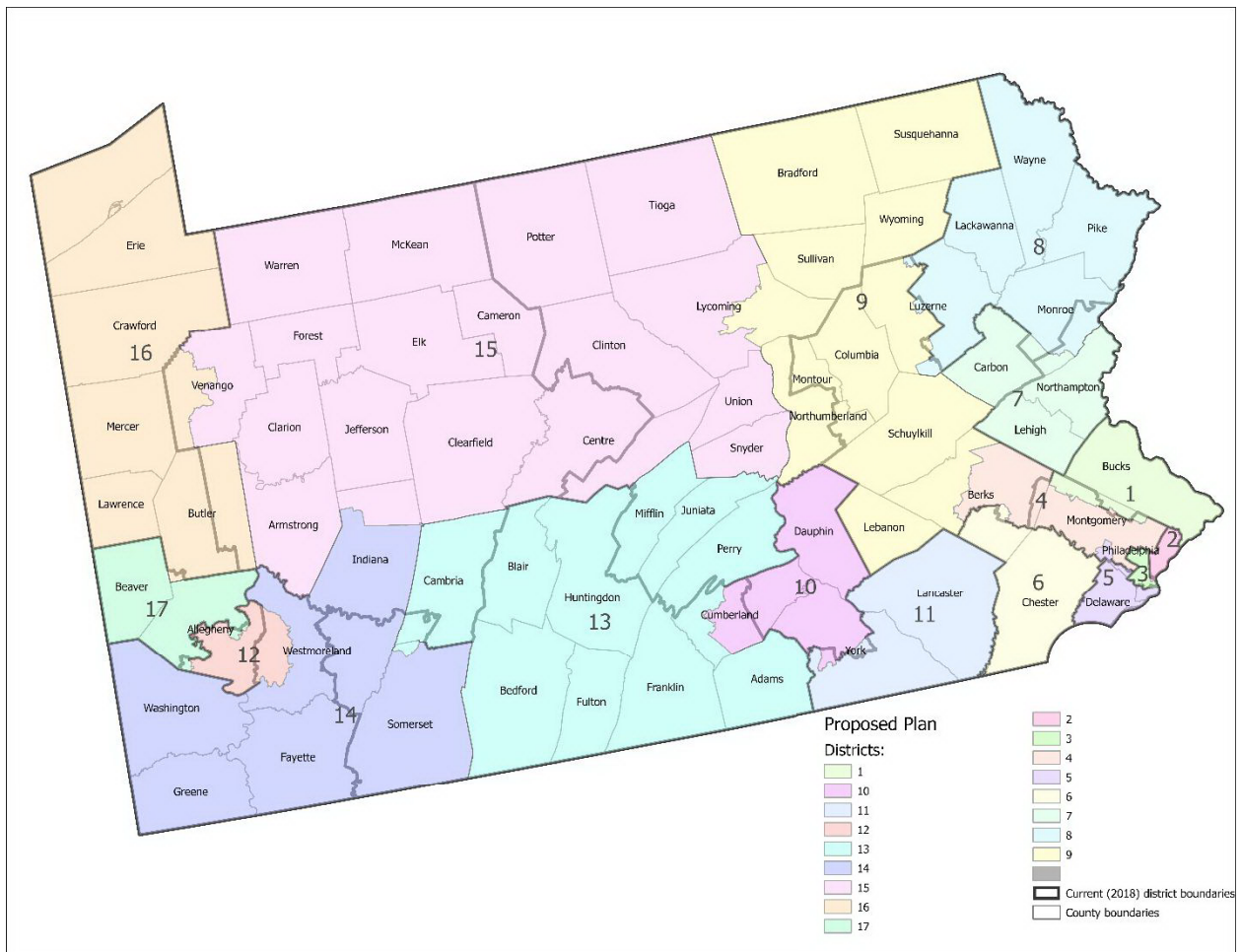


V. REDISTRICTING PLAN

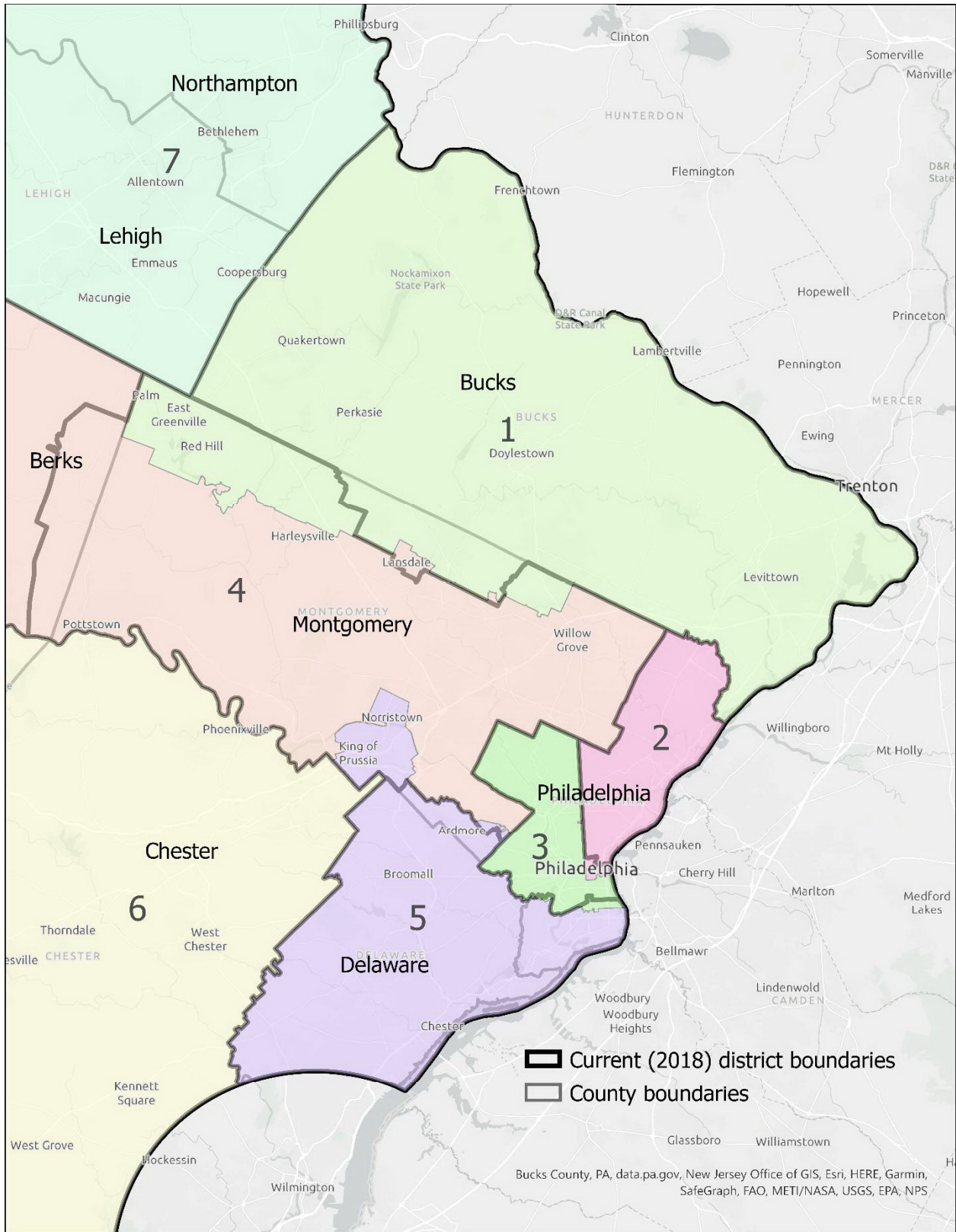
The Carter Plan is depicted in Figure 5, which also includes the boundaries of the previous (2018) plan, in thick gray, as well as the boundaries of Pennsylvania’s counties in thin gray. It is immediately clear that the district boundaries have changed very little in most of Eastern Pennsylvania and the Pittsburgh area, where, as shown in Figure 2, population has grown over the past decade. In contrast, the boundaries in the central part of the state have changed more substantially to accommodate population loss.

Figure 5: Proposed Congressional District Boundaries



Let us begin by taking a closer look at the Philadelphia area, which is displayed in greater detail in Figure 6. First, in the 2018 plan, Philadelphia County was divided into two relatively compact districts, Districts 2 and 3, with a small portion of South Philadelphia spilling into District 5. Since Philadelphia’s population growth has been quite close to overall U.S. population growth, I was able to retain this arrangement, while only slightly altering the boundaries of Districts 2 and 3 in order to achieve population equality.

