

Acknowledgements

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Abstract

Civil rights advocates have long recognized that housing segregation creates inequality in living conditions related to housing, like clean drinking water, the type and condition of homes, and exposure to pollution. Residential segregation also undermines equal access to education, public resources, and employment, and frustrates democracy at every level. Despite this understanding, most advocates address these issues piecemeal. Schools may desegregate for a time, but as segregated housing patterns persist they tend to resegregate. A community may successfully fight off one polluter but lack the political power to prevent the next. Few victories stay won.

One impediment to integration is an individualistic legal framework where civil rights are perceived as individual rights and racial discrimination as a personal experience. The opposite is true. Housing segregation operates at a neighborhood level. When a neighborhood is overwhelmingly one race, all of the residents face impacts of that segregation, regardless of their own race or circumstances. Individuals face other forms of racial discrimination individually, for example in employment or access to higher education, but even these types of discrimination are reinforced and perpetuated by segregated communities.

This report uses North Carolina as a case study of impacts tied to super-majority non-white neighborhoods called excluded communities. The term “excluded” is applied broadly to refer to any community excluded socially, politically, or economically from opportunities available to other residents. The report hypothesizes that super-majority non-white neighborhoods will face greater than average impacts of housing segregation suggestive of community exclusion based on race.

One particular form of exclusion this report analyzes is the phenomenon of municipal underbounding. Underbounding occurs where a municipality’s limits do not include a neighborhood¹ that would otherwise be within the municipal limits based upon its location, density, and history. Underbounding is sometimes obvious; an African American neighborhood may be completely surrounded by the municipal limits but not included, a doughnut hole. Other cases are not immediately apparent; a community may be near but not directly adjacent to a municipality, but still underbounded based upon the social and historical context.

Prior work considered community exclusion and underbounding primarily through case studies, through demographic analysis, or by examining one particular impact, often with only a limited assessment of the underlying causes. This report tests whether communities are excluded by examining whether they face disproportionate impacts in environmental justice, voting rights, housing, municipal services, and education. It further examines whether underbounding contributes to these impacts by comparing communities that may be underbounded because they are near municipalities but not incorporated with other excluded communities and with state and county averages.

The smallest geographic unit for which data is available is a census block, which is roughly equivalent to an urban city block, but is of no set area or population. Data in this report are based on every census block in North Carolina where at least 75% of the population self-identified as some race other than white only, or identified as Latino. Those census blocks were then grouped together into clusters comprising all immediately adjacent census blocks that met the 75% criteria. These clusters ranged from a single census block to dozens of blocks and were the best approximation for communities that we hypothesized would show manifestations of exclusion. Nearly 3,200 clusters were studied.

The goal is to provide communities, advocates, funders, and policy makers with an understanding of the shared causes of the overlapping challenges facing excluded communities, provide them with data on the seriousness of the issues, and to suggest where additional data is needed. While some of the results are startling, especially with respect to educational disparities and environmental justice issues, ultimately this report may raise more questions than provide answers. The Inclusion Project of the UNC Center for Civil Rights will continue this work not only with further research into individual counties and communities but through continued direct representation. Our sincere hope is that this report will enable and inspire others to do the same.

Community Exclusion and the Inclusion Project

Since 2006, the UNC Center for Civil Rights has represented communities in North Carolina that lack equal access to municipal services or representation in the political process. Our engagement began with African American² communities in southern Moore County that were underbounded from adjacent wealthy white towns. Since its founding in 2001, the Center has also represented historically excluded groups across North Carolina seeking equal access to education. Both our municipal inclusion and education desegregation client communities were referred to the Center or made direct contact based upon prior work. While these two practice areas began separately, our increased understanding of the underlying causes of these inequities and of our clients' experiences brought the two together.

Community exclusion manifests in at least five primary ways: 1) denial of infrastructure, 2) exclusion from quality schools and school districts, 3) lack of access to political and civic institutions, 4) absence of quality affordable housing, and 5) exposure to environmental hazards. These impacts are linked not only to race but to geographically identifiable communities. They suggest a particular form of housing segregation with primary impacts at the community rather than the individual level.

The merging of our educational equity and underbounding work, combined with the recognition of the community-wide effects of exclusion, necessitated a new model for civil rights advocacy. Traditional remedies for housing segregation address present acts of discrimination based on personal prejudice against an individual or a group of individual victims. A typical complaint under the Fair Housing Act would be by tenants against a racist landlord or seller. As John A. Powell notes, "The enforcement mechanisms of the Act . . . are largely individualistic, antidiscrimination tort approaches. These provisions may increase the freedom of choice for homebuyers, but have not necessarily helped produce integrated neighborhoods or addressed segregated living patterns."³ Conventional litigation and statutory strategies also privilege the role of lawyers over community advocates.

School desegregation cases do not focus exclusively on individual remedies but seek to redress the historic segregation of an entire community regardless of present prejudice. Once a court holds that a school district is liable for maintaining a segregated system, the district is required to take affirmative steps "to eliminate from the public schools all vestiges of state-imposed segregation" until the district is declared unitary.⁴ In addition, school desegregation struggles have a long history of linking litigation with broad-based community advocacy. Unfortunately, the persistence of segregated neighborhoods often thwarts genuine school integration due to logistical difficulties and political opposition associated with busing.

This report is part of an attempt to develop an approach to civil rights advocacy that focuses on repairing past segregation rather than preventing future acts, on community exclusion rather than individual victims, on structural racism rather than personal prejudice, and on community advocacy in addition to litigation.

Roots of Exclusion

Community exclusion, a particular form of housing segregation, results from historic structural racism, often but not necessarily combined with ongoing conscious racial prejudice. Many excluded neighborhoods are the result of Jim Crow era segregation. Towns that incorporated during *de jure* segregation often simply drew municipal boundaries that did not include African American communities. Some excluded communities trace their roots to Reconstruction. Newly emancipated slaves settled on the only land available, often floodplains on the outskirts of towns by rivers or swamp land. The Royal Oak community in Supply, N.C., for instance, was named after the adjacent swamp, which freedmen drained for farmland. In the decades since, neighborhood segregation persisted as access to white incorporated neighborhoods was limited by racially restrictive covenants, steering, exclusionary zoning, and other discriminatory practices.

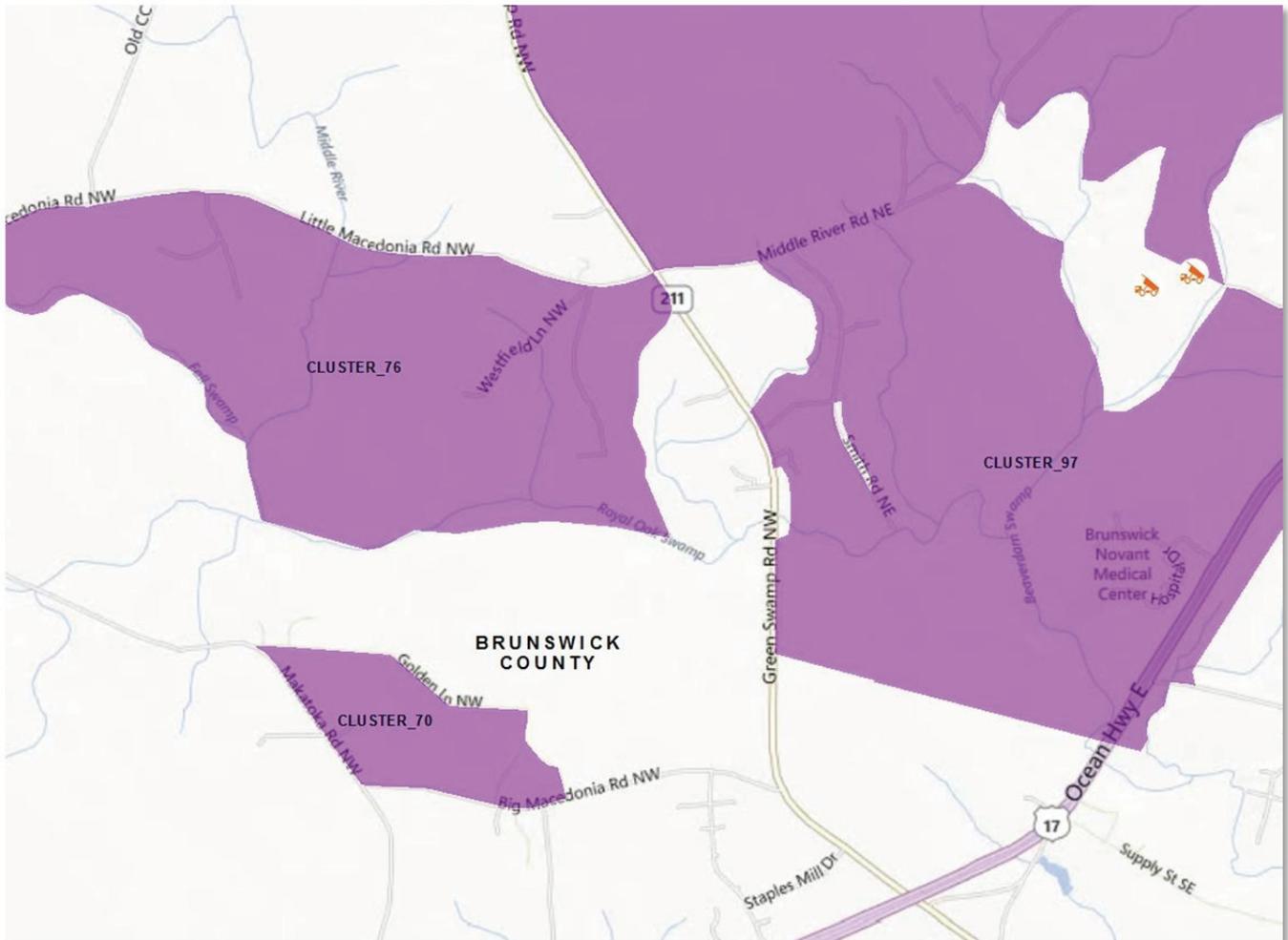


Figure 1: The areas shown in purple are clusters of contiguous census blocks that are each more than 75% African American. Clusters numbered 70, 76, and 97 are part of Royal Oak, a majority-African American community named for the Royal Oak swamp upon which it was built. The community hosts most of Brunswick County’s undesirable facilities, including the animal shelter, waste transfer station, sewage treatment plant, and multiple landfills. The county provides water and sewer service to the animal shelter, but not to the African American residents.

Whether during the Reconstruction or Jim Crow eras, the original segregation of these communities began decades of compounding impacts and continuing acts of discrimination. Relegating these communities to flood plains or swamps and denying them water and sewer infrastructure caused health issues from failing sewage systems. A high water table results in soil that does not percolate properly for septic tanks. Lack of access to infrastructure meant that these communities were unable to attract economic development from private companies or the public sector. Numerous decisions by local governments over decades, such as the decision not to place a school in an area lacking paved roads and water service, appear “race neutral,” but in fact solidified the initial segregation, each decision compounding the impacts of exclusion and perpetuating a system of structural racism.

These communities, whether consciously or by neglect, have been systematically underdeveloped. Businesses and governments avoid placing facilities there because of the lack of needed infrastructure such as water and sewer lines, sidewalks, paved roads, streetlights, and storm drains. The lack of development and infrastructure depresses property values relative to the surrounding majority-white communities. Once property values are depressed, there is a lower chance of receiving these services because they are tied to municipal annexation. Municipalities decline to annex these communities because the cost of providing services and infrastructure exceeds the potential tax revenue; instead the

municipalities annex newer suburban developments beyond the traditional African American community.⁵ Communities that should be included in municipal limits but are not are referred to as “underbounded,”⁶ but the term fails to recognize the underlying structural racism and deliberate exclusion.

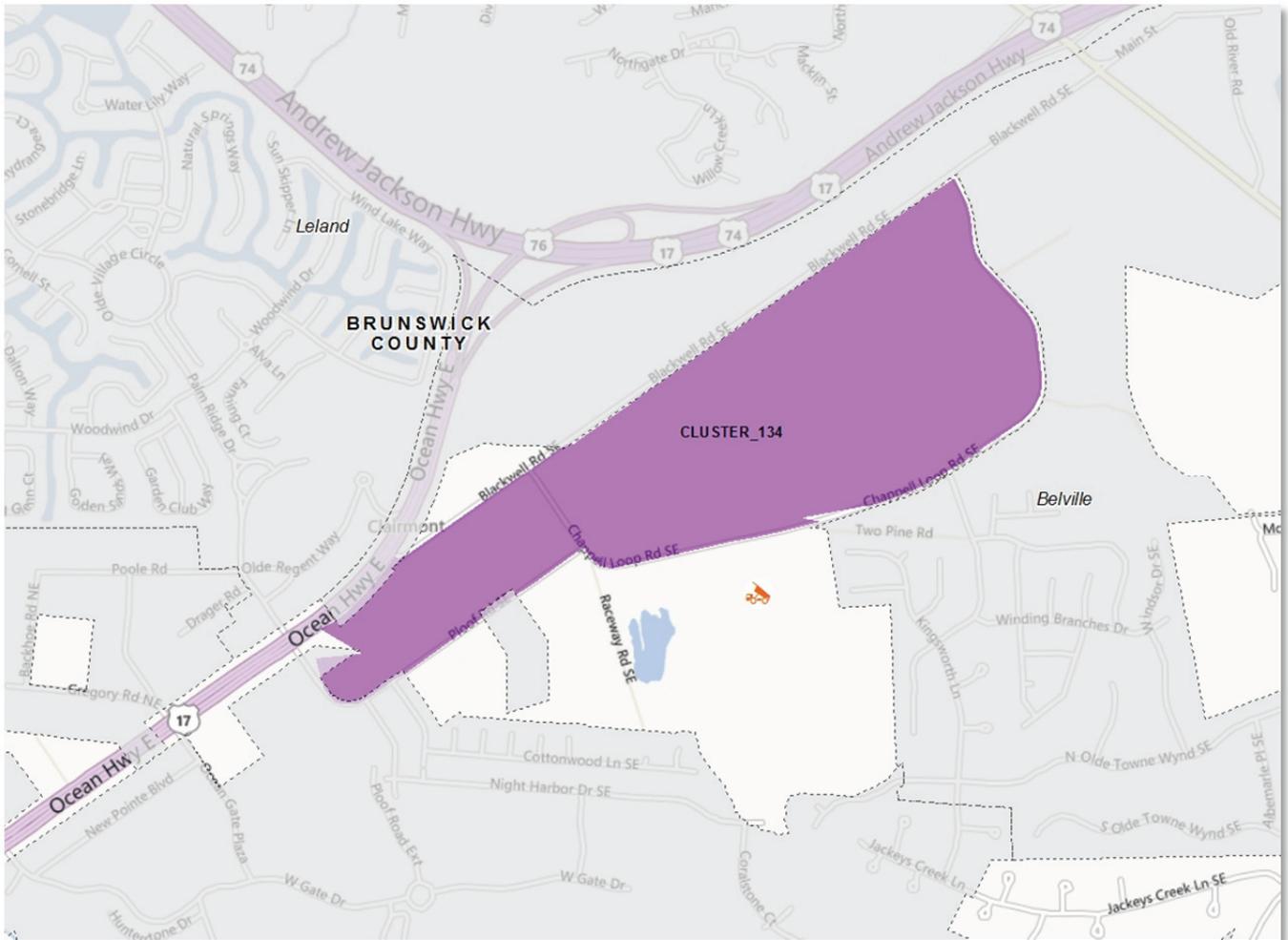


Figure 2: This cluster of contiguous census blocks in Brunswick County, an underbounded community sandwiched between the incorporated towns of Leland and Belville, is next to an inactive transfer station.

In addition to the lack of public services, being drawn out of town boundaries also excludes these communities from the political process, another obstacle to development. Not only are underbounded communities barred from voting in municipal elections, they are often in counties where people of color are not adequately represented in county government. Additionally, excluded communities that are underbounded are often subject to the extra-territorial jurisdiction (ETJ) of the neighboring municipality. ETJ allows the municipality to control the zoning and code enforcement for communities outside town limits, but the community members have no right to vote for the elected officials making those decisions. Excluded communities within an ETJ often report being “shuffled” between city and county governments with neither accepting responsibility for them.

The combination of lower property values, systematic underdevelopment and lack of political power not only discourages positive economic development, but makes these communities extremely vulnerable to undesirable facilities known as locally unwanted land uses (LULUs). LULUs frequently include landfills, waste transfer stations, and water and sewer treatment plants; municipalities want these facilities close by but not within their own borders.

