial Analysis of Foreclosures in

**Exhibits to the Expert Report of Ryan Weichelt**

Dane County, Wisconsin." *Geography Online*: Vol. 13 (1).

2012 - Weichelt, Ryan & Ezra Zeitler. 2012. "Multi-scalar Cartographic Analysis of 2008 and 2010 Election Returns in Wisconsin, U.S.A." *Journal of Maps*: Vol. 18 (3): 312 – 319.

2010 - Weichelt, Ryan. 2010. "Does a Hispanic Political Region of South Texas Exist? An Electoral Analysis of U.S. Presidential Elections, 1952 to 2008 in the State of Texas." *Southwestern Geographer*: Vol. 14: 88 - 121.

2006 - Weichelt, Ryan and Jonathan Herbert. 2006. "Sports and Climate: A Case Study of Lambeau Field and the Green Bay Packers." *The Geography-Sports Connection: Using Sports to Teach Geography*: 17 – 24.

2005 - Weichelt, Ryan and Chad Smith. 2005. *Physical Geography: 155 Laboratory Manual*. Department of Anthropology and Geography, University of Nebraska-Lincoln.

GRANTS

2020 - Weichelt, Ryan and Cameron Wingren. "Creating an Online Election Atlas of Wisconsin Elections." Faculty Student Research Collaboration Summer Grant, UWEC July 2020 (\$4,600)

2019 - Weichelt, Ryan and Wyatt Pajdash. "Redistricting, Gerrymandering, and Geography." Faculty Student Research Collaboration Summer Grant, UWEC July 2019 (\$4,600).

2018 - Weichelt, Ryan and Michael Lewis. "Geographic Patterns of UWEC First Year Students." Faculty Student Research Collaboration Summer Grant, UWEC July 2018 (\$4,600).

2017 - Weichelt, Ryan and Andrew Moen. "Continuation of Who Owns the Northwoods?" Faculty Student Research Collaboration Summer Grant, UWEC July 2017 (\$4,600).

2016 - Weichelt, Ryan and Samuel Lofstgarden (student). "The Minnesota 2<sup>nd</sup> District 2016 Election." Faculty Student Research Collaboration, UWEC, September 2016 (\$1,500).

2016 – Weichelt, Ryan, Ezra Zeitler, Nicholas Berg (student), and Hannah Wirth. "Who owns the Northwoods?" Faculty Student Research Collaboration Summer Grant, UWEC, July 2016 (\$6,900).

2016 - Weichelt, Ryan and Payden Volbrecht (student). "UWEC Admissions Research." Faculty Student Research Collaboration Summer Grant, UWEC, July 2016 (\$4,600).

2015 - Weichelt, Ryan and Dakota Dorn (student). "UWEC Admissions Research." Faculty Student Research Collaboration Summer Grant, UWEC, July 2015 (\$4,600).

2014 - O'Halloran, Peggy, Ryan Weichelt, Nathan Schafer (student), and Jade Goetz (student).

**Exhibits to the Expert Report of Ryan Weichelt**

“Participatory Photo-mapping Alcohol Use in the Historic Randall Park Neighborhood: The Good, the Bad and the Ugly. Faculty Student Research Collaboration Grant, UWEC, September 2014 (\$2,220).

2014 - Weichelt, Ryan and Emily Christenson (student). “Creation of an Online Redistricting Application for the state of Wisconsin.” Faculty Student Research Collaboration Grant and Summer Research Experience for Undergraduates, UWEC, June 2014 (\$4,600)

2014 - Hupy, Christina, Joseph Hupy, Ryan Weichelt, and Cyril Wilson. Wisconsin Growth Agenda Grant. Geospatial Education Initiative, July 2014 (\$418,869).

2013 - Weichelt, Ryan and Hannah Bristol (student). “Placement of a Methane Digester near Marshfield, WI.” Faculty Student Research Collaboration Grant, UWEC, September 2013 (\$1,300).

2013 - Weichelt, Ryan and Joseph Quintana (student). “Climatic Effects on Minor League Baseball.” Faculty Student Research Collaboration Grant and Summer Research Experience for Undergraduates, UWEC, June 2013 (\$4,600)

2012 - Weichelt, Ryan, Laura Middlesworth, Ben Possi (student), and Emily Anderson (student). “Collusion of Illusion: A Tri-State Analysis of Gas Prices.” Faculty Student Research Collaboration Grant, UWEC, September 2012 (\$1,300).

2012 - Weichelt, Ryan and Meghan Kelly (student). “Divided Government: A Spatial Analysis of ACU and ADA Indexes for the US House of Representatives and Senate, 1981-2011.” Faculty Student Research Collaboration Grant and Summer Research Experience for Undergraduates, UWEC, June 2012 (\$4,600).

2011 - Weichelt, Ryan and Benjamin Dunning (student). “Wisconsin Electoral History.” Faculty Student Research Collaboration Grant and Summer Research Experience for Undergraduates, UWEC, June 2011 (\$4,600).

2010 - Weichelt, Ryan and David Melsness (student). “Geographic Crime Displacement in Chicago’s Southside.” Faculty Student Research Collaboration Grant and Summer Research Experience for Undergraduates, UWEC, June 2010 (\$4,600).

2010 - Weichelt, Ryan, Ezra Zeitler, and Alyson Diller (student). “Spatial Patterns of Lottery Outlets in the Milwaukee MSA.” Faculty Student Research Collaboration Grant, UWEC, January 2010 (\$1,200).

2009 - Weichelt, Ryan, Ezra Zeitler, and Evan Byers (student). “Geography of Minnesota High School Hockey.” Faculty Student Research Collaboration Grant, UWEC, September 2009 (\$800).