Figure 6: Philadelphia Area



The previous version of District 1 was comprised mostly of Bucks County, which was kept whole, with a small segment reaching into Montgomery County. Since population growth in Bucks County has been somewhat slow relative to the country as a whole, District 1 required additional population in order to achieve population equality. I followed the same arrangement as before, but simply added additional county subdivisions along the border between Bucks and Montgomery.

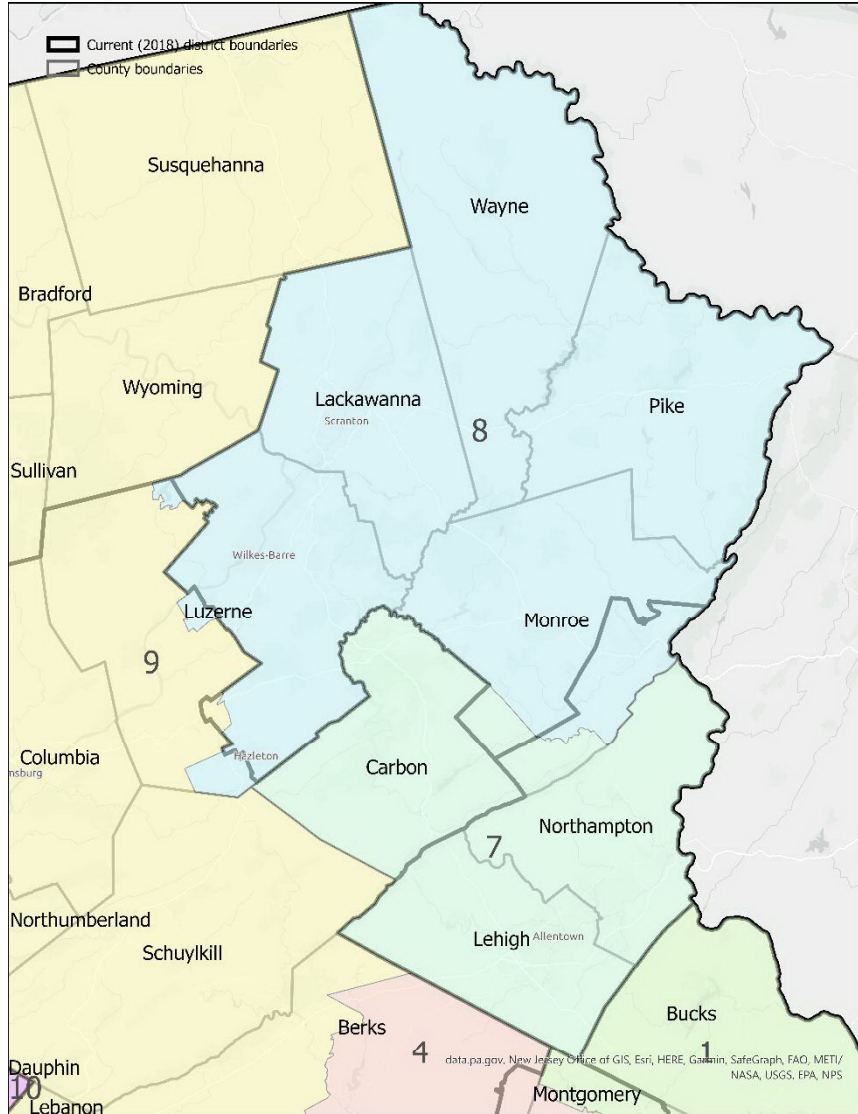
District 5 was based in Delaware County, with a portion reaching into South Philadelphia, and another reaching into Montgomery County. As with Bucks County, population growth was lackluster in District 5, so it was necessary to add population. Reaching into Chester County would have undermined the previous map's respect for several county boundaries to the West, so I elected once again to keep the structure of the existing map, reaching further into Montgomery County and including Norristown in District 5.

The downside of this approach is that it forces Montgomery County-based District 4 much further into Berks County than in the previous map. As quantified below, this makes District 4 less compact than the previous version. I considered alternative configurations that would have expanded District 5 into Chester County, but these approaches inevitably undermined the respect for county boundaries demonstrated by the previous map.