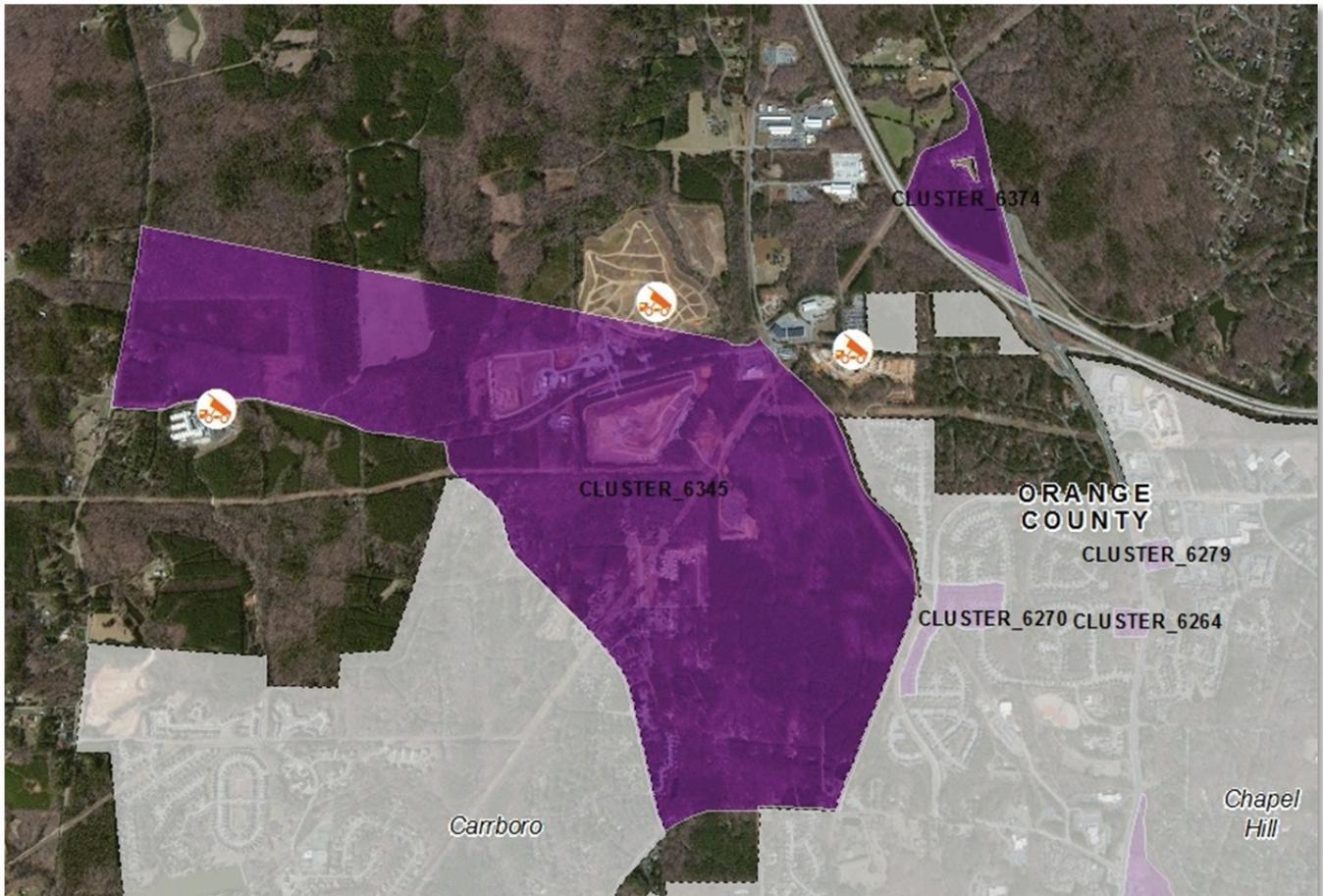


Figure 3: The Rogers Eubanks Community in Orange County, North Carolina, is partially in the Town of Carrboro. The remainder is adjacent to Chapel Hill and is subject to Chapel Hill's planning and zoning authority (similar to ETJ). For forty years the community has hosted the landfill that serves both towns and the county. While all three governments profess their intent to provide the necessary sewer service, the divided jurisdiction has been used to justify decades of passing the buck on paying for the needed services.

One final and often overlooked legacy of exclusion emerges when advocates or governments attempt to redress underdevelopment and find that property deeds and other necessary land records are missing or inadequate. Decades of government neglect of historically African American communities resulted in mistakes in tax and geographic information system (GIS) records and poor surveys of lot lines and roads. Also, barriers to legal assistance mean that many properties were inherited without a will, which tends to divide property ownership among generations of heirs, a condition known as heirs' property. Often the heirs may not even know they own a portion of a property. Without clear title to their land, families cannot develop it, sell it, or borrow against it. The divided ownership of heirs' property also inhibits granting easements required to widen and pave roads or to install utilities.

MODERN CREATION OF EXCLUDED COMMUNITIES

Unfortunately, exclusion and underbounding are not only relics of Jim Crow and Reconstruction. As towns continue to incorporate in North Carolina, they exclude less wealthy primarily non-white communities. Pinehurst, established as a private resort in 1895, did not incorporate as a municipality until 1980. When it did so, the residents seeking incorporation and the North Carolina legislature drew the boundaries to exclude Jackson Hamlet, a historically African American community that was home to many of the workers for the resort. Sandwiched between the towns of Pinehurst and Aberdeen, as of 2013, Jackson Hamlet still lacks full sewer services, many of its roads remain unpaved and its residents cannot vote in municipal elections in either town, despite its proximity to the luxury golf resorts.

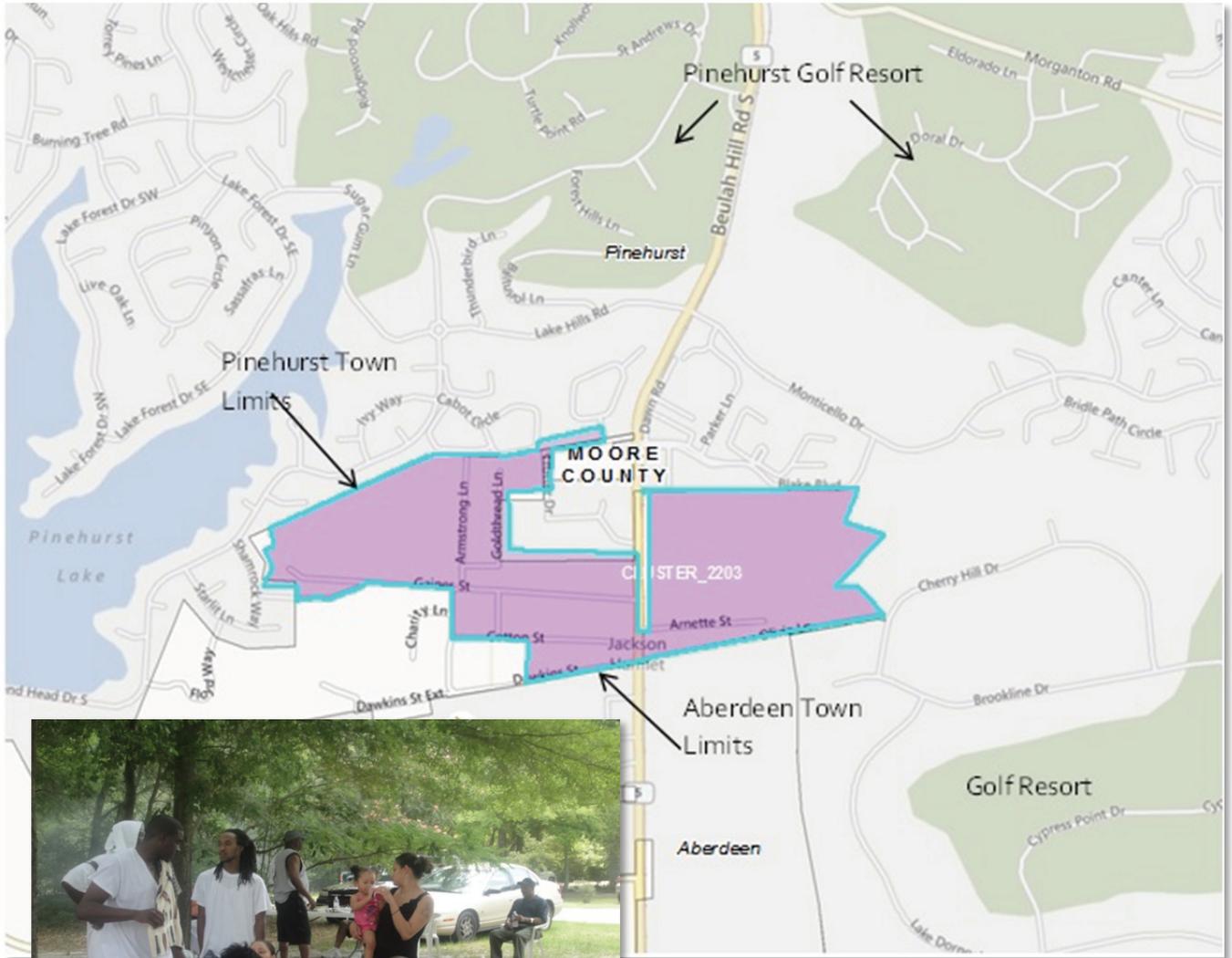


Figure 4: (above): Jackson Hamlet.

Figure 5: (right): Jackson Hamlet Day 2010, an annual community celebration held on Juneteenth, commemorating both the history of the community and the end of slavery.

In its 2013 session, the North Carolina legislature contemplated creating another underbounded community by incorporating only the predominantly white areas surrounding Lake James in Burke County and excluding African American neighborhoods.⁷ The African American community dates from 1916 when the community of Fonta Flora was flooded by Duke Power and pre-dates the white subdivisions that have sprung up along the coast of the lake. The white subdivisions seek to incorporate four non-contiguous areas, one just north of and another just south of the excluded community.⁸

LATINO EXCLUDED COMMUNITIES

Predominantly Latino communities in North Carolina are generally newer than most excluded African American communities, but the same forms of structural racism cause similar types of exclusion.⁹ Hannah Gill's analysis of *Latinos in North Carolina*, reports that "an estimated 51 percent of Latinos in North Carolina are native-born U.S. citizens [and] [a]nother 7 percent of the total Latino population in North Carolina are naturalized citizens."¹⁰ Although a majority of Latinos in North Carolina are citizens, the communities they live in are commonly perceived of and identify as immigrant

communities. Gill's description of rural North Carolinians' reactions to a growing Latino population echoes white people's racist resistance to sharing power and resources with African Americans following the end of slavery and legal segregation:

Immigration . . . challenges traditional conceptions of identity and presents stark questions about who does and does not belong in North Carolina. The swift pace of demographic change in rural locales that attach importance to tradition and conservative values has evoked a strong reaction in many places. In North Carolina, reactions reveal concerns about expansion, encroaching urbanization, allocation of resources, and the incorporation of a population unfamiliar with U.S. society.¹¹

Exclusion of Latino communities is aggravated by language and cultural barriers. As one health care practitioner described it, "Being able to link them to community services has been a real challenge. The more we understand their culture and how they link to services in their home

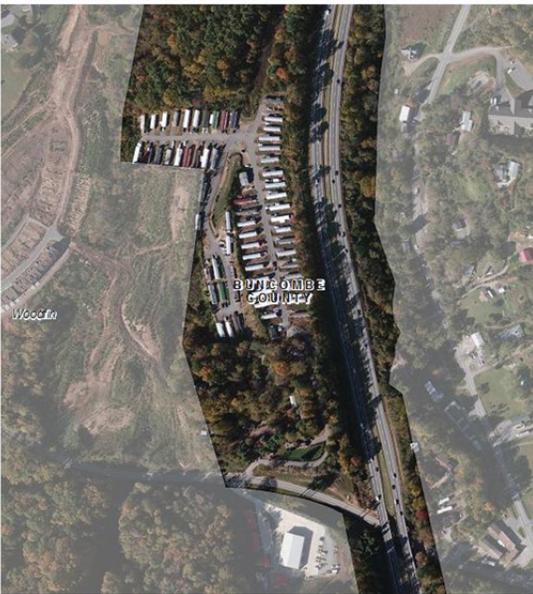


Figure 6: A majority-Latino excluded community surrounded on three sides by the majority-white town of Woodfin, a suburb of Asheville.

country, the better we will be able to provide that here in the United States."¹²

Despite the particularities of North Carolina's

Latino communities, specifically their age, language, and migration issues, these communities share the same impacts of exclusion as majority African American excluded communities in terms of housing, environmental justice, political exclusion, access to infrastructure, and access to quality education. Many African American neighborhoods were created by legal segregation and illegal housing discrimination. Latinos, in addition to being victims of individual housing discrimination, settled in segregated communities based upon the availability of affordable housing or employment. Whether the exclusion results from the historic legacy of racial segregation or the impacts of exclusion lead to cheaper housing that perpetuates discrimination, the communities experience similar impacts of

exclusion. Unless both forms of discrimination are addressed urgently, exclusion will only become more entrenched for these newer Latino communities and the impacts will compound as they have for older African American communities.

Latino communities in California suffer underbounding and exclusion similar to African American communities in the South. Phoebe S. Seaton of California Rural Legal Assistance (CRLA) describes these California communities as "[s]ituated off the psychic map of California, lacking political clout," and "excluded from regional land use and investment decisions," circumstances that result in "fragmented water delivery system and frequently deteriorating infrastructure."¹³ CRLA's description of Latino excluded communities in California describes verbatim the issues facing both African American and Latino excluded communities in North Carolina:

- ▲ Duplin, Lee, Sampson, Greene, and Montgomery counties have the highest percentage of Latinos.¹⁴
- ▲ From 1980 to 2010 the Latino population increased by more than 800,000, to over 8% of the total state population.¹⁵
- ▲ The greatest rate of growth between 2000 and 2010 took place in Macon, Camden, Perquimans, Anson, and Pasquotank counties.¹⁶
- ▲ Latinos are predicted to be largest "minority" group in N.C. by 2030.¹⁷
- ▲ 55.3% of Latinos are "working age," 18 to 44, compared to only 37.3% of non-Latinos.¹⁸
- ▲ North Carolina's Latino population has a median age of 24.5; 81% are younger than 39.¹⁹
- ▲ Two-thirds of Latinos in North Carolina are of Mexican descent, and this state has more agricultural guest workers than any other state.²⁰
- ▲ North Carolina ranks ninth in the U.S. for the size of its undocumented population.²¹

Throughout California hundreds of thousands of people live in Disadvantaged, Unincorporated Communities (DUCs). DUCs range from urban pockets that are excluded from cities, to more remote, densely settled rural communities. Residents in these communities often live without the most basic features of a safe and healthy environment – potable drinking water, sewer systems, safe housing, public transportation, access to healthy food, sidewalks, storm-water drainage, streetlights and parks – due to decades of neglect and exclusion from formal decision making by city, county and state governments. Political and institutional barriers to state and federal funding programs perpetuate this neglect, and conditions in DUCs remain largely unchanged.²²

NATIVE AMERICAN EXCLUDED COMMUNITIES

The brutal history of stealing Native Americans' land, relegating them to reservations, and otherwise depriving them of access to their traditional lands is long, complex, and outside of the scope of this report. However, the State of Exclusion does present data on the impacts of community exclusion that result from this history. The data includes the Cherokee in western North Carolina, and the Lumbee and Tuscarora in eastern North Carolina, among others. For an understanding of the history of these communities, see *Lumbee Indians in the Jim Crow South*, by Malinda Lowery,²³ and John Finger's *Cherokee Americans: The Eastern Band of Cherokees in the Twentieth Century*.²⁴

Examining Exclusion with a Wider Lens

The extent of community exclusion is not well documented in North Carolina or nationally. Some prior studies have focused on annexation and underbounding without analyzing the impacts of exclusion. Others studied impacts, but only on particular communities. The Cedar Grove Institute for Sustainable Communities conducted studies in 2004, 2006 and 2008, and identified about forty underbounded communities in North Carolina primarily through the creation and visual inspection of GIS maps. Their invaluable analysis of these communities formed the foundation of the Center's underbounding work in Moore County.²⁵ The UNC Center for Civil Rights published two studies, *Invisible Fences* (2006) and *Bridging the Gap* (2008), documenting exclusion and underbounding in our client communities across the state.²⁶

Another 2007 study, "Municipal Underbounding: Annexation and Racial Exclusion in Small Southern Towns" attempted an empirical analysis of underbounding in the South, looking at annexation as it correlated to race across several southern states.²⁷ Daniel Lichter at Cornell University and others at Mississippi State University studied which census blocks bordering municipalities in the 1990 census were annexed by 2000 and tested for correlation to race, age, population, and the percent of owner-occupied housing. Using this method, Lichter found that, "There is little evidence – at least based on these initial analyses – that blacks living in fringe neighborhoods are being systematically excluded from incorporation into local rural municipalities in the South."²⁸ However, the study also found that "communities with large black populations at the fringe were significantly less likely than other communities to annex at all," that white enclave towns surrounded by African Americans "were less likely to annex black population," and "that predominately white communities were much less likely to annex black populations, even when we controlled for the size of the black fringe population."