2009 - Zeitler, Ezra, Ryan Weichelt, and Darrin Mertig (student). “Geographic Bias in the National Football League Draft, 1970 – 2009.” Faculty Student Research Collaboration Grant, UWEC, September 2009 (\$1,200).

**Exhibits to the Expert Report of Ryan Weichelt**

2009 - Hupy, Christina, Ryan Weichelt, Rebekah Baum (student), and Matthew Sackman (student).  
“Alcohol Licenses in Eau Claire County, WI and the Relationship to Crime and Other Variables.”  
Faculty Student Research Collaboration Grant, UWEC, September 2009 (\$2,640).

CONSULTING

Expert Witness, ACLU and Native American Rights Fund (NARF). *Western Native Voice vs. Stapleon*, Cause No. DV 20-0377.

Consultant, ACLU and Native American Rights Fund (NARF). *Western Native Voice vs. Stapleton* (injunction), Cause No. DV-2020-377.

Consultant, Native American Rights Fund. Litigation pending to Voter Access in Nevada, 2020.

ARTICLE/BOOK REVEIWS

*Red Line 2014*

*Oxford Press*, 2013, 2012, and 2011.

*McGraw Hill*, 2012.

*Professional Geographer*, 2011.

*Political Geography*, 2010 and 2009.

PAPER AND POSTER PRESENTATIONS:

2021 – Weichelt, Ryan. “Slaying the Gerrymander: How Geography Can Offer Both Solutions and Invited Interdisciplinary Collaborations to the Study of Redistricting.” Paper presented at the 26<sup>th</sup> International Political Science Association (IPSA) World Congress Conference, July 2021, Virtual Paper Presentation.

2021 - Weichelt, Ryan. “Geography of the 2020 Wisconsin Presidential Election.” Poster presented at the 2021 Association of American Geographers, April, Virtual Poster Presentation.

2021 - Weichelt, Ryan. “Wisconsin’s Decade in a Purple Haze: Using Geospatial Technologies to Analyze Wisconsin’s Recent Electoral Patterns.” Presentation at the 2021 Wisconsin Land Information Association Conference, February 18, Virtual Presentation.

2019 – Weichelt, Ryan. “The 2016 U.S. Presidential Election and Trump’s Political Rhetoric: Wisconsin’s Electoral Geography as a Case Study.” Paper presented at 2019 Regional AAG West Lakes Conference, October, Cedar Falls, Iowa.

2019 - Zeitler, Ezra and Ryan Weichelt. “Economic Sustainability in Wisconsin’s Pleasure

**Exhibits to the Expert Report of Ryan Weichelt**

- Periphery: A Case Study of Second Home Ownership in Grantsburg and Hayward.” Paper presented at Annual Colloquium of the IGU-Commission on the Sustainability of Rural Systems, July, St. Paul, MN.
- 2019 - Weichelt, Ryan. “Current Practices, Social, and Political Implications of Redistricting.” Invited Panel Discussant at Harvard’s Center for Geographic Analysis Conference on the Geography of Redistricting, May, Cambridge, MA.
- 2019 - Weichelt, Ryan. “The 2018 Elections and Beyond.” Panel discussant to at the 2019 Association of American Geographers, April, Washington D.C.
- 2019 - Weichelt, Ryan. “Electoral Geography of the 2018 Midterm Elections in Wisconsin.” Poster presented at the 2019 Association of American Geographers, April, Washington D.C.
- 2018 - Weichelt, Ryan. “Understanding the Current State of Partisan Gerrymandering and the Need for Geographers.” 2018 Regional AAG West Lakes Conference, October 2018, La Crosse, WI.
- 2018 - Weichelt, Ryan. “The 2016 U.S. Presidential Election and Trump’s Populist Rhetoric: Wisconsin’s Electoral Geography as a Case Study.” Paper presented at the 25<sup>th</sup> International Political Science Association (IPSA) World Congress Conference, July 2018, Brisbane, Australia.
- 2018 - Weichelt, Ryan. “The Long Slow Bleed of Wisconsin Democrats: 2010 to the Present.” Paper presented at the 2018 Association of American Geographers, April, New Orleans, LA.
- 2018 - Weichelt, Ryan. “The Atlas of the 2016 Elections.” Panel discussant to at the 2018 Association of American Geographers, April, New Orleans, LA.
- 2018 – Weichelt, Ryan and Katie Weichelt. “Using Data and Geographic Analysis to Increase First Year Retention.” Poster Presented at the 2018 First Year Experiences Conference, February, San Antonio, TX.
- 2017 - Weichelt, Katie and Ryan Weichelt. “‘Make America Great Again’:” Trump’s Populist Rhetoric and Central Wisconsin.” Paper presented at the 2017 Regional AAG Great Plains Rocky Mountains Conference, October, Grand Forks, ND.
- 2017 - Weichelt, Ryan. “The Ambiguity of ‘Rural:’ An Electoral Regionalization of Wisconsin from the 2016 Presidential Election.” Paper presented at the 2017 NCGE Conference, July, Albuquerque, NM.
- 2017 - Weichelt, Ryan and Ezra Zeitler. “Who Owns the Northwoods?” Paper presented at the 2017 Geospatial Summit, April, Madison, WI.
- 2016 - Weichelt, Ryan and Ezra Zeitler. “Who Owns the Northwoods?” Poster presented at the 2016 Regional AAG West Lakes/East Lakes Joint Conference, October, Marquette, MI.