Next, the previous version of District 7 included the Lehigh Valley counties of Lehigh and Northampton and reached its population goal by extending Northward into part of Monroe County. Slow population growth in Northampton County meant that District 7 required additional population. I was able to unify Carbon County with the rest of the Lehigh Valley. The U.S. Census Department recognizes Allentown-Bethlehem-Easton as a metropolitan statistical area consisting of the entirety of Northampton, Lehigh, and Carbon Counties. These counties now constitute the core of District 7 (see Figure 7).

The previous version of District 8 was based in the Northeast corner of the state, including the Scranton-Wilkes-Barre corridor and extending to Hazleton in its Southwest corner. The district needed to add a small amount of population, which was possible to achieve by adding more of Monroe County as well as a couple of municipalities along the district's Western border in Luzerne County.

Figure 7: Districts 7 and 8

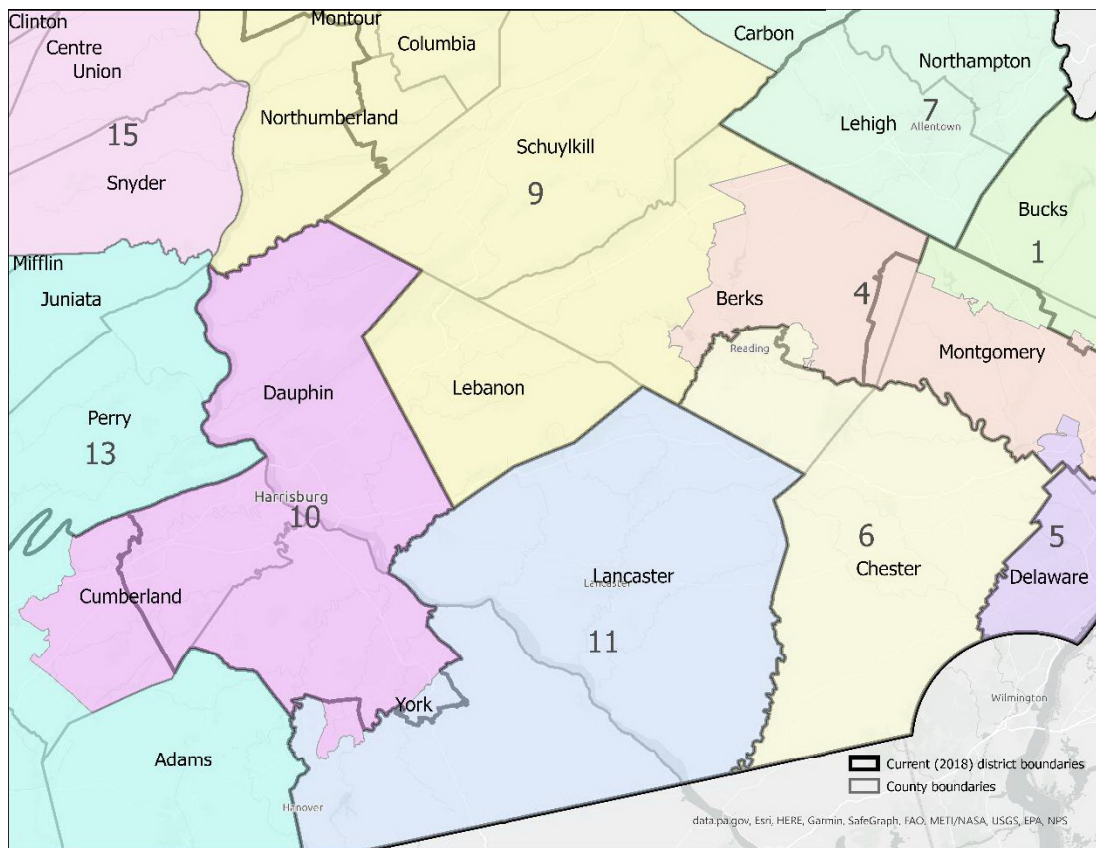


Due to healthy population growth on par with the national average, Districts 6, 10, and 11 required very little alteration (see Figure 8). As before, District 6 contains all of Chester as well as the Southwest corner of Berks County and the city of Reading. It was only necessary to add a small part of Exeter Township.

As in the previous map, District 11 contains all of Lancaster County and the Southern section of York County. It was only necessary to make small changes along the boundary between districts 10 and 11 in order to achieve population equality.