Approaching the issue from a different perspective, an ongoing effort in California by CRLA and PolicyLink seeks "to identify and document [unincorporated communities] and analyze and present to stakeholders and researchers [their] patterns of inequity and health disparities" for 220 communities in the eight counties of the San Joaquin Valley.²⁹

This State of Exclusion report builds on these previous efforts by applying a wide-angle, data-driven approach to the impacts of exclusion. Relying on 2010 census data, statewide GIS data, and the Center's experience representing these communities, this project first identified all communities in North Carolina that are less than 25% white, then analyzed data on each related to five primary impacts of exclusion, and, finally, compared those metrics to county and state averages to determine the extent of the impact of spatial segregation.

Following the statewide analysis of GIS and census data summarized in this report, the Inclusion Project will proceed in two additional research phases. The second stage will focus on 50-100 identified communities that present the greatest markers of exclusion and study them using information not consistently available at the state level, such as the location of water and sewer lines, school assignment zones, environmentally hazardous land uses, property values, and ETJ's. The race of elected officials and boundaries of voting districts will also be analyzed. Which of these data sets are used will depend on data availability. This second phase will also look at communities previously identified by the Center and Cedar Grove for progress toward inclusion.

From the second stage, a final list of excluded communities will be chosen for more detailed analysis. This list will be neither a random sample nor based solely on the severity of exclusion, but will consist of communities that exemplify different manifestations of exclusion and varying stages of progress toward inclusion. These communities will be examined in individual case studies, including interviews and photographs. This third phase will analyze the annexation history of any adjacent municipality for evidence of racial disparities.

These case studies will also explore whether the communities would be good candidates to pursue annexation under North Carolina's new 2012 voluntary annexation procedures which, under certain conditions, require a municipality to annex an underbounded high-poverty community and provide it with municipal services, including water and sewer.³⁰ Whether annexation should be pursued depends on which aspects of exclusion are the priorities and on local conditions; ultimately the pursuit of annexation can be decided only by the community. In communities where the primary legacies of segregation are racially identifiable schools or environmental hazards, annexation may solve nothing; in communities whose main priority is access to water and sewer or the ability to participate more fully in the political process, annexation may be a significant step toward full inclusion. Where annexation would benefit the community, the community must meet the statutory requirements of contiguity, low-income residents, and population size. The case studies will seek to identify those communities that would qualify for and benefit from annexation under the new statutory scheme, as well as to develop action plans for the remaining communities.

Methodology

In order to identify all potentially excluded communities, this study began with every census block that was at least 75% non-white³¹ and clustered those that were contiguous. Removing small clusters of contiguous census blocks that had a total population of fewer than 25 left 3,194 clusters. The remaining clusters range from single small neighborhoods to sections of larger cities with tens of thousands of residents, but almost two-thirds are between 50 and 1,000 people. The average cluster size is 410 people.

The cluster approach is designed to look at impacts of community exclusion as opposed to individual discrimination. The measurements of exclusion are applied to each resident of the cluster regardless of race. Communities face exclusion based upon the perceived race of the majority of the residents, but the impacts are felt across the community.

One limitation of census-based data is that a census block is the smallest denomination of data available.³² Census blocks are not of any particular size, either by area or population, and are defined by roads, physical features, and political boundaries.³³ For exclusion-related measurements that concern geographic proximity, this report assumes an even population distribution across each census block within a cluster.

Clusters are a good approximation for neighborhoods, but are both over- and under-inclusive. Census block lines do not follow boundaries identified by residents, so part of the community may be in a block that as a whole is more than 25% white and therefore excluded from the cluster. On the other hand, clusters are often over-inclusive, including vacant or

sparsely populated land or small portions of majority-white communities. However, in order to do an objective analysis based upon statewide data, some delineation was necessary. Any designation for a community other than individual self-identification would inherently be over- and under-inclusive. Even in organized communities where more complete information is available, the precise boundaries are often disputed.

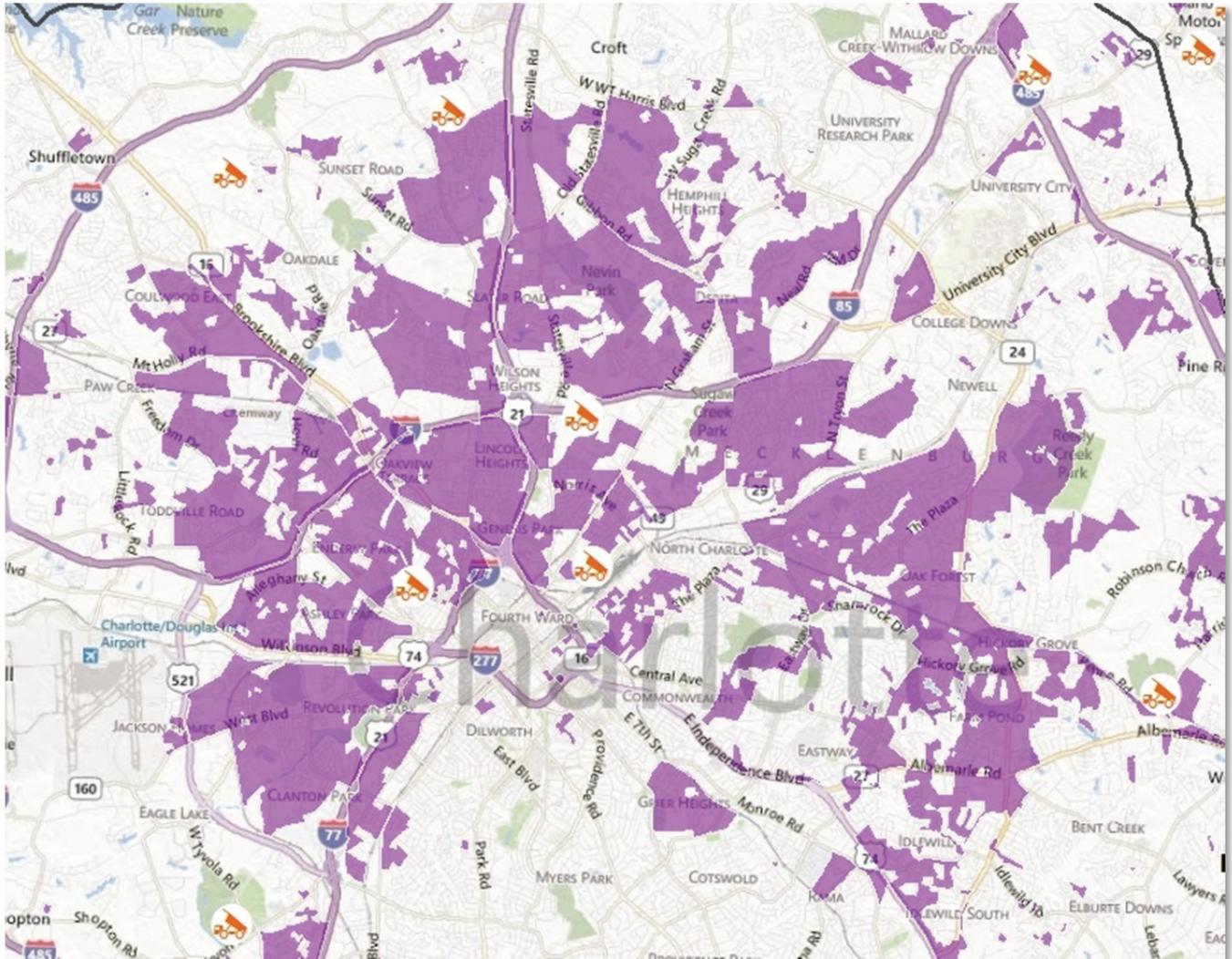


Figure 7: Examples of clusters of in central Charlotte. Solid waste facilities are marked with an orange dump truck; clusters are purple.

GENERAL ANALYSIS OF CLUSTERS

Clusters are not evenly distributed in the state by geography, race, or by the wealth of the county.³⁴ North Carolina divides counties into three tiers based upon wealth; the tiers help determine eligibility for community development and other funding.³⁵ The forty most distressed counties comprise Tier 1, the next forty are Tier 2, and the twenty wealthiest counties are Tier 3.³⁶ North Carolina counties are also divided into seventeen regional councils of government (COG) which are partly responsible for administering the Community Development Block Grant (CDBG) program.³⁷ The distribution of clusters by tier and COG should inform whether state funds are allocated to the areas of greatest need. The Center's prior experience suggests that community exclusion often creates greater disparities in wealthier counties, which receive less aid under the tier system.



Figure 8: N.C. Counties by Tier

Overall, only 16% of the state population lives in the forty most distressed counties that make up Tier 1; 33% live in Tier 2, the next 40 counties; 51% of North Carolinians live in the twenty wealthiest counties of Tier 3.

Table 1: All Clusters by Tier

	LATINO CLUSTERS		AFRICAN AMERICAN CLUSTERS		NATIVE-AMERICAN CLUSTERS		ALL CLUSTERS	
	Clusters	Population	Clusters	Population	Clusters	Population	Clusters	Population
TIER 1	70	11,577	719	206,921	44	59,530	836	278,252
TIER 2	238	36,007	877	258,788	7	2,157	1,132	297,814
TIER 3	297	92,536	878	632,046	1	33	1,226	733,007
STATEWIDE	605	140,120	2,474	1,097,755	52	61,720	3,194	1,309,073

Residents of majority-Latino clusters live disproportionately in the wealthiest counties: only 8% reside in Tier 1 and 26% reside in Tier 2, but 66% reside in Tier 3. On the other hand, residents of majority-African American clusters are distributed more like the overall statewide population: 19% in Tier 1, 24% in Tier 2, and 58% in Tier 3. Residents of majority-Native American clusters are overwhelmingly concentrated in the most distressed counties. The total cluster population is weighted significantly toward Tier 1, and somewhat toward Tier 3, which generally follows the population of majority-African American clusters.

Table 2: All Clusters by Region

	LATINO CLUSTERS		AFRICAN AMERICAN CLUSTERS		NATIVE-AMERICAN CLUSTERS		ALL CLUSTERS	
	Clusters	Population	Clusters	Population	Clusters	Population	Clusters	Population
COASTAL PLAIN	138	20,433	1,139	358,758	42	60,035	1,322	439,729
MOUNTAIN	42	3,581	78	11,944	9	1,652	129	17,177
PIEDMONT	425	116,106	1,257	727,053	1	33	1,743	852,167
STATEWIDE	605	140,120	2,474	1,097,755	52	61,720	3,194	1,309,073

Although the overall state population is 26% Coastal Plain, 12% Mountains, and 62% Piedmont, the cluster population is much higher in the Coastal Plain, 34%, and much lower in the Mountains, 1%. This distribution largely reflects the overall racial distribution of the state, but not exactly.

Of the 2,019,854 African American residents of North Carolina, 36% live in the Coastal Plain, 2% in the Mountains, and 62% in the Piedmont, but the cluster population breaks down slightly differently: 33% of residents of majority African American clusters live in the Coastal Plain, 1% in the Mountain region, and 66% in the Piedmont. A higher percentage of residents in super-majority-African American clusters than the overall African American population could suggest that the Piedmont is less internally integrated than the Mountain region or the Coastal Plains. When looking at the entire state, the Mountain region is overwhelmingly white, therefore not integrated.



Figure 9: N.C. Regions by County

The total number of all people of color in north carolina is 3,311,493: 32% in the coastal plain, 4% in the mountains, and 64% in the piedmont, but the cluster population breaks down as 34%, 1%, and 65%, respectively. This disparity again suggests that the piedmont is more segregated than the mountains, because the cluster population relative to the total population is weighted toward the piedmont. However, unlike the african american population, the total cluster population percentages are slightly higher in the coastal plain, 34%, than the overall people of color populations, 32%, possibly suggesting greater segregation among latino and native-american communities in the coastal plain.

UNDERBOUNDED CLUSTERS

Municipal underbounding is a phenomenon whereby, because of municipal control, history or geography, communities are outside of municipal boundaries when they should be included in the municipality. To determine which impacts are tied specifically to municipal underbounding, this study conducted a separate analysis for a subset of 427 clusters which are within one tenth of a mile of an incorporated municipality and which are themselves less than 50% incorporated by area. Not all of these clusters are in fact underbounded. Underbounding is a subjective designation based not just on geography and population density, but on historic and social context. No determination of which of these



Figure 10: Cluster in Wade, N.C., that is less than 50% incorporated by area, but aerial photographs show all the population appears to be within town limits. This cluster is not underbounded, but was one of the 427 potentially underbounded clusters.

427 clusters are underbounded can be made based only on GIS and census data; the proximity to a municipality and the fact that they are not incorporated is, however, suggestive of underbounding. Such clusters will be referred to as “unincorporated clusters near municipalities” or “potentially underbounded clusters.”

In some of these clusters that are less than 50% incorporated by area, all of the cluster population is centered in the incorporated portion. (Figure 10). Other clusters are large geographic areas that touch a municipality, but the population is farther from the municipal boundary. Many of the clusters, however, like Jackson Hamlet, Rogers Road, or the Latino community north of Asheville, are genuinely underbounded, drawn or left out of the municipal boundaries, based upon closer examinations of those communities.

Table 3: Racial Distribution of Unincorporated Clusters near Municipalities

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	Clusters	Population	Clusters	Population	Clusters	Population
LATINO	605	140,120	61	12,425	35	6,495
ASIAN	63	9,478	2	407	2	407
AFRICAN AMERICAN	2,474	1,097,755	359	152,864	166	40,296
NATIVE AMERICAN	52	61,720	5	46,100	1	33
TOTAL	3,194	1,309,073	427	211,796	204	47,231

Across all racial groups, about 13% of the clusters and 16% of the cluster residents are in unincorporated areas but near municipalities, possibly underbounded. Almost three-fourths of the Native American population lives in such a cluster, but this is deceptively high due to the size of these five clusters, which are mostly in Robeson County. They are less than 50% incorporated and are adjacent to one or more incorporated municipalities, but these clusters cover large sections of the county, much of which is not near a municipality, and therefore are probably not underbounded.

This study found that there were more clusters near municipalities that are not majority white. Only 141 of the state’s 553 municipalities are not majority white, but these 141 neighbor the majority of potentially underbounded clusters. Although 75% of N.C. towns are majority white, only 48% of potentially underbounded clusters and 22% of the population of potentially underbounded clusters borders them.

Professor Lichter’s research suggested that predominantly white towns were less likely to annex African American people living in adjacent census blocks between 1990 and 2000.³⁸ This present study did not find that underbounded clusters were more frequent near majority-white towns. Lichter’s study and this data are measuring two different things. Lichter measured whether existing African American census blocks were more or less likely to be annexed as compared to majority-white census blocks.³⁹ This study simply measures how many, how large, and where the potentially underbounded communities are located. The fact that this report found that such clusters were not more common outside of majority-white towns does not mean, as Lichter found, that they were not less likely to be annexed.

Therefore this cluster analysis does not contradict Lichter’s findings, but it is representative of broader patterns of segregation. Majority-white towns are more likely to be surrounded by majority-white census blocks, and the 141 towns in North Carolina that are not majority white, mostly in the Black Belt of Eastern North Carolina, are more likely to be surrounded by people of color. Professor Lichter studied whether existing communities were annexed, not where they were most likely to be found. The data, in combination with Lichter’s study, would suggest that while potentially underbounded communities are more frequently found near majority-African American towns, those that are near majority-white towns face greater barriers to annexation.

Table 4: Population Distribution of Unincorporated Clusters near Municipalities by Race and Tier

	POPULATION LATINO CLUSTERS		POPULATION AFRICAN AMERICAN CLUSTERS		POPULATION NATIVE-AMERICAN CLUSTERS		POPULATION ALL CLUSTERS	
	Unincorporated Near A Municipality	All	Unincorporated Near A Municipality	All	Unincorporated Near A Municipality	All	Unincorporated Near A Municipality	All
TIER 1	1,683	11,577	79,245	206,921	46,067	59,530	126,995	278,252
TIER 2	3,411	36,007	57,520	258,788	0	2,157	60,976	297,814
TIER 3	7,331	92,536	16,099	632,046	33	33	23,825	733,007
STATEWIDE	12,425	140,120	152,864	1,097,755	46,100	61,720	211,796	1,309,073

About 10% of residents of majority-Latino clusters live in potentially underbounded clusters (unincorporated clusters near a municipality), a number which is consistent across all tiers, with slightly fewer, 8%, in the wealthiest counties, Tier 3. The population of majority-African American clusters shows a greater trend toward underbounding in the poorest counties; almost 40% of residents of majority-African American clusters in Tier 1 are potentially underbounded. This trend may not be representative of actual underbounding; less wealthy counties are also less densely populated and have bigger clusters, so more of the clusters will touch municipalities, even though due to their size the population may not in fact be underbounded. The population of majority-African American clusters in Tier 3 is overwhelmingly either rural or incorporated, with only 2.5% living in potentially underbounded clusters. Underbounded communities in Tier 3 counties may be small communities clustered with larger incorporated areas, especially in pockets of Raleigh and Charlotte.