**Exhibits to the Expert Report of Ryan Weichelt**

- 2016 - Weichelt, Ryan. "Towards a Stronger Electoral Geography." Paper accepted and presented at the 24<sup>th</sup> International Political Science Association (IPSA) World Congress Conference, July 2016, Poznan, Poland.
- 2016 - Weichelt, Ryan. "Unlocking the Electoral Puzzle, Wisconsin Suburbs and Gerrymandering." Paper presented at the 2016 The Shifting Politics of U.S. Suburbs: Parties, Participation, and Public Opinion in 2016 Conference, June, Arlington, VA.
- 2015 - Weichelt, Ryan. "Public Perceptions of Alcohol use in the Randall Park Neighborhood of Eau Claire, WI using Public Participatory Mapping and ESRI Story Maps. Paper presented at the 2015 Regional AAG West Lakes Conference, October 2015, Eau Claire, WI.
- 2015 - Weichelt, Ryan, Christina Hupy, Cyril Wilson, and Joseph Hupy. "Education the Next Geospatial Workforce: Geospatial Education Initiative." Paper presented at the 2015 ESRI Education User Conference, July, San Diego, CA.
- 2015 - Weichelt, Ryan and Katie Weichelt. "Women Legislature Candidates and Electoral Safety. The Case of the Wisconsin State Legislature." Paper presented at the 2015 Association of American Geographers, April, Chicago, IL.
- 2015 - Weichelt, Ryan. "The 2014 Elections and 2016 Elections in the United States." Panel Discussant at the 2015 Association of American Geographers National Meeting, April, Chicago, IL.
- 2014 - Weichelt, Ryan. "Lessons from the 2012 Wisconsin Gubernatorial Recall Election and Beyond." Paper at the 2014 East Lakes/West Lakes Association of the American Geographers, October, Kalamazoo, MI.
- 2014 - Weichelt, Ryan. "Purple Haze: Connecting Culture to Legislation and Elections within the Context of the 2012 Wisconsin Gubernatorial Recall Election." Paper accepted and presented at the 23<sup>rd</sup> IPSA World Congress, July, Montreal, Canada.
- 2014 - Weichelt, Ryan & Katie Weichelt. "Mapping Changes in the Paper Industry along the Wisconsin River." Poster presented at the 2014 Association of American Geographers, April, Tampa, FL.
- 2013 - Weichelt, Ryan & Laura Middlesworth. "Collusion or Delusion: A Tri-State Analysis of Gas Prices." Paper presented at the 2013 West Lakes Association of American Geographers, October, Eau Claire, WI.
- 2013 - Weichelt, Ryan & Laura Middlesworth. "A Spatial Analysis of Foreclosures in Dane County." Poster presented at the 2013 Association of American Geographers, April, Los Angeles, CA.
- 2013 - Weichelt, Ryan. "The Political Geography of the 2012 U.S. Presidential Election." Panel Discussant at the 2013 Association of American Geographers National Meeting, April, Los Angeles, CA.
- 2013 - Weichelt, Ryan, Laura Middlesworth, and Louisa Rice. "Effectiveness of Bundles as Agents of Integration." Paper and Panel Discussant at the 2013 Office of Professional and Instructional Development, April, Madison, WI.

**Exhibits to the Expert Report of Ryan Weichelt**

- 2013 - Weichelt, Ryan & Laura Middlesworth. "A Spatial Analysis of Foreclosures in Dane County." Paper presented at UWEC Faculty Forum, March 2013.
- 2012 - Middlesworth, Laura and Ryan Weichelt. "A Spatial Analysis of Foreclosures in Dane County." Paper presented at the 2012 Wisconsin Economic Association Annual Meeting, November 2012, Stevens Point, WI.
- 2012 - Weichelt, Ryan and Meghan Kelly. "A Divided House? A Spatial Analysis of ACU and ADA Indexes for the U.S. House of Representatives, 1981 – 2011." Poster presented at the 2012 Regional AAG East/West Lakes Joint Conference, October 2012, DeKalb, IL.
- 2012 - Weichelt, Ryan. "Using Geospatial Technology to Understand and Predict Wisconsin Elections." Paper presented at the 2012 Geospatial Summit, April 2012, Madison, WI.
- 2011 - Weichelt, Ryan. "Purple Haze: Current and Future Electoral Possibilities in Wisconsin." Paper presented at the 2011 Regional AAG West Lakes Conference, November 2011, Chicago, IL.
- 2011 - Weichelt, Ryan. "Political Upheaval: Changing Electoral Patterns in Wisconsin." Paper presented at the 2011 Association of American Geographers National Meeting, April, Seattle, WA.
- 2011 - Weichelt, Ryan. "Geography and the 2010 and 2012 U.S. Presidential Elections." Panel Discussant at the 2011 Association of American Geographers National Meeting, April, Seattle, WA.
- 2010 - Weichelt, Ryan. "A Spatial Identification of Hispanic Voting Patterns: An Analysis of the 2008 Presidential Election." Paper presented at the 2010 Race, Place, and Ethnicity Conference, October, Binghamton, NY.
- 2010 - Weichelt, Ryan. "Divided Government: Does a Geographic and Ideological Divide Exist Among Role Call Voting of U.S. Senators?" Paper presented at the 2010 Association of American Geographers National Meeting, April, Washington D.C.
- 2009 - Weichelt, Ryan & Katie Haselwood. "Tennis Anyone? The Spatial Segregation of Tennis Court Locations in Milwaukee County, Wisconsin." Paper presented at the 2009 Regional AAG West Lakes Conference October, St. Paul, MN.
- 2009 - Weichelt, Ryan. "The Disappearance of Rural Taverns: A Case Study of Rural Marshfield." Paper presented at the 2009 Wisconsin Geographical Society Meeting, October, Stevens Point, WI.
- 2009 - Weichelt, Ryan. "Influence of Hispanic Voters on the 2008 Election." Paper presented at the 2009 Preconference of the Political Geography Specialty Group, March Las Vegas, NV.
- 2009 - Weichelt, Ryan & Katie Haselwood. "Tennis Anyone? The Spatial Segregation of Tennis Court Locations in Milwaukee County, Wisconsin." Poster presented at the 2009 Association of American Geographers National Meeting, March, Las Vegas, NV.
- 2009 - Weichelt, Ryan. "A Geographic Recollection of the 2008 Elections." Panel Discussant at the 2009 Association of American Geographers National Meeting, March, Las Vegas, NV.