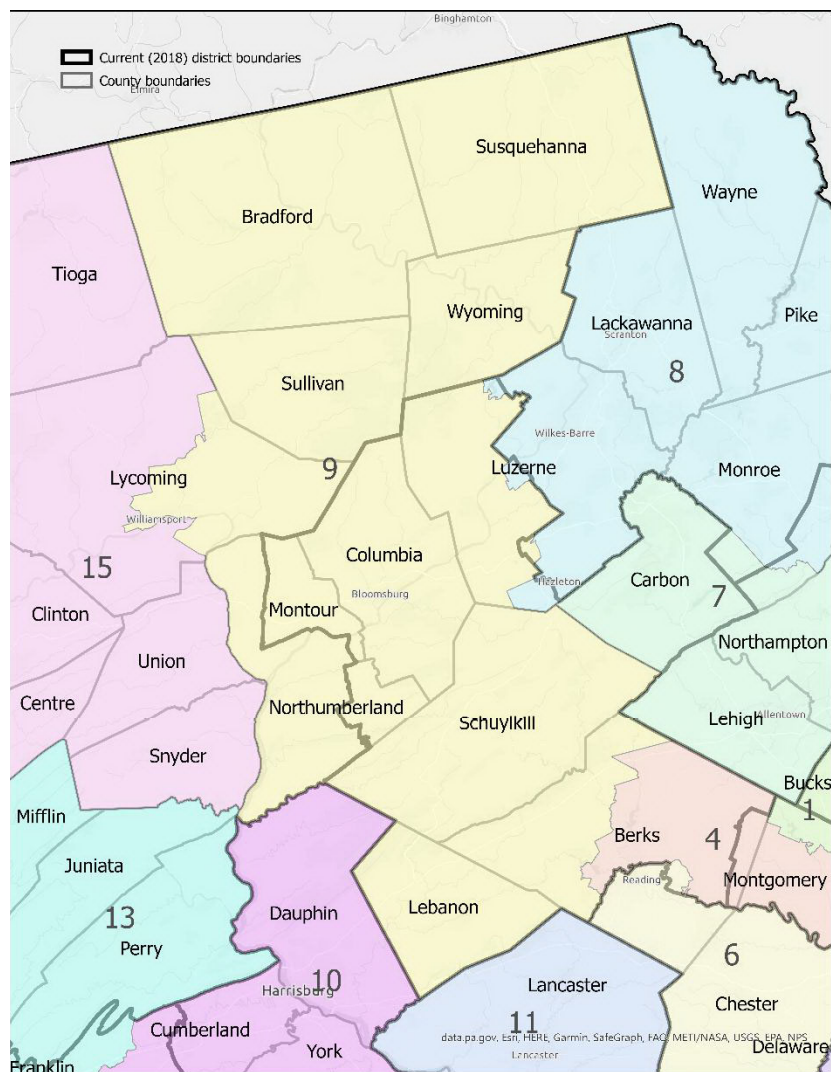
As before, District 10 is centered on the city of Harrisburg, which sits at the confluence of three counties: Dauphin, Cumberland, and York. The only noteworthy change is that the district needed to add a small amount of population by moving somewhat further West into Cumberland County.

Figure 8: Districts 6, 10, and 11



The boundaries of the former District 9 must change somewhat more substantially for a number of reasons (see Figure 9). The old version contained the counties of Columbia, Montour, part of Northumberland, Schuylkill, Carbon, Lebanon, and the rural Northern section of Berks County. However, Eastern counties have nowhere to grow but inwards, and as described above, Carbon County was placed in District 7 to unify a metropolitan statistical area. More importantly, Columbia, Schuylkill, Northumberland, and Montour counties all lost significant population. Thus, in order to achieve the target population, it was necessary for District 9 to grow to the North and West, taking the remainder of Northumberland, all of Bradford, Susquehanna, Sullivan, and Wyoming Counties, as well as part of Lycoming—all areas that had previously been in District 12, which due to severe population loss, cannot be retained.

Figure 9: District 9



Now, let us consider the Western part of the state. The previous configuration included District 14 in the Southwest corner of the state, and District 16 in the Northwest corner of the state. Due to population loss, both needed to expand to the East. District 16 gained the remainder of Butler County, which had previously been split, and part of Venango County. District 14 expanded Eastward by taking the remainder of Westmoreland County and most of Indiana and Somerset Counties.

Figure 11: Western Pennsylvania (Districts 14, 12, 17, and 16)