Table 5: Regional and Racial Distribution of the Population of Unincorporated Clusters near Municipalities

	POPULATION LATINO CLUSTERS		POPULATION AFRICAN AMERICAN CLUSTERS		POPULATION NATIVE AMERICAN CLUSTERS		POPULATION ALL CLUSTERS	
	Unincorporated Near A Municipality	All	Unincorporated Near A Municipality	All	Unincorporated Near A Municipality	All	Unincorporated Near A Municipality	All
COASTAL PLAIN	1,178	20,433	108,320	358,758	46,067	60,035	155,565	439,729
MOUNTAIN	510	3,581	2,788	11,944	0	1,652	3,298	17,177
PIEDMONT	10,737	116,106	41,756	727,053	33	33	52,933	852,167
STATEWIDE	12,425	140,120	152,864	1,097,755	46,100	61,720	211,796	1,309,073

A different pattern emerges when one divides the state by region. Latino clusters in the Mountain region and the Piedmont have a greater percentage of their population in clusters near municipalities; in the Coastal Plain the population is most likely rural. The population distribution of majority-African American clusters is exactly the opposite; it is more likely to be near municipalities in the Coastal Plain, almost one-third by population.

Environmental Justice

Solid Waste Facilities

Prior representation and community experience suggest one of the five primary recurring challenges facing excluded communities is environmental injustice. Underbounded communities are particularly vulnerable to being burdened with the solid waste facilities of nearby municipalities due to the combination of their depressed property values, lack of political voice, proximity to a municipality, and racial discrimination. Several of the Center’s existing clients, including the Rogers Eubanks community, Lincoln Heights, Royal Oak, and Jackson Hamlet, host one or more solid waste facilities that primarily serve the adjacent majority-white towns. The scope of this phenomenon is plotted in terms of exposure rates to open or closed solid waste facilities, including landfills of all types, waste transfer stations, incinerators, and recycling facilities.⁴⁰ Exposure rates are determined by the percentage of the population within one mile of each facility. Multiple facilities are often in the same location, which has a cumulative impact on the community. Therefore an area that hosts multiple facilities could have an exposure rate of over 100%.

For all of North Carolina the exposure rate is only 5.34%; in other words, an average of 509,177 people live within one mile of these facilities. *Residents of majority-African American clusters are nearly twice as likely to live within one mile of a solid waste facility; exposure rates are 10.36% for residents of these clusters.*

Table 6: Proximity of Cluster Residents to Solid Waste Facilities by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	%	POPULATION	%	POPULATION	%
LATINO	140,120	5.44%	12,425	4.45%	6,495	8.51%
ASIAN	9,478	3.45%	407	0.00%	407	0.00%
AFRICAN AMERICAN	1,097,755	10.36%	152,864	5.59%	40,296	8.14%
NATIVE AMERICAN	61,720	1.75%	46,100	2.28%	33	0.00%
TOTAL	1,309,073	9.37%	211,796	4.79%	47,231	8.12%

In order to compare the impact of solid waste facilities on clusters with the general population, the charts list both population and the exposure rate for each group. For example, Table 6 shows that there are 140,120 residents of majority-Latino clusters across the state with an exposure rate of 5.44%, corresponding to an average of 7,623 residents within one mile of such a facility. Table 7, below, shows that there are 733,007 cluster residents in Tier 3, with an exposure rate of 12.29%. For comparison, the total tier population and corresponding rate are given in the next columns: Tier 3 has 4,823,641 residents, and an exposure rate of 6.21%.

In the columns on the right side of the chart, Table 7 presents population numbers and rates for unincorporated clusters near a municipality (potentially underbounded clusters) and “all census blocks near municipalities” for comparison. “All census blocks near municipalities” includes all census blocks that are within one tenth of a mile of a municipality and are less than 50% incorporated. These comparison census blocks include only those blocks that are each individually within a tenth of a mile and less than 50% incorporated, as opposed to the unincorporated clusters near municipalities, where only the cluster as a whole is within a tenth of a mile and less than 50% incorporated. Each census block contained within a potentially underbounded cluster may not individually meet those requirements; they may be more than 50% incorporated or over a tenth of a mile from a municipality, as long as they are part of a cluster of census blocks that meets the requirements overall.

As shown in Table 6, residents of potentially underbounded African American and Latino clusters do not show a higher rate of proximity to a solid waste facility, at 5.59% and 4.45% respectively, compared to the state average of 5.34% of the total population. When narrowed to clusters that are potentially underbounded from a majority-white municipality, residents of African American or Latino clusters are significantly disproportionately burdened at 8.14% and 8.51%, respectively.

Table 7: Proximity of Cluster Residents to Solid Waste Facilities by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
TIER 1	278,252	3.11	1,548,570	3.86	126,995	2.69	195,258	5.90%
TIER 2	297,814	8.04	3,163,272	4.74	60,976	6.88	399,361	5.82%
TIER 3	733,007	12.29	4,823,641	6.21	23,825	10.61	480,955	6.81%
STATEWIDE	1,309,073	9.37	9,535,483	5.34	211,796	4.79	1,075,574	6.28%

In the poorest Tier 1 counties there is not as great a discrepancy between residents of clusters and the general population, and fewer people overall live near solid waste facilities. In wealthier Tier 2 and Tier 3 counties, however, residents of clusters are almost twice as likely as the general population to live within one mile of a solid waste facility. Residents of potentially underbounded clusters are most impacted in Tier 3 counties.

Table 8: Proximity of Cluster Residents to Solid Waste Facilities by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
COASTAL PLAIN	439,729	5.25	2,504,184	4.17	155,565	4.10	272,194	6.16%
MOUNTAIN	17,177	4.55	1,110,320	5.19	3,298	10.79	172,456	9.01%
PIEDMONT	852,167	11.60	5,920,979	5.86	52,933	6.44	630,924	5.58%
STATEWIDE	1,309,073	9.37	9,535,483	5.34	211,796	4.79	1,075,574	6.28%

Like Tier 3 counties, the residents of clusters in the Piedmont are much more likely to live near solid waste facilities. This increased probability may simply reflect the disproportionate number of Tier 3 counties that are in the Piedmont (thirteen out of the twenty Tier 3 counties are in the Piedmont region). Thirteen out of the thirty-seven Piedmont counties are in Tier 3, as opposed to four out of forty in the Coastal Plain, and three out of twenty-three in the Mountain region.

The increased disparities in environmental justice in the Piedmont region are likely related to the increased population density and urbanization in this region, which has 332 people per square mile as opposed to 196 statewide.⁴¹ The population density of Tier 3 counties, 295 people per square mile, is similarly higher than the state average. The five largest cities in North Carolina: Charlotte, Raleigh, Greensboro, Durham, and Winston-Salem, are all in both the Piedmont region and in Tier 3 counties.

Mountain region residents of census blocks just outside of incorporated municipalities also have a high likelihood of living in close proximity to a solid waste facility; the rate is even higher for unincorporated clusters near a municipality.

Table 9: Proximity of Cluster Residents to Solid Waste Facilities by Council of Government

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
ALBEMARLE COMMISSION	19,423	9.53%	171,996	5.21%	1,682	4.55%	15,520	3.09%
CAPE FEAR COUNCIL OF GOVERNMENTS	31,916	1.28%	420,413	4.14%	5,204	1.98%	44,345	8.95%
CENTRALINA COUNCIL OF GOVERNMENTS	305,281	9.47%	1,968,680	4.84%	12,109	6.09%	193,563	5.05%
EASTERN CAROLINA COUNCIL OF GOVERNMENTS	73,833	1.87%	633,028	3.71%	16,141	0.93%	71,393	5.26%
HIGH COUNTRY COUNCIL OF GOVERNMENTS	827	0.00%	210,049	3.62%	272	0.00%	28,372	8.00%
ISOTHERMAL PLANNING AND DEVELOPMENT COMMISSION	15,360	4.82%	231,394	5.08%	2,913	5.65%	38,121	6.42%
KERR-TAR REGIONAL COUNCIL OF GOVERNMENTS	41,807	2.70%	226,393	2.46%	16,336	6.09%	24,648	4.02%
LAND-OF-SKY REGIONAL COUNCIL	5,010	3.53%	398,912	4.28%	401	36.20%	62,906	8.58%
LUMBER RIVER COUNCIL OF GOVERNMENTS	97,819	3.64%	299,106	2.99%	58,408	4.79%	31,961	8.85%
MID-CAROLINA COUNCIL OF GOVERNMENTS	65,158	16.63%	497,540	6.10%	9,974	15.71%	52,107	4.53%
MID-EAST COMMISSION	59,120	2.16%	286,363	3.90%	27,758	2.38%	36,198	6.07%
NORTHWEST PIEDMONT COUNCIL OF GOVERNMENTS	73,204	3.60%	551,390	4.47%	765	0.00%	56,059	4.44%
PIEDMONT TRIAD COUNCIL OF GOVERNMENTS	161,128	6.60%	1,089,327	4.37%	8,021	2.34%	119,495	7.67%
SOUTHWESTERN COMMISSION	1,820	4.32%	194,102	9.70%	85	54.12%	29,501	14.93%
TRIANGLE J COUNCIL OF GOVERNMENTS	251,169	21.80%	1,680,877	9.36%	13,316	11.18%	175,959	6.88%
UPPER COASTAL PLAIN COUNCIL OF GOVERNMENTS	99,642	3.80%	310,416	2.99%	37,370	2.73%	29,851	4.00%
WESTERN PIEDMONT COUNCIL OF GOVERNMENTS	6,556	7.95%	365,497	3.81%	1,041	0.00%	65,575	2.56%
STATEWIDE	1,309,073	9.37	9,535,483	5.34	211,796	4.79	1,075,574	6.28%

Of the seventeen regional councils of government, two show very high rates of proximity to a solid waste facility for residents of clusters. In the Mid-Carolina Council of Governments, comprising Cumberland, Harnett, and Sampson counties, the rate is 16.63% for cluster residents, as opposed to only 6.10% for other residents.

The Triangle J Council of Governments, comprising Chatham, Durham, Johnston, Lee, Moore, Wake, and Orange counties has the worst rates of proximity to a solid waste facility of anywhere in the state at over 20%. The high numbers in the Raleigh-Durham-Chapel Hill Triangle area probably explain the high rates in the Piedmont region and Tier 3 overall. These high rates reflect the experience of the Center representing communities in Orange County (Rogers Road) and Moore County (Jackson Hamlet) that host these facilities, as well as the extensive history of environmental justice struggles around the landfills in Holly Springs in Wake County.



Figure 11: Multiple solid waste facilities surround super-majority-African American clusters in and near Holly Springs.

EPA-Monitored Polluting Sites

Solid waste facilities are common environmental hazards, but they are not the only polluters which disproportionately impact excluded communities. The EPA Facility Registry system was used to identify the locations of other environmental impacts, including hazardous waste sites, major discharges of air pollution, and major point-source-pollution water sources.⁴² Almost a quarter (24.25%) of all North Carolinian residents live within one mile of an EPA-registered polluter, but 41% of residents of Latino clusters and 44% of residents of African American clusters live within a mile of such pollution sources.

Table 10: Proximity of Cluster Residents to EPA-Monitored Polluting Sites by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY CLUSTERS		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	%	POPULATION	%	POPULATION	%
LATINO	140,120	40.67%	12,425	17.88%	6,495	25.41%
ASIAN	9,478	21.65%	407	0.00%	407	0.00%
AFRICAN AMERICAN	1,097,755	44.11%	152,864	18.58%	40,296	14.69%
NATIVE AMERICAN	61,720	6.78%	46,100	6.59%	33	0.00%
TOTAL	1,309,073	41.82%	211,796	15.90%	47,231	16.03%

Generally, residents of both unincorporated clusters near municipalities and other census blocks on the border of municipalities are less likely to be in close proximity to these sources of pollution. However, for majority-Latino clusters there is a noticeable increase for clusters near a majority-white municipality.

Table 11: Proximity of Cluster Residents to EPA-Monitored Polluting Sites by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
TIER 1	278,252	19.93%	1,548,570	16.15%	126,995	8.83%	195,258	15.80%
TIER 2	297,814	39.48%	3,163,272	19.81%	60,976	30.99%	399,361	15.91%
TIER 3	733,007	51.08%	4,823,641	29.77%	23,825	14.92%	480,955	16.30%
STATEWIDE	1,309,073	41.82%	9,535,483	24.25%	211,796	15.90%	1,075,574	16.07%

Just as with solid waste facilities, both the rates of proximity to these pollution sources and the disparity between the general population and residents of clusters are much higher in Tier 3 counties (Table 11) and counties in the Piedmont region (Table 12). While the concentration could be due to the increased industrial development and population density in these counties, those factors should apply equally and do not explain the higher disparity between clusters and the general population in these counties. Table 12 shows that cluster residents in the Mountains and the Piedmont are around twice as likely to live within one mile of an EPA-monitored pollution source as other residents.

Table 12: Proximity of Cluster Residents to EPA-Monitored Polluting Sites by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
COASTAL PLAIN	439,729	27.04%	2,504,184	16.79%	155,565	14.51%	272,194	11.98%
MOUNTAIN	17,177	47.80%	1,110,320	21.76%	3,298	18.39%	172,456	25.06%
PIEDMONT	852,167	49.33%	5,920,979	27.88%	52,933	19.81%	630,924	15.37%
STATEWIDE	1,309,073	41.82%	9,535,483	24.25%	211,796	15.90%	1,075,574	16.07%

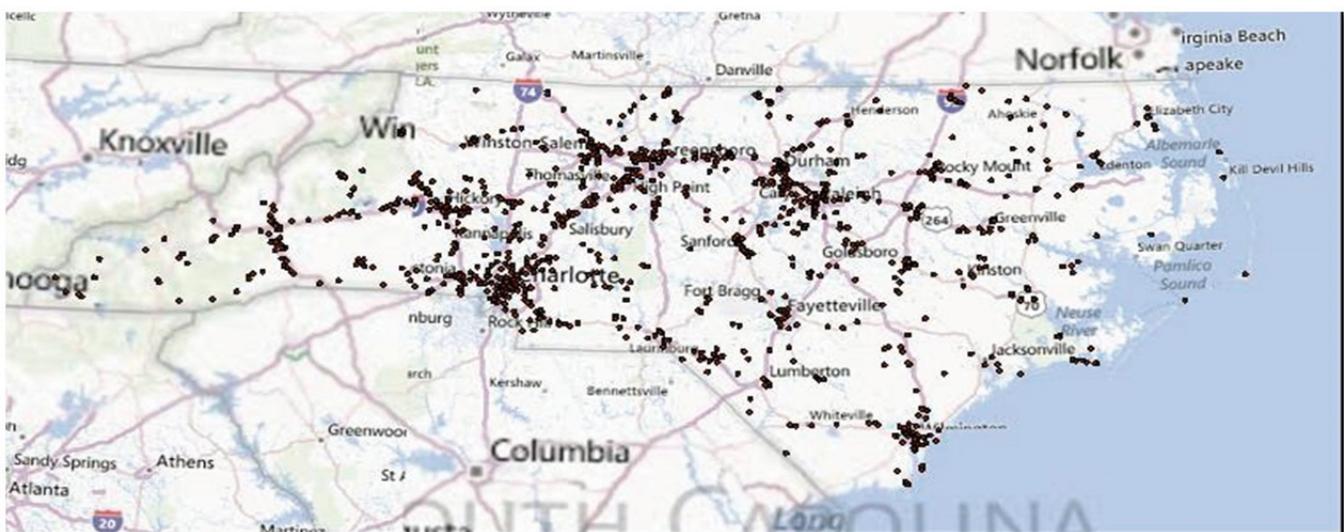


Figure 12: Distribution of EPA-Monitored Pollution Sources across North Carolina.