**Exhibits to the Expert Report of Ryan Weichelt**

- 2009 - Weichelt, Ryan. "2008 Presidential Election, Hispanic Voting Results." Paper Presented at the 2009 Political Geography Preconference March, Las Vegas, NV.
- 2008 - Weichelt, Ryan. "A County Level Analysis of Hispanic Election Patterns in Texas: 1952–2006." Paper Presented at the 2008 Regional AAG Great Plains/Rocky Mountains Conference September, Grand Forks, ND.
- 2008 - Weichelt, Ryan. "Geographic Perspectives on the 2008 Elections." Panel Discussant at the 2008 Regional Great Plains/Rocky Mountains Conference September, Grand Forks, ND
- 2008 - Weichelt, Ryan. "U.S. Presidential Elections and Electoral Behavior of Hispanics at a National Scale: 1980 – 2004." Paper Presented at the 2008 Association of American Geographers National Meeting, April, Boston, MA.
- 2008 - Weichelt, Ryan. "The 2008 Elections." Panel Discussant at the 2008 Association of American Geographers National Meeting, April, Boston, MA.
- 2007 - Weichelt, Ryan. "Hispanic Influence on the Roll-Call Voting of U.S. House Members: 1993 – 2005." Paper Presented at the 2007 Association of American Geographers National Meeting, April, San Francisco, CA.
- 2006 - Weichelt, Ryan. "Does Geography Matter? A Regional Analysis of Variance Using ADA and ACU Indexes for U.S. Senators, 1980 – 2004." Paper Presented at the 2006 Regional AAG Great Plains/Rocky Mountains/West Lakes Conference, October 2006, Lincoln, NE.
- 2006 - Weichelt, Ryan. "The Decline of Rural Taverns in Central Wisconsin." Paper Presented at the 2006 Association of American Geographers National Meeting, March, Chicago, IL.
- 2005 - Weichelt, Ryan. "A Three State Election Analysis of Ant-Gay Marriage Amendments: Michigan, Georgia, and Ohio." Paper presented at the 2005 Nebraska Academy of Sciences, April 2005, Lincoln, NE.
- 2005 - Weichelt, Ryan. "Public Perceptions of the Austin, Texas Police Department." Paper presented at the 2005 Association of American Geographers National Meeting, April 2005, Denver, CO.
- 2004 - Weichelt, Ryan. "Defining a Political Place: An Analysis of Hispanic Voting Patterns of South Texas Counties." Paper presented the at 2004 AAG Regional Great Plains/Rocky Mountain Conference, October 2004, Sioux Falls, SD.
- 2003 - Weichelt, Ryan. "Political Participation of Major University Communities: An Analysis of Voter Turnout." Paper presented at the 2003 Association of American Geographers National Meeting, March 2003, New Orleans, LA.

**Exhibits to the Expert Report of Ryan Weichelt**

2002 - Weichelt, Ryan. "A Survey of Texas Presidential Elections: 1992 – 2000." Paper presented at the 2002 Annual Association of American Geographer National Meeting, March 2002, Los Angeles, CA.

2002 - Shelley, Fred, Ryan Weichelt, and Tanya McKay, "Electoral Geography on the Border: The Texas Democratic Primary of 2002." Paper Presented at the 2002 Annual Association of American Geographers National Meeting, Los Angeles, CA.

2002 - Shelley, Fred & Ryan Weichelt, "Levels of Voter Turnout in Texas." Paper Presented at the 2002 Annual Association of American Geographers National Meeting, Los Angeles, CA.

2000 - Weichelt, Ryan. "Political Landscape of Eau Claire Neighborhoods." Poster presented at the University of Wisconsin-Eau Claire Poster Day, April 2000, Eau Claire, WI.

1999 - Weichelt, Ryan. "Diffusion of Coral Reef Disease." Poster presented at the University of Wisconsin-Eau Claire Poster Day, April 1999, Eau Claire, WI.

FACULTY/STUDENT RESEARCH COLLABORATIONS

2020 - Weichelt, Ryan and Cameron Wingren. "Creating an Online Election Atlas of Wisconsin Elections." Faculty Student Research Collaboration Summer Grant, UWEC July 2020.

2019 - Weichelt, Ryan and Wyatt Pajdash. "Redistricting, Gerrymandering, and Geography." Faculty Student Research Collaboration Summer Grant, UWEC July 2019. Poster presented at the 2019 West Lakes Regional Association of American Geographers National Meeting, Cedar Rapids, IA.

\*Poster presented at UWEC's 2020 Celebration of Excellence in Research and Creative Activity.

2018 - Lewis, Michael. "Geographic Patterns of UWEC First Year Students." Faculty Student Research Collaboration Summer Grant, UWEC July 2018. Poster presented at the 2018 West Lakes Regional Association of American Geographers National Meeting, La Crosse, WI.

\*Poster presented at UWEC's 2019 Celebration of Excellence in Research and Creative Activity.

2018 – Fischer, Zachary and Andrew Moen. "Continuation of Who Owns the Northwoods?" Faculty Student Research Collaboration Summer Grant. Poster presented at the 2018 Association of American Geographers National Meeting, New Orleans, LA.

\*Poster presented at UWEC's 2018 Celebration of Excellence in Research and Creative Activity.

2017 - Loftsgarden, Samuel. The Minnesota 2<sup>nd</sup> Congressional District 2016 Election. Research through OSRP Funding. \*Poster presented at UWEC's 2017 Celebration of Excellence in Research and Creative Activity.

**Exhibits to the Expert Report of Ryan Weichelt**

- 2017 - Berg, Nicholas and Hannah Wirth. Who Owns the Northwoods? Summer Research through OSRP funding. \*Poster presented at UWEC's 2017 Celebration of Excellence in Research and Creative Activity.
- 2016 - Volbrecht, Payden. UWEC Admissions Research. Summer Research through OSRP funding.
- 2015 - Dorn, Dakota. UWEC Admissions Research. Summer Research through OSRP funding.
- 2015 - O'Halloran, Peggy, Ryan Weichelt, Nathan Schafer (student), and Jade Goetz (student). Participatory Photo-mapping Alcohol Use in the Historic Randall Park Neighborhood: The Good, the Bad and the Ugly. Faculty Student Research Collaboration. \*Paper presented at UWEC's 2015 Celebration of Excellence in Research and Creative Activity.
- 2014 - Christenson, Emily. Creation of an Online Redistricting Application for the state of Wisconsin. Summer Research through OSRP funding.
- 2014 - Bristol, Hannah. "Placement of a Methane Digester near Marshfield, WI." Poster presented at the Regional AAG West Lakes Conference, Eau Claire, WI.  
\*Poster presented at UWEC's 2014 Student Research Day, Eau Claire, WI.
- 2014 - Quintana, Joseph. "Climatic Effects on Minor League Baseball." Paper presented at the 22<sup>nd</sup> Annual McNair Research Conference, November, Lake Geneva, WI. \*Poster presented at UWEC's 2014 Student Research Day, Eau Claire, WI.
- 2013 - Russell, Miriam. "A Spatial Analysis of Musician Locations in Metropolitan United States." Poster presented at the 2013 Association of American Geographers National Meeting, Los Angeles, CA.  
\*Poster also presented at UWEC's 2013 Student Research Day, Eau Claire, WI.
- 2013 - Siegel, Shandi. "Exploring Wisconsin's Aging Counties." Poster presented at the 2013 Association of American Geographers National Meeting, Los Angeles, CA.  
\*Poster also presented at UWEC's 2013 Student Research Day, Eau Claire, WI.
- 2013 - Peterson, Andrew. "More Than Just Yard Decorations: Campaign Signs as a Predictor of Election Results and Voter Turnout for the 2012 Presidential Election in the City of Eau Claire." Poster presented at UWEC's 2013 Student Research Day, Eau Claire, WI.
- 2013 - Possi, Ben and Emily Anderson. 2013. "Collusion of Illusion: A Tri-State Analysis of Gas Prices." Poster presented at UWEC's 2013 Student Research Day, Eau Claire, WI.
- 2013 - Kelly, Meghan. "Divided Government: A Spatial Analysis of ACU and ADA Indexes for the US House of Representatives and Senate, 1981-2011." Poster presented at the 2013 Association of American Geographers National Meeting, Los Angeles, CA.
- 2013 - Kelly, Meghan. "Does Geography Matter? Divided Government: A Spatial Analysis of ACU and ADA Indexes for the House of Representatives, 1981 - 2009." Poster presented at the East/West Lakes Joint Regional AAG Conference (DeKalb, IL)  
\*Poster also presented at UWEC's 2013 Student Research Day, Eau Claire, WI.

**Exhibits to the Expert Report of Ryan Weichelt**

2012 - Kelly, Meghan and Jon Bowen. "The Geography of Super Tuesday in Ohio through Twitter." Poster presented at UWEC's Student Research Day.

2012 - Dunning, Benjamin. "Wisconsin Electoral History." Poster presented at the 2012 UW-Eau Claire Student Research Day.

2011 - Diller, Alyson. "Spatial Analysis of Lottery Revenue across Neighborhoods of Contrasting Socioeconomic Make-up in Southeastern Wisconsin." Poster presented at the 2011 Association of American Geographers National Meeting, Seattle, WA.

\*Poster also presented at UWEC's 2011 Student Research Day, Eau Claire, WI.

2011 - Melsness, David. "Spatial Crime Displacement in Chicago's South Side: From the Projects to the 'Hood'." Paper presented at UWEC's Provost's Honors Symposium for Research, Scholarship, and Creative Activity, Eau Claire, WI.

2011 - Melsness, David. "Displacement of Crime in Chicago." Poster presented at the 2011 Association of American Geographers National Meeting, Seattle, WA.

\*Poster also presented at UWEC's 2011 Student Research Day, Eau Claire, WI.

2011 - Sackmann, Matthew. "Crime Analysis of Eau Claire County." Poster presented at UWEC's 2011 Student Research Day, Eau Claire, WI.

2010 - Melsness, David. "Geographic Crime Displacement in Chicago's Southside." Poster presented at the 2010 Race, Place, and Ethnicity Conference in Binghamton, NY. 2010 –

2010 - Mertig, Darin. "Geographic Bias in the National Football League Draft, 1970 – 2009." Poster presented at the 2010 Annual Association of American Geographers National Meeting, Washington D.C. \*Poster also presented at UWEC's 2010 Student Research Day, Eau Claire, WI.