Education

Although the North Carolina Constitution guarantees the right to a sound basic education to every student,⁴³ access to quality schools depends directly on where one lives. Most North Carolinians live in a county-wide school district, but not all schools in a county are equal in quality, nor does everyone have equal access to the community's best schools due to school assignment policies. Some counties have multiple school districts, a situation which often aggravates disparities based upon spatial segregation.⁴⁴

School assignment data are not available for all districts in North Carolina.⁴⁵ Education related metrics were instead based upon the closest school with a third grade (elementary school) in the same county as the cluster, excluding alternative schools.⁴⁶ Data for the schools, as well as the county averages they are compared to, are similarly based on schools with a third grade. Data presented as a county average may differ from county averages reported by the State Department of Public Instruction (DPI) because these data are aggregates of all public schools with a third grade geographically located within the county, regardless of district lines.⁴⁷

Racially Identifiable Schools

Racial segregation was measured in terms of "racially identifiable" schools where the racial composition of the school was more than 10% different from the county average. Percentages in the tables are of the population whose closest elementary school has a non-white population that is 10% different (plus or minus) from the county's average elementary school population. Racially identifiable schools include both schools that are whiter than the county average and those that have more students of color.

Table 13: Proximity of Cluster Residents to Racially Identifiable Schools by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	%	POPULATION	%	POPULATION	%
LATINO	140,120	74.24%	12,425	84.93%	6,495	76.66%
ASIAN	9,478	70.93%	407	88.94%	407	88.94%
AFRICAN AMERICAN	1,097,755	81.22%	152,864	61.52%	40,296	46.47%
NATIVE AMERICAN	61,720	46.21%	46,100	52.03%	33	100.00%
TOTAL	1,309,073	78.75%	211,796	60.88%	47,231	51.02%

Table 14: Proximity of Cluster Residents to Racially Identifiable Schools by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
TIER 1	278,252	56.26%	1,548,570	51.94%	126,995	52.52%	195,258	50.45%
TIER 2	297,814	75.68%	3,163,272	57.53%	60,976	69.74%	399,361	57.07%
TIER 3	733,007	88.53%	4,823,641	71.02%	23,825	82.75%	480,955	70.37%
STATEWIDE	1,309,073	78.75%	9,535,483	63.44%	211,796	60.88%	1,075,574	61.82%

Table 14 shows that, statewide, the closest elementary school to 63.44% of the population is racially identifiable: it has a 10% or more racial disparity from the county average. Thus, the problem of racially identifiable schools is in no way limited

to majority-African American neighborhoods. Even though the problem is widespread, it is significantly worse for residents of African American and Latino clusters. Over 80% of the one million residents of majority African American clusters live where the elementary school is segregated compared to the county as a whole (Table 14).

Both the overall percentages of cluster residents whose nearest school is racially identifiable and the disparity between them and other county residents gets significantly worse as the wealth of the county increases. The proximity to racially identifiable schools is highest in Tier 3 and lowest in Tier 1. Tier 1 may be the most integrated because there are fewer schools and a more rural population, so the schools’ racial compositions do not differ much from the county’s average.

Table 15: Proximity of Cluster Residents to Racially Identifiable Schools by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
COASTAL PLAIN	439,729	64.66%	2,504,184	58.75%	155,565	57.94%	272,194	57.36%
MOUNTAIN	17,177	79.13%	1,110,320	42.78%	3,298	92.21%	172,456	44.08%
PIEDMONT	852,167	86.01%	5,920,979	69.30%	52,933	67.55%	630,924	68.59%
STATEWIDE	1,309,073	78.75%	9,535,483	63.44%	211,796	60.88%	1,075,574	61.82%

Somewhat surprisingly, residents of clusters in the Mountain region have almost as high a likelihood of living near a racially identifiable school as in the Piedmont, and a much higher disparity from the overall population than the other regions. One explanation may be that the non-white population in the Mountain region is more concentrated than in other regions. More detailed analysis of school district boundaries and assignment policies is needed to determine the degree and causes of school segregation in this region.

Failing Schools

In this study, educational outcomes are measured by the passing rates for third grade combined reading and math end-of-grade tests. The percentages given are of the population where the nearest elementary school has a combined passing rate of less than 50%, a “failing” school.⁴⁸

Table 16: Proximity of Cluster Residents to Failing Schools by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	%	POPULATION	%	POPULATION	%
LATINO	140,120	38.23%	12,425	26.83%	6,495	9.90%
ASIAN	9,478	18.47%	407	0.00%	407	0.00%
AFRICAN AMERICAN	1,097,755	47.56%	152,864	56.40%	40,296	38.96%
NATIVE AMERICAN	61,720	34.80%	46,100	37.37%	33	0.00%
TOTAL	1,309,073	45.75%	211,796	50.41%	47,231	34.60%

In terms of the performance of the closest school, unincorporated majority-Latino clusters that are near municipalities are actually less likely than other Latino clusters to have failing end-of-grade tests at the closest school, while majority-African American clusters show the opposite trend. All clusters seem to have lower likelihoods when located near majority-white municipalities, but this does not mean that these potentially underbounded students have access to these schools. They may simply live near better schools to which they do not have access due to district boundaries or assignment policies.

Table 17: Proximity of Cluster Residents to Failing Schools by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
TIER 1	278,252	50.37%	1,548,570	25.55%	126,995	55.57%	195,258	24.79%
TIER 2	297,814	38.87%	3,163,272	17.28%	60,976	45.86%	399,361	12.84%
TIER 3	733,007	46.79%	4,823,641	17.07%	23,825	34.62%	480,955	10.38%
STATEWIDE	1,309,073	45.75%	9,535,483	18.52%	211,796	50.41%	1,075,574	13.91%

Across North Carolina, only 19% of residents live where the closest elementary school has a less than 50% passing rate, but, for all clusters, near municipalities or not, the chance of living where the closest school is failing more than doubles. *For Tier 3, although only 17% of all residents have a failing closest school, almost half of cluster residents do.* The poorest counties have higher rates overall, but smaller, although still very large, relative disparities.

Table 18: Proximity of Cluster Residents to Failing Schools by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
COASTAL PLAIN	439,729	44.48%	2,504,184	23.24%	155,565	52.41%	272,194	21.56%
MOUNTAIN	17,177	18.50%	1,110,320	2.90%	3,298	66.95%	172,456	2.37%
PIEDMONT	852,167	46.96%	5,920,979	19.45%	52,933	43.52%	630,924	13.76%
STATEWIDE	1,309,073	45.75%	9,535,483	18.52%	211,796	50.41%	1,075,574	13.91%

Schools in North Carolina are generally administered by county-wide districts. Even counties with multiple independent school districts substantially control education funding and have the authority to merge the districts.⁴⁹ Therefore while there are identifiable patterns based on region and county wealth, school performance is fundamentally a county-by-county issue. Table 19 lists those counties with the largest disparities in educational outcomes between the schools nearest to cluster residents and the county average. The disparity in educational outcomes is calculated by comparing the percent for “all clusters” to the percent for “general population.” Although they have smaller disparities, New Hanover and Wake counties are included for comparison.

Table 19: Counties with the largest disparities in proximity to a failing school between cluster residents and the county average

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
UNION	14,166	59.00%	201,292	11.15%	1,351	0.00%	33,933	6.20%
JOHNSTON	10,777	62.70%	168,878	15.29%	966	60.25%	24,315	10.41%
ALAMANCE	16,630	73.71%	151,131	32.10%	1,799	0.00%	16,062	19.54%
WAYNE	23,093	71.01%	122,623	32.55%	2,305	17.35%	15,780	15.42%
PITT	29,729	75.29%	168,148	38.50%	9,211	74.43%	20,277	31.89%
LENOIR	15,795	74.29%	59,495	38.34%	5,190	98.82%	4,594	32.22%
FORSYTH	70,615	70.01%	350,670	34.10%	550	7.09%	30,361	5.86%
DAVIDSON	6,359	44.54%	162,878	11.65%	83	0.00%	19,696	0.00%
CHATHAM	7,005	41.14%	63,505	9.31%	1,216	0.00%	4,785	14.84%
MECKLENBURG	240,070	57.63%	919,628	26.94%	2,571	42.78%	28,821	13.71%
CASWELL	2,325	82.02%	23,719	52.33%	882	95.46%	1,460	82.53%
GASTON	8,769	39.72%	206,086	10.35%	514	20.82%	35,084	3.94%
RANDOLPH	4,266	53.91%	141,752	27.90%	267	51.31%	22,556	28.58%
GUILFORD	121,614	55.28%	488,406	30.28%	2,992	30.98%	40,637	24.84%
STANLY	3,415	34.49%	60,585	10.01%	804	0.00%	10,862	3.19%
ROCKINGHAM	5,452	55.61%	93,643	31.51%	705	41.99%	13,499	35.40%
FRANKLIN	6,711	41.99%	60,619	19.65%	3,202	28.20%	8,785	22.22%
ANSON	7,830	69.62%	26,948	49.77%	4,551	84.27%	3,850	53.84%
HOKE	7,615	69.53%	46,952	50.20%	1,840	52.83%	4,587	22.13%
GRANVILLE	9,545	82.25%	59,916	67.33%	4,922	94.53%	4,702	81.37%
HALIFAX	22,813	70.64%	54,691	61.89%	13,431	62.65%	6,574	80.76%
NEW HANOVER	13,000	17.31%	202,667	11.30%	185	1.08%	11,275	4.80%
WAKE	116,191	11.90%	900,993	6.45%	4,294	18.28%	89,554	7.39%
STATEWIDE	1,309,073	45.75%	9,535,483	18.52%	211,796	50.41%	1,075,574	13.91%

High-Poverty Schools

The number of students in a school eligible for the free or reduced lunch (FRL) program is a common measure of the socio-economic demographics of a school and is one basis for federal funding under Title I for high-poverty schools.⁵⁰ Tables 20, 21, 22, and 23 show the percent of the population where the nearest elementary school has at least 10% more students qualifying for free or reduced lunch than the county average. These high-poverty schools are often racially identifiable and frequently have worse educational outcomes.⁵¹

As shown below in Table 21, 33.12% of all residents of North Carolina live where their closest elementary school is a high-poverty school. Unlike with failing schools, the chance that their closest elementary school is high-poverty does not change significantly for residents of majority-Latino clusters between all clusters and those near municipalities. For residents of majority-African American clusters, on the other hand, residents near municipalities, especially majority-white municipalities, are less likely to be near a high-poverty school. Residents of Latino and African American clusters overall have twice the likelihood for their nearest elementary school to be high-poverty as the state average.

Table 20: Proximity of Cluster Residents to High-Poverty Schools by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	%	POPULATION	%	POPULATION	%
LATINO	140,120	63.10%	12,425	65.59%	6,495	57.17%
ASIAN	9,478	26.02%	407	0.00%	407	0.00%
AFRICAN AMERICAN	1,097,755	67.58%	152,864	47.54%	40,296	38.82%
NATIVE AMERICAN	61,720	12.27%	46,100	11.87%	33	100.00%
TOTAL	1,309,073	64.19%	211,796	40.74%	47,231	41.05%

Table 21: Proximity of Cluster Residents to High-Poverty Schools by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
TIER 1	278,252	26.99%	1,548,570	19.64%	126,995	24.84%	195,258	19.84%
TIER 2	297,814	60.74%	3,163,272	29.61%	60,976	62.69%	399,361	25.25%
TIER 3	733,007	79.71%	4,823,641	39.75%	23,825	69.31%	480,955	36.67%
STATEWIDE	1,309,073	64.19%	9,535,483	33.12%	211,796	40.74%	1,075,574	29.37%

Despite the wealth of the counties, Tier 3 has the highest rates for the nearest school to be high-poverty for both cluster residents and for the general population. In both Tiers 2 and 3, cluster residents are twice as likely as other county residents to be closest to a high-poverty school. Rates in Tier 1 are lower, but there is still a large disparity of 27% of cluster residents versus only 20% of other residents. Rates for unincorporated clusters near municipalities are also higher across the board than similarly situated census blocks. Once again, Tier 3 counties correlate with Piedmont counties for the highest rates and disparities.

Table 22: Proximity of Cluster Residents to High-Poverty Schools by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
COASTAL PLAIN	439,729	43.82%	2,504,184	28.72%	155,565	35.21%	272,194	23.87%
MOUNTAIN	17,177	45.46%	1,110,320	20.51%	3,298	79.53%	172,456	23.47%
PIEDMONT	852,167	75.08%	5,920,979	37.34%	52,933	54.57%	630,924	33.36%
STATEWIDE	1,309,073	64.19%	9,535,483	33.12%	211,796	40.74%	1,075,574	29.37%

Table 23 shows those counties with the largest disparities in the proximity of residents to high-poverty elementary schools between cluster residents and county residents as a whole. This disparity is calculated by comparing the percent for “all clusters” to the percent for “general population.”

Table 23: Counties with the largest disparities in proximity to a high-poverty elementary school between cluster residents and the county average

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
BURKE	978	85.07%	90,912	13.40%	31	0.00%	16,359	1.58%
DAVIDSON	6,359	92.64%	162,878	24.08%	83	0.00%	19,696	9.23%
MCDOWELL	393	98.22%	44,996	33.89%	0	0.00%	9,721	54.58%
UNION	14,166	100.00%	201,292	39.06%	1,351	100.00%	33,933	31.49%
DAVIE	64	100.00%	41,240	39.76%	28	100.00%	6,035	41.61%
DARE	166	100.00%	33,920	40.12%	30	100.00%	3,752	78.78%
ONslow	3,016	75.83%	177,772	17.69%	145	0.00%	16,349	1.59%
CHATHAM	7,005	83.58%	63,505	25.66%	1,216	96.63%	4,785	53.19%
CARTERET	1,126	74.42%	66,469	17.32%	524	75.19%	14,126	18.29%
GASTON	8,769	82.04%	206,086	29.69%	514	40.08%	35,084	24.28%
WILKES	634	71.14%	69,340	18.89%	183	0.00%	9,668	36.08%
ALEXANDER	136	75.74%	37,198	25.04%	37	100.00%	3,675	99.16%
IREDELL	7,227	91.31%	159,437	41.50%	1,325	95.55%	32,385	35.54%
NEW HANOVER	13,000	91.04%	202,667	43.48%	185	100.00%	11,275	29.84%
JOHNSTON	10,777	84.53%	168,878	37.65%	966	100.00%	24,315	39.97%
WILSON	23,397	73.45%	81,234	28.54%	11,456	91.10%	6,361	9.78%
ALAMANCE	16,630	95.11%	151,131	52.01%	1,799	72.87%	16,062	39.40%
CALDWELL	499	63.53%	83,029	20.86%	32	100.00%	14,848	18.97%
WAKE	116,191	77.49%	900,993	35.07%	4,294	47.02%	89,554	39.56%
RUTHERFORD	1,193	75.69%	67,810	35.36%	116	100.00%	7,872	64.93%
LENOIR	15,795	81.42%	59,495	41.45%	5,190	98.82%	4,594	41.10%
MECKLENBURG	240,070	84.81%	919,628	45.77%	2,571	46.13%	28,821	41.83%
LINCOLN	815	79.75%	78,265	40.91%	0	0.00%	5,503	80.94%
WAYNE	23,093	71.28%	122,623	32.55%	2,305	17.35%	15,780	15.42%
ROCKINGHAM	5,452	66.25%	93,643	27.98%	705	41.99%	13,499	23.45%
GUILFORD	121,614	84.33%	488,406	46.39%	2,992	59.02%	40,637	37.03%
HENDERSON	1,326	73.30%	106,740	35.82%	172	54.07%	20,826	39.50%
PITT	29,729	64.90%	168,148	27.51%	9,211	61.40%	20,277	22.35%
FORSYTH	70,615	88.83%	350,670	53.53%	550	100.00%	30,361	23.46%
CRAVEN	9,245	71.51%	103,505	36.73%	809	73.18%	7,649	26.21%
PERSON	4,438	83.60%	39,464	52.55%	87	100.00%	3,232	100.00%
CASWELL	2,325	82.02%	23,719	52.33%	882	95.46%	1,460	82.53%
PENDER	4,166	81.13%	52,217	51.87%	414	75.36%	6,532	30.99%
CUMBERLAND	45,991	71.97%	319,431	44.25%	4,936	85.90%	36,588	37.89%
YADKIN	587	51.11%	38,406	23.57%	0	0.00%	4,942	26.69%
SCOTLAND	6,596	43.09%	36,157	16.45%	580	11.38%	2,311	25.92%
LEE	10,770	50.32%	57,866	25.38%	801	66.54%	9,658	43.32%
DURHAM	94,899	61.16%	267,587	38.68%	4,124	95.59%	22,268	56.22%
DUPLIN	14,946	47.78%	58,505	25.72%	6,479	66.01%	7,646	35.94%
ORANGE	6,315	52.51%	133,801	31.46%	910	27.47%	11,523	36.67%
STATEWIDE	1,309,073	64.19%	9,535,483	33.12%	211,796	40.74%	1,075,574	29.37%

Housing

Another key feature of excluded communities is the lack of access to quality affordable housing. In addition to the stigma of segregation, the housing itself is often substandard. Like environmental justice, poor housing affects a community as a whole.