2010 - Baum, Rebekah. "Examining the Relationship between Alcohol Outlets and Crime through Regression Analysis in Eau Claire County, WI." Poster presented at the 2010 Annual Association of American Geographers National Meeting, Washington D.C. \*Poster also presented at UWEC's 2010 Student Research Day, Eau Claire, WI.

2010 - Melsness, David. 2010 "A Spatial and Temporal Analysis of Displacement Theory and Crime in Engelwood, Chicago." Poster presented at the 2010 UW-Eau Claire student research day.

2009 - Byers, Evan. 2009. "Geography of Minnesota High School Hockey." Poster Presented at the 2009 West Lakes Region of the Association of American Geographers, St. Paul, MN.

INVITED PUBLIC LECTURES/ARTICLES:

May 2021 - Invited Interview. "Most Desirable Places to Live Post-Pandemic." Conducted by *Central Time, WPR*. <https://www.wpr.org/most-desirable-places-live-post-pandemic>

March 2021 - Invited Interview. "COVID-19 Set America's Housing Market On Fire. That Could Alter U.S. Politics For A Generation." Conducted by Forbes.

**Exhibits to the Expert Report of Ryan Weichelt**

<https://www.forbes.com/sites/petertaylor/2021/03/11/covid-19-set-americas-housing-market-on-fire-that-could-alter-us-politics-for-a-generation/?sh=1a61b49139de>

November 2020 - Invited Lecture. "Using GIS to Study Elections." Purdue University GIS Day Keynote Speaker. \*Canceled due to COVID-19.

November 2020 - Invited Interview. "Échos du Wisconsin rural, à quelques jours de la présidentielle." Conducted by *Radio-Canada*. <https://ici.radio-canada.ca/nouvelle/1746055/wisconsin-donald-trump-campagne-elections-president-etats-unis>

May 2020 - Invited Radio Interview. "Coronavirus and Summer Travel to Northern Wisconsin." Conducted by *Central Time, WPR*. <https://www.wpr.org/coronavirus-and-summer-travel-northern-wisconsin>

May 2020 - Invited Radio Interview. "Who Owns the Northwoods?" Conducted by *The Morning Show, WPR*. <https://www.wpr.org/who-owns-northwoods>

May 2020 - Invited Published Article. "The Hazard of COVID-19 Heading up North for Summer." Published by *WisContext*: <https://www.wiscontext.org/hazard-covid-19-heading-north-summer>

May 2020 - Invited Lecture. "Gerrymandering in Wisconsin." Chippewa Valley Learning in Retirement. \*Cancelled due to COVID-19.

May 2020 - Invited Lecture. "Wisconsin Election Results, a Spatial Approach." University of Wisconsin-River Falls Geography Department Honors Banquet. \*Cancelled due to COVID-19.

September 2019 - Invited Radio Interview. "Untangling How Minimum Markup Affects Gas Prices in Eau Claire." Conducted by *Central Time, WPR*: <https://www.wpr.org/untangling-how-minimum-markup-affects-gas-prices-eau-claire>

September 2019 - Invited Published Article. "The Stubborn Similarity of Gas Prices Across Eau Claire." Published by *WisContext*: <https://www.wiscontext.org/stubborn-similarity-gas-prices-across-eau-claire>.

May 2019 - Invited Radio Interview. "Why are Wisconsin's Rural Taverns Disappearing?" Conducted by *Central Time, WPR*: <https://www.wpr.org/why-are-wisconsins-ruraltaverns-disappearing>

May 2019 - Invited Published Article. "The Bygone Era of Marshfield's Rural Taverns." Published by *WisContext*: <https://www.wiscontext.org/bygone-era-marshfields-ruraltaverns>

February 2019 - Invited Radio Interview. "Why Aren't More Women Serving in Wisconsin's Legislature?" Conducted by *Central Time, WPR*: <https://www.wpr.org/why-arentmore-women-serving-wisconsins-legislature>

February 2019 - Invited Published Article. "As Number of Wisconsin's Women Legislators Stalls, Partisan Mix Shifts." Published by *WisContext*: <https://www.wiscontext.org/number-wisconsins-women-legislators-stalls-partisanmix-shifts>

**Exhibits to the Expert Report of Ryan Weichelt**

October 2018 - Invited Lecture. History of Wisconsin Election Patterns and the 2018 Mid-Term Elections. Chippewa Valley Learning in Retirement.

May 2018 - Interview. "Geographer Shares Expertise on Redistricting, Gerrymandering." Published by UWEC: <https://www.uwec.edu/news/news/geographer-shares-expertiseon-redistricting-gerrymandering-3039/>

April 2018 - Interview. "Field Study Helps Bugolds Understand Relationships Among History, Race, and Place." Published by UWEC: <https://www.uwec.edu/news/news/immersion-helps-bugolds-understandrelationships-among-history-race-and-place-2965/>

March 2013 – "Foreclosures in Dane County." Presented to CETL, Brownbag Series.

December 2012 – "Collusion or Illusion: A Tri-State Analysis of Gas Prices." Co-presenter (Laura Middlesworth, Ben Possi, and Emily Anderson), presented to the City of Eau Claire Fiscal Advisory Committee.

July 2012 - Gas Price Investigation. Invited speaker by the City of Eau Claire Fiscal Advisory Committee.

November 2010 - Navigating the 2010 United States Census. Speaker sponsored by the UWEC Geography and Anthropology Club.

October 2009 - Idea Lounge X: The Urban Battle. Panel discussant, sponsored by Downtown Eau Claire, Inc. (DECI).

October 2008 - "The Electoral Behavior of Hispanics at a National Scale: 1980-2004 and Beyond." A presentation to the American Democracy Project, Edmond, Oklahoma.

December 2007 - "The Physical Geography of Spain, Portugal, and Morocco." A presentation to the LEAD Program sponsored by the University of Nebraska-Lincoln, Lincoln, NE.

UNIVERSITY SERVICE AND CIVIC ENGAGEMENT:

2<sup>nd</sup> Vice President Gamma Theta Upsilon. January 2021 to the present.

Co-Chair Research Council 15, Cultural and Political Geography, for the International Political Science Association. July 2018 to the present.

University of Wisconsin – Eau Claire Director of First Year Experiences. Summer April 2019 to the August 2020.

University of Wisconsin – Eau Claire Interim Director of First Year Experiences. Summer 2017 to the April 2019.

University of Wisconsin – Eau Claire University Senate Executive Committee Member. Sept. 2019 to present.

UWEC Opening Day Committee. Summer 2018 to Present.

**Exhibits to the Expert Report of Ryan Weichelt**

First Year Experiences Proposal Reviewer. Fall 2018 to Present

UWEC Living Learning Communities Committee, Co-Chair. Fall 2017 to the present.

Geography and Anthropology GIS Tenure Track Search Committee Chair. Fall 2017.

UWEC Provost Sponsored Committee "Transfer Students and A & S." Fall 2017 – Spring 2018.

UWEC Provost Sponsored Committee "Women in STEM." Fall 2017 – Spring 2018.

Gamma Theta Upsilon, West Lakes Regional Councilor. January 2017 to the December 2020.

Geographic Bulletin, Editorial Board. March 2017 to the present.

Eau Claire School District Demographics and Trends Committee Member. Fall 2016 to the present.

Department of Geography and Anthropology, Faculty Senator. Fall 2015 to present.

Geography and Anthropology Geospatial Board Chairman, University of Wisconsin-Eau Claire. Fall 2015 to the present.

Geography and Anthropology Geospatial Board Member, University of Wisconsin-Eau Claire. Fall 2012 to the present.

First Year Advisory Committee, University of Wisconsin-Eau Claire. Fall 2013 to the present.

State of Wisconsin Geography Bee Judge. Spring 2010 to the present.

AP Human Geography Test Grader, June 2010 to the present.

Department of Geography, Department Personal Committee, Fall 2009 to the present.

Assistant Director of Advising for UWEC, Search Committee Member. Summer 2016.

OSRP Social Science Grant Review Committee. Summer 2014 to Fall 2017.

First Year Section Pilot, University of Wisconsin-Eau Claire. Fall 2014.

Geospatial Education Initiative Growth Agenda Co-PI 2014 to 2016.

Geospatial Ethics Workshop Co-creator and Co-facilitator (Martin Goettl), University of Wisconsin-Eau Claire. Summer 2013 to 2015.

McNair Scholar Advisor to Joseph Quintana Summer and Fall 2013.

LE Core Pilot (Geography 111), University of Wisconsin-Eau Claire. Spring 2014.

**Exhibits to the Expert Report of Ryan Weichelt**

Geography and Anthropology Simpson Fund Committee, University of Wisconsin-Eau Claire. Spring 2013.

West Lakes Steering Committee, University of Wisconsin-Eau Claire. Fall 2012 to Fall 2013 & Fall 2014.

Connected Advising Institute Participant, University of Wisconsin-Eau Claire. August 2012.

Geography and Anthropology Scheduling Committee, University of Wisconsin-Eau Claire. Spring 2011 to the present.

Geography and Anthropology GeoSpatial Technology Search Committee, University of Wisconsin-Eau Claire. Fall 2010 to Summer 2011.

University of Wisconsin-Eau Claire Pilot Bundle participant. Spring 2010 to Spring 2012.

Advisor University of Wisconsin-Eau Claire Gamma Theta Upsilon. Fall 2011 to the present.

Co-advisor University of Wisconsin-Eau Claire Geography and Anthropology Club. Fall 2010 to the present.

Geography and Anthropology Curriculum Committee, University of Wisconsin-Eau Claire. Fall 2010 to Spring 2012.

Geography Advisory Board, Department of History and Geography, University of Central Oklahoma. Member. Fall 2008 to present.

Geography graduate student representative, Department of Anthropology and Geography. Fall 2006 to Spring of 2007.

CURRENT RESEARCH INTERESTS:

Topical Subjects: Political Geography, Urban Geography, Cultural Geography, Population Geography, Human Geography, Electoral Geography, applications of GIS in electoral geography and crime mapping, Crime and Geography, Economic and Business Geography, and Sports Geography

Regional Subjects: North America, Europe, and the Middle East.

ACADEMIC HONORS/AWARDS:

Graduate Teaching Assistantship, 2004 – 2008, Department of Anthropology and Geography, University of Nebraska – Lincoln

1<sup>st</sup> Place 2006, Regional AAG Great Plains/Rocky Mountains/West Lakes Conference. Ph.D. Paper Competition

Graduate Teaching Assistantship, Aug. 2001 – Dec. 2002, Department of Criminal Justice, Texas State University

**Exhibits to the Expert Report of Ryan Weichelt**

Blanchard Scholarship in Geography, 2002. Texas State University Department of Geography

Outstanding Geography Senior, 2000. University of Wisconsin-Eau Claire Department of Geography

Scholarship in Geography Education 1998. University of Wisconsin-Eau Claire Department of Geography

University of Wisconsin-Eau Claire Dean's List: 1996, 1997, 1998, 2000

University of Wisconsin-Eau Claire Academic Honors: 1996-2000

NON-ACADEMIC ADMINISTRATIVE EXPERIENCE:

Faculty Advisor, Gamma Theta Upsilon. 2011 to the Present.