The census collects housing data in a number of categories. Unfortunately the data that are specific to housing units: value, age, construction type, ownership, and vacancy, are reported only at the block group level, a larger geographic area that includes multiple census blocks.⁵² This means that the data are averaged over a larger population and geographic area than data reported at the block level, such as racial demographics and ownership. Because the former data are averaged over a larger area, they frequently include neighboring blocks that are wealthier, majority white, and not part of the cluster. These data points can therefore be imprecise and less useful for this level of study.

Averaging the data points across a larger area produces inaccurate results for smaller clusters. This is particularly a problem for majority-Latino clusters, which have a smaller size overall, averaging 232 people per cluster as opposed to the overall cluster average of 410. The averaging problem is apparent, among other places, when looking at home values for majority-Latino clusters. Based upon census values disaggregated from the block group level, the average home value in potentially underbounded Latino clusters outside of majority-white municipalities is \$160,959 (Table 24), and for Latino clusters in the Coastal Plain near majority white municipalities is \$164,628. This average is based on only forty-seven homes (Table 25).

Table 24: Average Home Values of Cluster Residents by Race

	ALL CLUSTERS ⁵³		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	HOMES	VALUE	HOMES	VALUE	HOMES	VALUE
LATINO	49,007	\$ 116,059	3,825	\$ 137,520	1,982	\$ 160,959
ASIAN	3,396	\$ 202,337	184	\$ 219,293	184	\$ 219,293
AFRICAN AMERICAN	470,473	\$ 104,275	67,773	\$ 91,744	16,730	\$ 100,302
NATIVE AMERICAN	23,854	\$ 69,252	17,381	\$ 65,137	14	\$ 112,500
TOTAL	546,730	\$ 104,412	89,163	\$ 88,784	18,910	\$ 107,826

Table 25: Average Home Values of Residents of Latino Clusters by Region

	ALL MAJORITY LATINO CLUSTERS		ALL MAJORITY LATINO UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		MAJORITY LATINO UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	HOMES	VALUE	HOMES	VALUE	HOMES	VALUE
COASTAL PLAIN	6,594	\$ 101,012	382	\$ 122,808	47	\$ 164,628
MOUNTAIN	1,157	\$ 144,726	178	\$ 163,904	178	\$ 163,904
PIEDMONT	41,256	\$ 117,659	3,265	\$ 137,802	1,757	\$ 160,562
TOTAL	49,007	\$ 116,059	3,825	\$ 137,520	1,982	\$ 160,959

These forty-seven homes are in three clusters. One of them, outside of Wilmington, is a portion of a mobile home park. The 23 homes appear in aerial photography to be single-wide trailers; all are rental units based upon an examination of the tax records. Their value is impossible to determine precisely, because the cluster (only a single census block) is a segment of a larger parcel encompassing an entire mobile home park. The total parcel tax value is \$1,318,000, and holds 34 homes, for an average value of only about \$39,000, not the value of \$162,500 reported for that cluster. Both of the other two

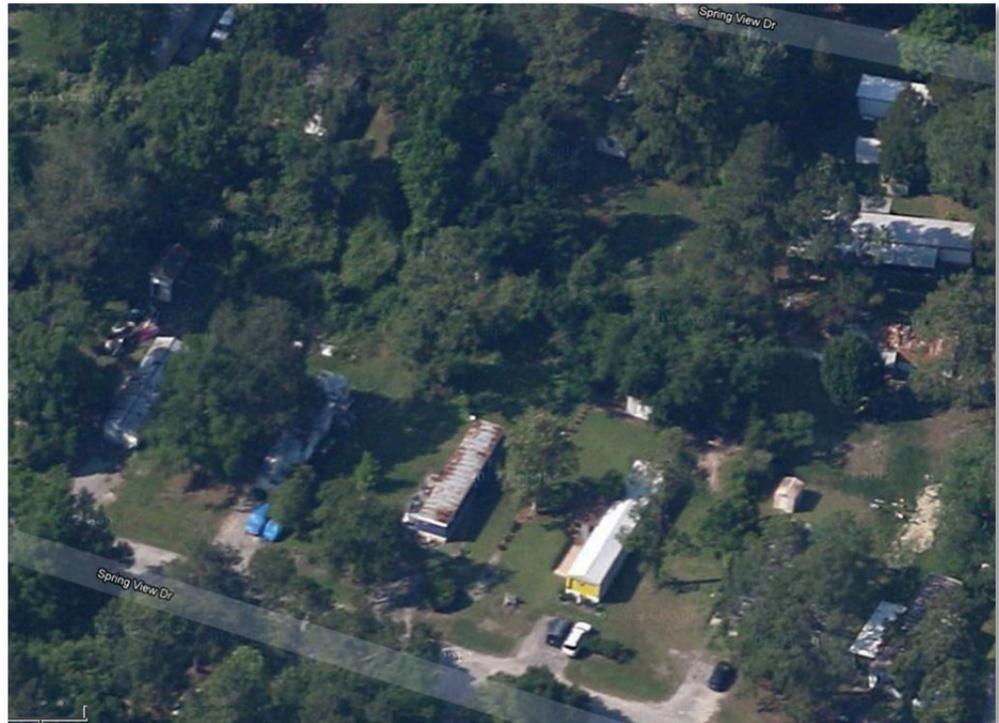


Figure 13: Manufactured homes in a majority Latino cluster outside of Wilmington with a reported average housing unit value of \$162,500. The incorrect average results from including nearby wealthier parts of town.

clusters, outside of Manteo and Turkey, N.C., are similar. It is clear that the calculated median home value from the census includes the surrounding areas, precisely those neighborhoods from which these clusters have been excluded. This misleading averaging is not limited to Latino communities. Jackson Hamlet, a majority-African American underbounded community excluded from Pinehurst, is reported to have a median home value of \$275,000, a valuation surely based upon the value of the surrounding homes on golf courses.

Manufactured Homes

Just as with the age and value of housing units, the census reports the percentage of manufactured homes across an entire census block group, allotting the same percentage for each constituent block. Even averaging over a large area, majority Latino clusters have slightly higher rates of manufactured housing than the state average of 14.26%. Almost half of all homes in majority-Native American clusters are manufactured. Potentially underbounded clusters generally have rates of manufactured housing more than twice the state average.

Table 26: Percentages of Manufactured Homes by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	HOMES	%	HOMES	%	HOMES	%
LATINO	49,007	15.69%	3,825	27.93%	1,982	23.66%
ASIAN	3,396	2.20%	184	1.75%	184	1.75%
AFRICAN AMERICAN	470,473	9.92%	67,773	24.86%	16,730	31.76%
NATIVE AMERICAN	23,854	44.30%	17,381	47.53%	14	30.49%
TOTAL	546,730	11.89%	89,163	29.37%	18,910	30.61%

Table 27: Percentages of Manufactured Homes by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	HOMES	%	HOMES	%	HOMES	%	HOMES	%
TIER 1	121,729	26.24%	729,340	25.17%	54,806	33.64%	88,375	24.56%
TIER 2	127,554	16.13%	1,435,270	18.47%	25,746	25.91%	178,280	19.09%
TIER 3	297,447	4.19%	2,162,918	7.79%	8,611	12.48%	208,184	14.02%
STATEWIDE	546,730	11.89%	4,327,528	14.26%	89,163	29.37%	474,839	17.88%

Just the inverse of the markers of environmental injustice, the rates of manufactured homes are lowest in the wealthiest Tier 3 counties and the Piedmont and highest in Tier 1 counties and the Coastal Plain region. Interestingly, clusters in Tier 2 and Tier 3 have lower rates of manufactured homes than the counties overall.

Table 28: Percentages of Manufactured Homes by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	HOMES	%	HOMES	%	HOMES	%	HOMES	%
COASTAL PLAIN	191,857	22.50%	1,179,359	20.31%	66,763	32.40%	124,902	24.18%
MOUNTAIN	7,490	16.08%	592,230	19.41%	1,572	20.87%	87,982	19.21%
PIEDMONT	347,383	5.94%	2,555,939	10.28%	20,828	20.30%	261,955	14.43%
STATEWIDE	546,730	11.89%	4,327,528	14.26%	89,163	29.37%	474,839	17.88%

Home Vacancy Rates

Abandoned and dilapidated properties plague excluded communities by attracting crime, vermin, and illegal dumping and by depressing property values.⁵⁴ Despite frequent first-hand accounts of high rates of dilapidated and vacant homes in excluded communities, our data do not reveal significantly higher vacancy rates in clusters. Partly this could be due to how the census determines vacancy. It counts only what are determined to be “habitable” housing units – those occupied or “intended for occupancy” – and excludes severely dilapidated homes frequently found in excluded communities.⁵⁵ The census is over-inclusive by counting rental units that are between tenants, and under-inclusive by not counting vacant lots.⁵⁶

Table 29: Percentages of Vacant Homes by Race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	HOMES	%	HOMES	%	HOMES	%
LATINO	49,007	12.92%	3,825	9.99%	1,982	9.49%
ASIAN	3,396	6.39%	184	3.26%	184	3.26%
AFRICAN AMERICAN	470,473	13.30%	67,773	13.93%	16,730	14.05%
NATIVE AMERICAN	23,854	9.42%	17,381	7.77%	14	21.43%
TOTAL	546,730	13.06%	89,163	12.54%	18,910	13.47%



Figure 14 & 15: Dilapidated homes in Cameron Heights.

Table 30: Percentages of Vacant Homes by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	HOMES	%	HOMES	%	HOMES	%	HOMES	%
COASTAL PLAIN	191,857	13.44%	1,179,359	16.99%	66,763	12.43%	124,902	15.80%
MOUNTAIN	7,490	15.15%	592,230	22.17%	1,572	18.45%	87,982	18.26%
PIEDMONT	347,383	12.80%	2,555,939	9.81%	20,828	12.45%	261,955	8.70%
STATEWIDE	546,730	13.06%	4,327,528	13.46%	89,163	12.54%	474,839	12.34%

According to the over- and under-inclusive census data, clusters have lower vacancy rates than the general population, except for clusters in the Piedmont, which have slightly higher rates. From another perspective, a lower-than-average vacancy rate raises questions about the availability of affordable housing. Especially in wealthier areas, excluded communities provide some of the only available low-cost housing options because of their depressed property values. Even government subsidized affordable housing, despite laws to the contrary, tends to be predominantly located in communities of color.⁵⁷

Rental Population

Unlike the percentages of homes that are vacant or manufactured, census data about renters and owners of housing units are determined by people, not housing units. More importantly, the data are reported at the block level, reflecting the actual home values for each cluster.

While rental units may not necessarily reflect substandard or inadequate housing, the percentage of people who rent is inversely correlated to home ownership.⁵⁸ Especially among African Americans, home ownership is a crucial indicator of wealth. Thomas Shapiro, director of the Brandeis University Institute on Assets and Social Policy, suggests wealth is a better measure of social inequality than income. Wealth “is a special kind of money utilized to launch social mobility, create opportunities and status, or pass along advantages to one’s children. Two families with similar incomes but widely disparate wealth most likely do not share similar life trajectories, and we must consider this when thinking about inequality and public policy.”⁵⁹ Wealth “offers the key to understanding racial stratification in the United States, especially the persistence of racial inequality in a post-civil rights era.”⁶⁰ No recent block-level geographic data exists on wealth distribution; home ownership is the best available proxy.

Table 31: Cluster residents in rental housing by majority race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	%	POPULATION	%	POPULATION	%
LATINO	140,120	63.03%	12,425	41.19%	6,495	41.88%
ASIAN	9,478	39.29%	407	89.68%	407	89.68%
AFRICAN AMERICAN	1,097,755	55.16%	152,864	40.93%	40,296	33.69%
NATIVE AMERICAN	61,720	25.49%	46,100	26.27%	33	30.30%
TOTAL	1,309,073	54.49%	211,796	37.85%	47,231	35.30%

While statewide less than one-third of people live in rental housing, more than half of all cluster residents live in rental units. A higher percentage of residents of majority-Latino clusters live in rental housing than residents of majority-African American clusters, and rental rates for both decrease in potentially underbanded clusters, but still exceed the rental rates for other unincorporated census blocks near municipalities. Residents of majority-Native American clusters have lower-than-average rental rates for all types of clusters.

Table 32: Cluster residents in rental housing by Tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
TIER 1	278,252	42.09%	1,548,570	29.92%	126,995	34.73%	195,258	27.85%
TIER 2	297,814	54.64%	3,163,272	32.50%	60,976	45.35%	399,361	26.51%
TIER 3	733,007	59.14%	4,823,641	32.84%	23,825	35.28%	480,955	20.82%
STATEWIDE	1,309,073	54.49%	9,535,483	32.25%	211,796	37.85%	1,075,574	24.21%

By tier, rental rates follow the same trend of proximity to environmental hazards, but the opposite of the percent of manufactured housing units; that is, they are higher, and home ownership rates correspondingly lower, among cluster residents in the twenty wealthiest counties. Rental rates and disparities are similarly high in the Piedmont.

Table 33: Cluster residents in rental housing by Region

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	%	POPULATION	%	POPULATION	%	POPULATION	%
COASTAL PLAIN	439,729	47.35%	2,504,184	35.37%	155,565	37.87%	272,194	30.00%
MOUNTAIN	17,177	49.78%	1,110,320	27.68%	3,298	42.90%	172,456	26.73%
PIEDMONT	852,167	58.27%	5,920,979	31.79%	52,933	37.48%	630,924	21.02%
STATEWIDE	1,309,073	54.49%	9,535,483	32.25%	211,796	37.85%	1,075,574	24.21%

Infrastructure

Most advocacy for improved infrastructure in excluded communities, in both North Carolina and California, has focused on access to water and sewer systems. Many of the Center’s client communities also experience issues with the lack of sidewalks, storm drains, street lights, and street maintenance.

Access to clean drinking water continues to be a crucial issue for excluded communities in North Carolina. Fifty-two percent of North Carolina’s population depends upon groundwater for its drinking water supply. Privately owned individual wells serve 2.7 million North Carolina residents (28% of the population).⁶¹ The driving force behind community organizing in many excluded communities is access to water and sewer service.⁶²

Unfortunately data in North Carolina on the location of water and sewer lines are incomplete, outdated, and inaccurate. Although the N.C. Rural Economic Development Center attempted to put together statewide GIS data sets to show water, sewer, and storm-water infrastructure, they often display only the boundaries of the systems, sometimes an entire county, not where the pipes actually exist. The data were collected by each individual county or utility provider. Some provided actual locations of infrastructure; most just offered blanket maps of their “service area.” Other data cover only certain counties, or are more than ten years out of date. No statewide data are available on the location of streetlights or sidewalks.⁶³

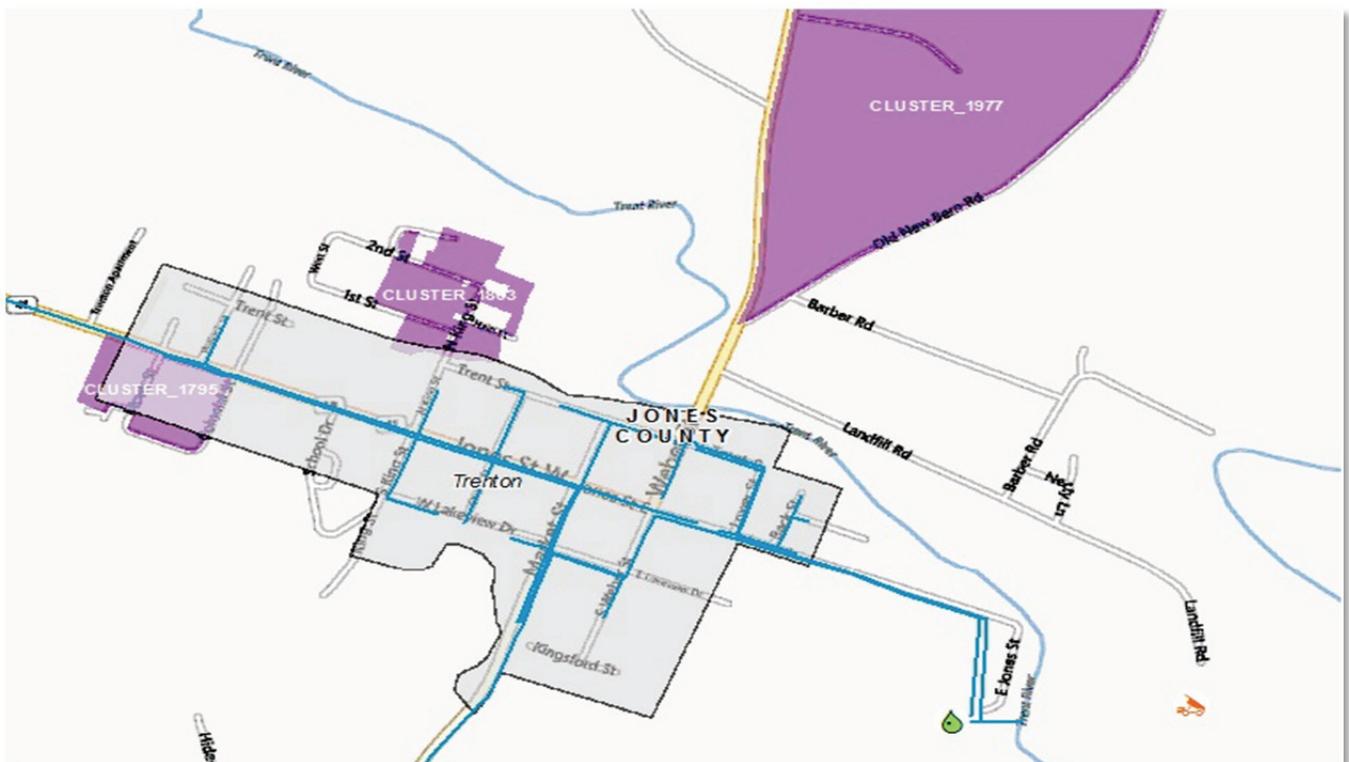


Figure 16: Majority-African American clusters underbonded from Trenton, N.C., and the sewer lines provided by the town.

Prior experience and case studies suggest excluded communities also lack equal access to paved roads, which are necessary to attract economic and institutional development. Most roads in North Carolina, with the exception of municipal roads inside incorporated town limits, are paved and maintained by the N.C. Department of Transportation (DOT). Underbounded communities obviously lack municipal roads, and many roads in excluded communities are not accepted as state roads by the DOT. No statewide data exist for municipal roads, but the DOT maintains good GIS data on state roads.⁶⁴ Tables 34 and 35 compare the number of miles of DOT-maintained road per capita (MPC) for cluster residents by the majority race of the cluster (Table 34) and by county tier (Table 35).

Table 34: Roads per capita by majority race

	ALL CLUSTERS		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		UNINCORPORATED CLUSTERS NEAR A MAJORITY WHITE MUNICIPALITY	
	POPULATION	MPC	POPULATION	MPC	POPULATION	MPC
LATINO	140,120	0.0051	12,425	0.0076	6,495	0.0052
ASIAN	9,478	0.0027	407	0.0040	407	0.0040
AFRICAN AMERICAN	1,097,755	0.0072	152,864	0.0194	40,296	0.0230
NATIVE AMERICAN	61,720	0.0194	46,100	0.0192	33	0.0000
TOTAL	1,309,073	0.0075	211,796	0.0186	47,231	0.0204

Clusters have fewer miles of paved state roads per capita, 0.0075, than the total statewide average of 0.0086. While this could be a manifestation of disparate access to infrastructure, it could also be explained by concentrations of clusters inside incorporated municipalities that have few if any state-maintained roads. Most potentially underbounded clusters, just like other unincorporated census blocks near municipalities, have more miles of road per capita than the state average because these blocks include little or no incorporated areas served by municipal roads.

Table 35: Miles of road per capita by tier

	ALL CLUSTERS		GENERAL POPULATION		UNINCORPORATED CLUSTERS NEAR ANY MUNICIPALITY		ALL UNINCORPORATED CENSUS BLOCKS NEAR MUNICIPALITIES	
	POPULATION	MPC	POPULATION	MPC	POPULATION	MPC	POPULATION	MPC
TIER 1	278,252	0.0189	1,548,570	0.0175	126,995	0.0216	195,258	0.0172
TIER 2	297,814	0.0098	3,163,272	0.0101	60,976	0.0162	399,361	0.0123
TIER 3	733,007	0.0023	4,823,641	0.0048	23,825	0.0090	480,955	0.0103
STATEWIDE	1,309,073	0.0075	9,535,483	0.0086	211,796	0.0186	1,075,574	0.0123

Unincorporated clusters near municipalities have slightly more miles of DOT-paved roads per capita than other unincorporated census blocks, 0.0186 as opposed to 0.0123, probably because the clusters include more rural blocks with lower population density.

Tier 3 clusters have less than half the miles of road per capita than Tier 3 counties; Tier 2 clusters nearly match the average for Tier 2 counties, and the poorest Tier 1 counties have more miles of paved road in clusters.

Just like the data on environmental hazards and rental rates, the data on the miles of state road per capita suggest greater exclusion in Tier 3 counties. Any conclusions regarding infrastructure, however, should be based upon more than just DOT road data, but that is all that is available statewide. Analysis of water and sewer data, where available, and direct examination of actual road conditions on a community-by-community basis in phase two of the project will be necessary to demonstrate exclusion from access to infrastructure.

Political Exclusion

Lack of political power causes and reinforces all other manifestations of exclusion, but it is difficult to measure directly. Obviously underbounded communities lack direct elected representation in the municipal governments that exclude them. Depending on how district lines are drawn for municipal elections, even clusters inside municipalities may not have fair representation. And cluster residents, like all non-white residents of North Carolina, experience proportionally less representation in the North Carolina General Assembly since the 2010 redistricting because of the packing of super-majority-African American gerrymandered districts.⁶⁵

An African American elected official does not necessarily represent the will of an African American community, nor is an African American choice candidate necessarily herself African American, but the racial makeup of elected officials overall reflects access to government. The race of candidates for elected office and their success is probative of racial discrimination in elections or districting, and a candidate’s race may be evidence to support a claim under the Voting Rights Act.⁶⁶

Underbounded communities in an ETJ lack a direct voice in municipal elections but do have representation on unelected planning boards and boards of adjustment, which are required by statute to include ETJ residents. The representatives on these boards, however, have limited authority and are subject to appointment by elected officials who do not represent underbounded communities.

Unfortunately, there are no publically accessible data on the demographic makeup or election methods for municipal government. Information on state and federal legislative districts is available, but these districts cross many clusters, while other clusters, even small ones, may be in multiple districts. Therefore, the state and municipal levels of political exclusion will require closer scrutiny in the second phase of the project.

Fortunately, few clusters cross county lines and the North Carolina Association of County Commissioners tracks the racial demographics and election methods of all the boards of commissioners in North Carolina. The racial representation on a county board of commissioners, compared to the racial demographics of the county as a whole and of the cluster population, will allow a first order approximation for political exclusion. This method is not cluster specific, but it does allow analysis of the effectiveness of various election methods and Section Five of the Voting Rights Act.⁶⁷

Table 36: The thirty N.C. Counties with the Largest Disparity between the Racial Makeup of the County and Its Board of Commissioners

	POPULATION	NON-WHITE	CLUSTER RESIDENTS	% DIFFERENTIAL BETWEEN NON-WHITE MEMBERS ON THE BOARD OF COMMISSIONERS AND THE ENTIRE COUNTY ⁶⁸	VOTING RIGHTS ACT SECTION 5 COUNTY (2012) ⁶⁹	ELECTION METHOD OF BOARD OF COMMISSIONERS ⁷⁰
HYDE	5,810	40.9%	6.8%	-40.9%	no	Residency Districts
JONES	10,153	38.8%	11.4%	-38.8%	no	At-large
SWAIN	13,981	34.4%	8.9%	-34.4%	no	At-large
GREENE	21,362	53.0%	21.0%	-33.0%	yes	At-large
ALAMANCE	151,131	32.7%	11.0%	-32.7%	no	At-large
ONslow	177,772	31.1%	1.7%	-31.1%	yes	At-large
PASQUOTANK	40,661	45.0%	20.9%	-30.7%	yes	Combined Residency Districts and At-Large
JOHNSTON	168,878	30.2%	6.4%	-30.2%	no	Residency Districts
CHATHAM	63,505	28.8%	11.0%	-28.8%	no	Residency Districts

CABARRUS	178,011	28.4%	6.0%	-28.4%	no	At-large
MARTIN	24,505	47.8%	26.7%	-27.8%	yes	Other
RICHMOND	46,639	41.3%	16.3%	-27.0%	no	At-large
TYRRELL	4,407	46.7%	16.5%	-26.7%	no	At-large
LEE	57,866	40.7%	18.6%	-26.4%	yes	Combined Districted and At-Large
ROWAN	138,428	26.3%	8.6%	-26.3%	no	At-large
UNION	201,292	25.4%	7.0%	-25.4%	yes	At-large
GASTON	206,086	24.2%	4.3%	-24.2%	yes	Residency Districts
WAKE	900,993	37.8%	12.9%	-23.5%	no	Residency Districts
BLADEN	35,190	45.3%	38.7%	-23.1%	yes	Other
MOORE	88,247	22.4%	5.9%	-22.4%	no	Residency Districts
FRANKLIN	60,619	36.5%	11.1%	-22.2%	yes	Combined Districted and At-Large
CATAWBA	154,358	22.0%	3.2%	-22.0%	no	At-large
PITT	168,148	42.9%	17.7%	-20.7%	yes	Districted
LENOIR	59,495	48.7%	26.5%	-20.2%	yes	Combined Districted and At-Large
CAMDEN	9,980	18.8%	1.7%	-18.8%	yes	Residency Districts
RANDOLPH	141,752	18.7%	3.0%	-18.7%	no	Residency Districts
JACKSON	40,271	18.6%	0.0%	-18.6%	yes	Combined Residency Districts and At-Large
GUILFORD	488,406	45.7%	24.9%	-18.4%	yes	Combined Districted and At-Large
DAVIDSON	162,878	18.0%	3.9%	-18.0%	no	At-large
STANLY	60,585	17.7%	5.6%	-17.7%	no	At-large

All of the ten counties with the greatest gap between the percentage of people of color residing in the county and the percentage of people of color on their board of commissioners elect commissioners either at large or through a mixture of at large and residency districts; five of the top six counties with the biggest gaps elect commissioners at large. Of the top twenty-five counties with the biggest gap, only Pitt County has entirely districted elections. Five other counties with significant gaps have mixed districted and at-large elections.

Of the forty North Carolina counties covered by Section Five of the Voting Rights Act,⁷¹ twenty-two have a negative gap of more than 10%; their board of commissioners is at least 10% whiter than the county as a whole. The other eighteen counties have smaller gaps, suggesting that Section Five is helping for about half the counties where it applies, but may not adequately protect all forty counties. Of the ten counties with the worst gap, only three are covered by Section Five. Greene, Onslow, and Pasquotank counties have negative differentials of more than 30%; all three are covered by Section Five and either conduct their elections at large or have only residency districts. These counties are perhaps the most ripe for some form of voting rights challenge.

Conclusions

Of the five areas of exclusion examined, dramatic disparate impacts were found in three, environmental justice, education, and housing; in two others, infrastructure and political exclusion, there was insufficient available data to reach strong conclusions about exclusion based on clusters. The chances that cluster residents lived within one mile of an environmental hazard, or that their closest school was failing, racially identifiable, or high-poverty, were even higher than expected. The odds almost double for most categories for cluster residents compared to state averages: 5% to 9% for solid waste, 24% to 41% for other polluters, 63% to 79% for racially identifiable schools, 19% to 46% for failing schools, and 33% to 64% for high poverty schools. Similarly, rental rates for cluster residents were 54% as opposed to 32% across the state.

Overall, African American and Latino communities seem to experience largely the same disparate impacts of exclusion despite their variant roots. African American and Latino communities both generally show higher negative impacts than average, but African American communities appear to experience most of the measured impacts at higher rates. The available data may not reflect the true impacts on Latino communities because they are frequently smaller and may not appear as separate clusters. At other times, the relative newness of the Latino communities may explain lower rates, as compared to entrenched and historic housing patterns for African American neighborhoods.

Close proximity to solid waste facilities appears to be a problem specific to majority-African American clusters, which are more than twice as likely to be exposed as either the statewide average, or clusters with other majority races. More than 10% of residents of majority-African American clusters live within one mile of a solid waste facility as opposed to 5% for residents of majority-Latino clusters or the average N.C. resident. Proximity to other EPA-registered polluters, however, affects Latino clusters nearly as much as African American clusters, with 41% within one mile compared to 44% for residents of majority-African American clusters, and only 24% for the statewide average.

Disparities in the closest elementary school are also similar between residents of majority-Latino and majority-African American clusters, but slightly worse for the African American clusters. Between residents of majority-Latino clusters, African American clusters, and the statewide average, the chance that the closest elementary school was failing was 38% / 48% / 19%, that it was racially identifiable was 74% / 81% / 63%, and that it was high poverty was 63% / 68% / 33%.

Housing, on the other hand, showed worse impacts on Latino cluster residents than other clusters, to the extent that they were measureable by the data. The miles of state Department of Transportation road per capita are similarly lower (worse) in majority-Latino clusters. Rental rates were highest for residents of majority-Latino clusters, at 63%, versus 55% for residents of majority-African American clusters and 32% across North Carolina. Despite the averaging problem, manufactured housing was more prevalent in majority-Latino clusters, representing 16% of the housing units, as opposed to only 10% of housing units in majority-African American clusters and 14% of housing units statewide. Majority-Native American clusters, while having generally lower-than-average rates in all other areas, had a very high rate of manufactured housing at 44%.

This study also attempted to measure whether exclusionary impacts were worse in communities that were underbounded. Unfortunately, the best model for determining which clusters were underbounded was to approximate underbounding with unincorporated clusters near municipalities, a model that was both over- and under-inclusive. This model suggested underbounding was more common in the poorest counties, Tier 1, and in the Coastal Plain for majority-African American clusters. Not surprisingly, unincorporated clusters were disproportionately found outside of minority-white municipalities, which are disproportionately in the poorest counties in the Black Belt of Eastern North Carolina.

Contrary to prior experience, there were not higher rates of proximity to solid waste facilities for unincorporated clusters near municipalities, only about 4.8% for these clusters, less than the state average of 5.3%. There is a substantial increase, however, for unincorporated clusters near majority-white municipalities where exposure rates increase to 8%. In a few specific counties and Councils of Government, the proximity of these potentially underbounded clusters to solid waste facilities jumped even higher (Table 9).

As predicted, disparities related to the closest elementary school did not appear to be a function of underbounding in general because most North Carolina school districts are county-wide. In fact, being unincorporated but close to a municipality decreased the odds that a resident's closest school was high-poverty. A handful of N.C. school districts are city school districts, where underbounding may contribute to exclusion from the best schools. Several of these districts will be examined in detail in the following phases of the report.

Housing disparities were also not tied to this measure of underbounding. Rental rates were generally lower in these communities. On the other hand, unincorporated clusters near municipalities had twice the rates of manufactured housing units as the state average, with even higher rates in the 80 least wealthy counties and in the Piedmont and Coastal Plain (Tables 27, 28).

Remarkable patterns also emerged when dividing North Carolina counties by wealth and region. In particular, despite their overall wealth, the 20 counties in Tier 3 showed the worst absolute impacts, and the worst disparities between cluster residents and county averages. (Tables 8, 12, 15, 18, 22, 33, & 36). The only impacts where Tier 3 counties were not measurably worse were manufactured housing rates and representation in county government.

In almost every area the wealthiest and most densely populated counties leave excluded communities out of their overall prosperity. Tier 3 is also home to more clusters and cluster residents; it contains only 51% of North Carolina's population but 66% of residents of majority-Latino clusters and 58% of residents of majority-African American clusters.

The Community Development Block Grant (CDBG) program distributes federal funds to provide affordable housing and needed water and sewer infrastructure. In distributing these funds, North Carolina is required by the Fair Housing Act to "affirmatively further fair housing." The state must not only refrain from discrimination but must distribute the funds where they will proactively redress housing segregation. The data in this report suggest that the tier system, which gives favorable consideration to applications from Tier 1 and Tier 2 counties, may be working against these fair housing goals. The proximity to environmental hazards; the likelihood that the closest school was failing, high poverty, or racially identifiable; the rental rates; and the miles of DOT road per capita were all worse for clusters in the wealthiest counties.

Only political exclusion (Table 36) and the percentage of manufactured homes (Tables 28 & 29) remain most acute in poor counties and in the eastern part of the state. These are also the counties that are disproportionately home to majority-Native American clusters.

Educational disparities are particularly pronounced for the Mountain region. While the region's overall rates for cluster residents' proximity to high-poverty, failing, or racially identifiable elementary schools are lower than the Piedmont, the disparities between cluster residents and the general population are higher. The closest elementary school for 79% of cluster residents in the Mountain region is racially identifiable, lower than the 86% for Piedmont clusters, but the disparity between cluster residents and other residents is twice as high. Similarly, while only 18.5% of Mountain region cluster residents have a closest school that is failing, a rate equal to the state average and lower than Piedmont or Coastal Plain clusters, that 18.5% is huge compared to the only 2.9% for the general population of the Mountain region. Further study of multi-district counties and specific school assignment zones in subsequent phases may help understand these disparities.