Co-Faculty Advisor, UWEC Geography and Anthropology Club. 2010 to Present

President, Vice-President, Member Geography Student Organization and Gamma Theta Upsilon (Geography Honor's Society), U. of Nebraska-Lincoln, 2004 – 2008.

Volunteer, Nebraska Library Commission, Producer, 2005.

Station Manager, TV10, University of Wisconsin-Eau Claire, 1998-2000.

President Gamma Theta Upsilon (Geography Honor's Society), University of Wisconsin- Eau Claire Chapter, 1996-2000.

President Geography Club, University of Wisconsin-Eau Claire, 1996-2000.

Vice President Model United Nations Club, University of Wisconsin-Eau Claire, 1999- 2000.

Intern for the City of Eau Claire's Assistant City Manager 1999.

PROFESSIONAL ORGANIZATIONS:

- Association of American Geographers
  - Political Geography Specialty Group
  - Population Specialty Group
  - Urban Geography Specialty Group
  - Applied Geography Specialty Group
- Gamma Theta Upsilon (Geography Honor Society)
- Phi Kappa Phi (Senior Scholastic Honor Society)
- Phi Eta Sigma (Freshman Scholastic Honor Society)
- Phi Sigma Alpha (Political Science Honor Society)
- Mortar Board (Senior Leadership Honor Society)

**Exhibits to the Expert Report of Ryan Weichelt**

- Kappa Delta Pi (Education Honor Society)

Materials Considered by Ryan Weichelt

- Documents Produced by Defendants
- HB 2777 House Plan
- UCCRO HD 114 Shape Files
- Industry, Illinois State Museum,  
<http://www.museum.state.il.us/RiverWeb/landings/Ambot/Archives/fwp/INDUSTRY.html> (last visited Nov. 9, 2021)
- National Historic GIS, <https://www.nhgis.org/> (last visited Nov. 9, 2021)
- U.S. Census Bureau, QuickFacts: East St. Louis city, Illinois,  
<https://www.census.gov/quickfacts/fact/table/eaststlouiscityillinois#> (last visited, Nov. 9, 2021)
- Jack Santrup & Janelle O’Dea, *St. Louis region’s population grew just 1.2% in past decade, metro drops out of the top 20 for the first time*, St. Louis Post Dispatch, Aug. 12, 2021, [https://www.stltoday.com/news/local/govt-and-politics/st-louis-region-s-population-grew-just-1-2-in-past-decade-metro-drops-out/article\\_af3462a5-df31-54b8-880e-183fc18565d1.html](https://www.stltoday.com/news/local/govt-and-politics/st-louis-region-s-population-grew-just-1-2-in-past-decade-metro-drops-out/article_af3462a5-df31-54b8-880e-183fc18565d1.html) (last visited Nov. 9, 2021)
- Reference map of the Metro-East Area (Source: 2020 United States Census Bureau)
- Reference map of St. Clair County, Illinois Places (Source: 2020 United States Census Bureau)
- Map of the Public Transportation Routes for the Metro-East Area (Source: <https://www.metrostlouis.org/wp-content/uploads/2019/04/190328-Metro-Illinois-Map-1.jpg>)
- H.R. 0385, 97th Gen. Assemb. (Il. 2011),  
<https://www.ilga.gov/legislation/97/HR/PDF/09700HR0385lv.pdf>
- 2011 Plan State House Districts 112, 113, and 114 (Source: State of Illinois)
- U.S. Census Bureau, Understanding and Using American Community Survey Data: What All Data Users Need to Know 1 (2020), available at [https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs\\_general\\_handbook\\_2020\\_ch01.pdf](https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_general_handbook_2020_ch01.pdf)
- League of Women Voters, Statement on Appropriate Data for Redistricting (2020).  
<https://www.lwv.org/sites/default/files/202104/Statement%20on%20Appropriate%20Data%20for%20Redistricting.pdf>
- HB 2777 State House Districts 112, 113, and 114 (Source: State of Illinois)
- 2015-19 5 Year Estimates ACS Estimated Population Difference with HB1177 Population (Source: <https://ilhousedems.com/redistricting/wp-content/uploads/2021/05/2021-Proposed-District-Data.pdf>)
- Population Difference with HB1177 Population and 2020 Census Data (Source: PL 94-171 2020 Data, P1 and P3)
- Deposition Transcript of Jonathan Maxson, dated November 3, 2021.
- H.R. 0385, 97th Gen. Assemb. (Il. 2011),  
<https://www.ilga.gov/legislation/97/HR/PDF/09700HR0385lv.pdf>
- Source: ESRI Redistricting Online 2.36
- Howard J. Simkowitz, Ph.D, A Primer on Redistricting, The Urban and Regional Information Systems Association 28 (2001), available at

[https://www.urisa.org/clientuploads/directory/Documents/Books%20and%20Quick%20Study/primer\\_on\\_redistricting.pdf](https://www.urisa.org/clientuploads/directory/Documents/Books%20and%20Quick%20Study/primer_on_redistricting.pdf)

- H.R. 0359, 102nd Gen. Assemb. (Il. 2021),  
<https://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=110&GA=102&DocTypeId=HR&DocNum=359&GAID=16&LegID=136368&SpecSess=&Session=>