Most of all, this study revealed the lack of comprehensive data needed to document the full legacy of community-based racial segregation and to guide efforts to overcome this injustice. The lack of statewide data on the availability of basic utilities cannot be excused, especially when state funding for such utilities through CDBG funding is based upon a tier system that seems to direct funding away from those counties where it is most needed. The lack of data on infrastructure and housing quality is an impediment to fair housing; government funds may not be reaching racially excluded communities or residents most in need.

The conclusions of this study are inherently limited by its nature. Common struggles facing excluded communities in the areas of environmental justice, home ownership, political exclusion, and education can be documented by statistics, but these tables and charts cannot replace the insight into the underlying causes and flexible solutions associated with particular communities. The next phases of the Inclusion Project will narrow in geographic scope, but deepen the analysis through greater direct community engagement.

Appendixes

APPENDIX A MAPS AND IMAGES

Figure 1: The areas shown in purple are clusters of contiguous census blocks that are each more than 75% African American. Clusters numbered 70, 76, and 97 are part of Royal Oak, a majority-African American community named for the Royal Oak swamp upon which it was built. The community hosts most of Brunswick County’s undesirable facilities, including the animal shelter, waste transfer station, sewage treatment plant, and multiple landfills. The county provides water and sewer service to the animal shelter, but not to the African American residents of the community. 5

Figure 2: This cluster of contiguous census blocks in Brunswick County, an underbounded community sandwiched between the incorporated towns of Leland and Belville, is next to an inactive transfer station. 6

Figure 3: The Rogers Eubanks Community in Orange County, North Carolina, is partially in the Town of Carrboro. The remainder is adjacent to Chapel Hill and is subject to Chapel Hill’s planning and zoning authority (similar to ETJ). For forty years the community has hosted the landfill that serves both towns and the county. While all three governments profess their intent to provide the necessary sewer service, the divided jurisdiction has been used to justify decades of passing the buck on paying for the needed services. 7

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APPENDIX C ENDNOTES

¹ The terms “community” and “neighborhood” are used interchangeably.

² Throughout this report the term “African American” refers to persons who self-identified as Black or African-American on the 2010 U.S. Census. The term “Black” is preserved in quotations and is also used to refer to the Black Belt region. Similarly the term “Latino” refers to persons who self-identified as “Hispanic” or “Latino” on the 2010 U.S. Census. “Hispanic” is preserved in quotations.

³ John a. Powell, *Reflections on the Past, Looking to the Future: The Fair Housing Act at 40*, 18 J. AFFORDABLE HOUS. & CMTY. DEV. L. 145, 146 (2009).

⁴ *Swann v. Charlotte-Mecklenburg Bd. of Ed.*, 402 U.S. 1, 15 (1971).

⁵ Daniel T. Lichter, et. al., *Municipal Underbounding: Annexation and Racial Exclusion in Small Southern Towns*, 72 RURAL SOC. 47, 60 (2007). See also James H. Johnson Jr., et. al., *Racial Apartheid in a Small North Carolina Town*, 31 Rev. Black Pol. Econ. 89, (2004).

⁶ See ALLAN M. PARNELL, ET AL., THE PERSISTENCE OF POLITICAL SEGREGATION: RACIAL UNDERBOUNDING IN NORTH CAROLINA 1 (2004); Charles S. Aiken, *Race as a Factor in Municipal Underbounding*, 77 ANNALS ASS’N AM. GEOGRAPHERS 564, 565 (1987).

⁷ S.312, 2013-2014 Gen. Assem., Reg. Sess. (N.C. 2013), available at <http://www.ncleg.net/Sessions/2013/Bills/Senate/PDF/S312v1.pdf>.

⁸ J. Reynold Hutchins, *Bill Would Put Village of Lake James up to Vote*, Morganton News Herald, Mar. 16, 2013, available at http://www.hickoryrecord.com/morganton/news/article_ca839964-8e73-11e2-be24-001a4bcf6878.html.

⁹ This report uses term “Latino” to refer to anyone who self identifies as Hispanic or Latino on the census or school data. The census considers Latino or Hispanic an ethnic group, not a race. Most respondents who identify as Hispanic or Latino identify their race either as “white” or “some other race.” KAREN R. HUMES, ET AL., OVERVIEW OF RACE AND HISPANIC ORIGIN: 2010 CENSUS BRIEF (2010), available at <http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf>.

¹⁰ HANNAH GILL, LATINOS IN NORTH CAROLINA: A GROWING PART OF THE STATE’S ECONOMIC AND SOCIAL LANDSCAPE 4 (2012), available at http://www.immigrationpolicy.org/sites/default/files/docs/gill_-_latinos_in_north_carolina_032112.pdf.

¹¹ *Id.* at 6.

¹² *NC Services Adapt to Growing Latino Population*, PUBLIC NEWS SERVICE, Oct. 8, 2012, <http://www.publicnewsservice.org/index.php?/content/article/28724-1>.

¹³ Patricia Leigh Brown, *The Problem Is Clear: The Water Is Filthy*, N.Y. TIMES, Nov. 13, 2012, available at <http://www.nytimes.com/2012/11/14/us/tainted-water-in-california-farmworker-communities.html>.

¹⁴ OFFICE OF THE GOVERNOR, DEMOGRAPHIC TRENDS OF HISPANICS/LATINOS IN NORTH CAROLINA 30, <http://www.ncdhhs.gov/mhddsas/providers/DWI/hispanic-latinodemographicsreport.pdf> (last visited May 9, 2013).

¹⁵ GILL, *supra* note 10 at 3.

¹⁶ OFFICE OF THE GOVERNOR, *supra* note 14 at 36.

¹⁷ GABRIELA ZABALA, GLOBAL MIGRATION AND THE NEW LATINO SOUTH 5 (2010), <http://www.unc.edu/world/2010Residential/Zabala.pdf> (last visited May 9, 2013).

¹⁸ *Id.* at 11.

¹⁹ NORTH CAROLINA DEPARTMENT OF HEALTH AND HUMAN SERVICES, THE HISPANIC OR LATINO POPULATION, 2011 NORTH CAROLINA 1, (2011), http://www.ncdhhs.gov/aging/cprofile/Hispanic_Latino2010.pdf (last visited May 9, 2013).

²⁰ GILL, *supra* note 10 at 2, 4.

²¹ *Id.* at 4.

²² PHOEBE SEATON & VERONICA GARIBAY, AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009: ANALYSIS OF DRINKING WATER AND WASTE WATER INVESTMENT IN FRESNO AND STANISLAUS COUNTIES 1 (2011), available at http://www.crla.org/sites/all/files/content/uploads/Resources/CRLA_CEI_ARRA_Water%20Report-2012.pdf.

²³ MALINDA MAYNOR LOWERY, LUMBEE INDIANS IN THE JIM CROW SOUTH, (2010).

²⁴ JOHN R. FINGER, CHEROKEE AMERICANS: THE EASTERN BAND OF CHEROKEES IN THE TWENTIETH CENTURY, (1993).

²⁵ ANN MOSS JOYNER AND CAROLYN J. CHRISTMAN, SEGREGATION IN THE MODERN SOUTH: A CASE STUDY OF SOUTHERN MOORE COUNTY (2005), available at <http://www.cedargroveinst.org/files/Southern%20Moore%20County%20Case%20Study.pdf>; PARNELL, *supra* note 6.

²⁶ UNC CENTER FOR CIVIL RIGHTS, BRIDGING THE GAP: THE POWER OF GRASSROOTS ACTIVISM TO EFFECT POSITIVE CHANGE & MUNICIPAL INCLUSION, (2008), available at <https://lcrm.lib.unc.edu/voice/works/w/bridging-the-gap>; UNC CENTER FOR CIVIL RIGHTS, INVISIBLE FENCES: MUNICIPAL UNDERBOUNDING IN SOUTHERN MOORE COUNTY (2006), available at <https://lcrm.lib.unc.edu/voice/works/w/invisible-fences>.

²⁷ Lichter, *supra* note 5.

²⁸ Lichter, *supra* note 5 at 58.

²⁹ California Rural Legal Assistance, Inc., Community Equity Initiative, <http://www.crla.org/community-equity-initiative> (last visited May 9, 2013).

³⁰ Annexation Reform Act of 2011, 2011 N.C. Sess. Laws. 396. See Peter Gilbert, *Including Excluded Communities*, POL'Y & PROGRESS, Summer 2011 at 5.

³¹ Clusters included census blocks where no more than 25% of the population self-identified as white and did not self-identify as Hispanic or Latino on the 2010 U.S. Census. In other words, at least 75% of the residents of the census block identified as at least one race other than white, or checked that they were Hispanic or Latino. The census considers Latino an ethnic group, not a race. See *supra* note 9.

³² Census Blocks and Block Groups, <http://www.census.gov/geo/reference/pdfs/GARM/Ch11GARM.pdf>, (last visited May 10, 2013).

³³ Random Samplings, What are Census Blocks, <http://blogs.census.gov/2011/07/20/what-are-census-blocks/>, (last visited May 14, 2013).

³⁴ The distribution of clusters, by race, region, COG, tier, or county could be presented many different ways. Only a few representative charts have been presented in this report, but all of our data are available at www.uncinclusionproject.org, with a tool to present numerous possible charts.

³⁵ 2012 tier designations are used throughout. N.C. Dep't of Commerce, 2012 Article 3J County Tier Designations, <http://www.nccommerce.com/research-publications/incentive-reports/2012-county-tier-designations>, (last visited May 10, 2013).

³⁶ *Id.*

³⁷ Councils of Governments are involved in CDBG funding in part through the N.C. Tomorrow program. N.C. Dep't of Commerce, N.C. Tomorrow, <http://www.nccommerce.com/communitydevelopment/investment-assistance/grant-categories/nc-tomorrow>, (last visited May 14, 2013).

³⁸ Lichter, *supra* note 5 at 67.

³⁹ *Id.*

⁴⁰ The list of facilities was from the N.C. Department of the Environment and Natural Resources, which lists open and closed solid waste facilities and their location. N.C. Division of Waste Management, Solid Waste Permitted Facility List, <http://portal.ncdenr.org/web/wm/sw/facilitylist>, (last visited May 10, 2013). The list does not include many older closed facilities, such as the unlined inactive municipal landfills in Lincoln Heights in Roanoke Rapids. Many of these older closed facilities may be the most dangerous because they predate environmental regulations.

⁴¹ The population density of other regions is 118 people per square mile in the Coastal Plain and 115 in the Mountains.

⁴² U.S. EPA, Enforcement & Compliance History Online (ECHO), http://www.epa-echo.gov/echo/help_all_programs.html, (last visited May 10, 2013). This list overlaps somewhat with the list of open and closed waste management facilities; it also includes 7 of the 252 solid waste facilities. It also includes some (24) but not all, wastewater treatment plants that are point-source-water-pollution sources.

⁴³ *Leandro v. State*, 346 N.C. 336, 345, (1997).

⁴⁴ The following 11 counties have multiple school districts: Buncombe, Cabarrus, Catawba, Columbus, Davidson, Halifax, Iredell, Orange, Randolph, Sampson, and Surry County.

⁴⁵ The only available assignment data for the state were from Maponics, Incorporated. These are the same data used for school district boundaries on www.greatschools.org. Unfortunately the data only covers about half of the students in the state and is not all from the same school year.

⁴⁶ Alternative schools are usually for students with disciplinary issues or behavioral or emotional handicaps. Magnet schools are not alternative schools and are generally included in the data set.

⁴⁷ All school data is from the State Department of Public Instruction. Public Schools of N.C., Data and Statistics, <http://www.ncpublicschools.org/data/reports/>, (last visited May 10, 2013).

⁴⁸ *Id.*

⁴⁹ N.C. Gen. Stat. §115C-68.1.

⁵⁰ 20 U.S.C.A. § 6313(a)(5) (2012). In North Carolina it is tracked and reported by the State Department of Public Instruction. Public Schools of N.C. *supra* note 47.

⁵¹ John Charles Boger, *Education's "Perfect Storm"? Racial Resegregation, High-Stakes Testing, and School Resource Inequities: The Case of North Carolina*, 81 N.C. L. REV. 1375, 1416-17 (2003).

⁵² The census term of art is "housing unit." U.S. Census Bureau, Population Estimates, <http://www.census.gov/popest/about/terms/housing.html>, (last visited May 10, 2013). This report uses "housing unit" and "home" interchangeably. For a definition of "block groups" see Census Blocks and Block Groups, *supra* note 30.

⁵³ Certain clusters are excluded if they are reported with a zero or a deleted value. Certain clusters have a “deleted value” because they have only one or a few housing units, so the census deletes data to hide personally identifiable information. Other clusters have a zero value because they are prisons or institutions.

⁵⁴ BRIAN A. MIKELBANK, *SPATIAL ANALYSIS OF THE IMPACT OF VACANT, ABANDONED AND FORECLOSED PROPERTIES*, (2008), http://www.clevelandfed.org/Community_Development/publications/Spatial_Analysis_Impact_Vacant_Abandoned_Foreclosed_Properties.pdf.

⁵⁵ “A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.” U.S. Census Bureau, *State and County QuickFacts*, http://quickfacts.census.gov/qfd/meta/long_HSGo30210.htm, (last visited May 10, 2013).

⁵⁶ Jeffrey Fraiser, *The Cost of Blight: Vacant and Abandoned Properties*, Pittsburgh Q. Fall 2011, <http://www.pittsburghquarterly.com/index.php/Region/the-cost-of-blight/All-Pages.html>.

⁵⁷ Nikole Hannah-Jones, *Soft on Segregation: How the Feds Failed to Integrate Westchester County*, PROPUBLICA, Nov. 2, 2012, <http://www.propublica.org/article/soft-on-segregation-how-the-feds-failed-to-integrate-westchester-county>, (last visited May 17, 2013).

⁵⁸ Each housing unit is categorized as rental, owner-occupied with a mortgage, or owner-occupied without a mortgage. Therefore the greater percentage of rental units and the lower the percentage of owner-occupied units.

⁵⁹ Thomas M. Shapiro, *Race, Homeownership, and Wealth*, 20 J. L. & POL’Y, 56 (2006).

⁶⁰ *Id.* at 53.

⁶¹ North Carolina Groundwater Association, <http://www.ncgwa.org/>, (last visited May 10, 2013).

⁶² Camille Pannu, *Drinking Water and Exclusion: A Case Study from California’s Central Valley*, 100 CAL L. REV. 223 (2012).

⁶³ Based upon a review of GIS datasets available through NC One Map, <http://www.nconemap.com/>, as well as through the libraries at NCSU and UNC-Chapel Hill.

⁶⁴ Connect NCDOT, <https://connect.ncdot.gov/resources/gis/Pages/default.aspx>, (last visited May 10, 2013).

⁶⁵ Ari Berman, *How the GOP is Resegregating the South*, THE NATION, Feb., 20, 2012, *available at*, <http://www.thenation.com/article/165976/how-gop-resegregating-south#>.

⁶⁶ *Thornburg v. Gingles*, 478 U.S. 30, 61 (1986).

⁶⁷ “Section 5 freezes changes in election practices or procedures in certain states until the new procedures have been determined, either after administrative review by the United States Attorney General, or after a lawsuit before the United States District Court for the District of Columbia, to have neither discriminatory purpose or effect. If the proposed change has not been shown to be free of the purpose and the effect, the Attorney General may block implementation of the change by interposing an objection.” U.S. Dep’t of Justice, *Statutes Enforced by the Voting Section*, <http://www.justice.gov/crt/about/vot/overview.php#vra> (last visited May 9, 2013).

⁶⁸ Where the differential is the same as the racial makeup of the county, the board of commissioners is all white.

⁶⁹ On June 25, 2013, the U.S. Supreme Court voided section 4(b) of the Voting Rights Act which determined which states and counties were covered by Section 5. *Shelby County v. Holder*, 570 U.S. ___, 133 S.Ct. 2612 (2013). Congress has yet to enact a new formula for Section 5 coverage, so at the time of publication of this report the N.C. counties listed are no longer by Section 5.

⁷⁰ Commissioners who are elected “at-large” are elected by all of the eligible voters in a county. In districted elections, only the eligible voters who reside in a particular district may vote for the commissioner from that district. Residency districts require that the candidate be from a particular district, but all eligible voters in the county may vote. Generally at-large elections disfavor minority voting groups.

⁷¹ The following North Carolina counties are covered under §5 of the Voting Rights Act: Anson, Beaufort, Bertie, Bladen, Camden, Caswell, Chowan, Cleveland, Craven, Cumberland, Edgecombe, Franklin, Gaston, Gates, Granville, Greene, Guilford, Halifax, Harnett, Hertford, Hoke, Jackson, Lee, Lenoir, Martin, Nash, Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Robeson, Rockingham, Scotland, Union, Vance, Washington, Wayne, and Wilson County. U.S. Dep’t of Justice, *Section 5 Covered Jurisdictions*, http://www.justice.gov/crt/about/vot/sec_5/covered.php (last visited May 9, 2013).



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