

**Addressing Racial Disparities in Local Government Actions:
The Mebane Case Study ¹
(May 29, 2003)**

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Introduction

African Americans in and around Mebane, North Carolina, maintain that systematic actions by Mebane's government have damaged their communities. Specifically, they maintain that: 1) the city and state have proposed that a limited-access highway run through two of these communities; 2) the African American communities have been denied access to sewerage, creating potential public health problems, lowering property values, and threatening the viability of their neighborhoods; and 3) the city is using zoning to endanger the African American communities in Mebane's Extra-Territorial Jurisdiction (ETJ).

This report examines these charges,² using a mix of methodologies, including participant observation at public meetings, content analysis of the minutes of public meetings, demographic analysis, and spatial analysis using Geographic Information Systems (GIS). GIS is a computer-based mapping method capable of identifying latent spatial relationships in geo-coded data. We map the patterns of sewer access, the highway routing, and zoning in relationship to race of those affected by these location decisions.

As a first step in a larger study, we examine the situation using data that shows the situation in or around 2000, the year the latest census was collected. We do not address how the patterns emerged over time, a necessary step to show intent, but document the current situation. This situation is dynamic, with continued annexations by the town and expansion of public services.

Data for this analysis come from several public sources. Official minutes of Mebane City Council meetings provide the policy and political context. Demographic data are from Census 2000, as are the boundaries for the underlying census geographic units used to map the data. The Piedmont Triad Council of Governments (PTCOG) provided spatial data on town boundaries, ETJ boundaries, critical watershed area, zoning designations, and location of sewer lines. The PTCOG also provided Alamance and Orange County property tax files showing lot lines and locations of houses. We obtained the proposed new routes of NC Highway 119 and other information from the NC Department of Transportation. We also refer to published news articles and quote officials that we have contacted directly.

Mebane Today

Mebane is located in central North Carolina on the border of Alamance and Orange Counties between the Piedmont Triad and the Research Triangle metropolitan areas (see **Map 1**). The town's economic base has been primarily industrial, but it is also becoming a commuter community for the Triangle and the Triad. The town is attempting to attract new industrial development by zoning areas for industrial parks and changing zoning designations in some areas from residential and other land uses to manufacturing and industrial classifications.

Map 1 shows the key features of Mebane in 2000. The Mebane city limits are shown as a red line. The railroad and U.S. 70 run through the middle of town. During the 1990s, the town annexed land to and beyond I-85/40, annexed property for the Club at Mill Creek to the north, and satellite-annexed several parcels which subsequently have become commercial and industrial sites, primarily along the interstate. Mebane's Extra-Territorial Jurisdiction (ETJ) boundary is shown as a yellow line. The ETJ extends to areas in both Alamance and Orange Counties where industrial, commercial and residential growth is anticipated.

² This report was supported by a grant from the Warner Foundation, Durham N.C. (www.thewarnerfoundation.org)
The authors are solely responsible for its contents.

There are four historical African American communities. Only East End (not mapped) and a portion of West End are inside the city limits. Most of West End and White Level border the town and are within the extra-territorial control of Mebane. Mebane has satellite-annexed part of Buckhorn/Perry Hill and extended its ETJ to include part of this community. This report focuses on West End, White Level, and Buckhorn/Perry Hill, the three African American communities that are partly or completely outside of Mebane's city limits but within Mebane's ETJ. Because these communities are outside the city boundaries, they receive no city services from Mebane. Residents of ETJs are not able to vote in a city's elections but are bound by the city's zoning regulations. Thus they have no representation and little negotiating power, and so are effectively disenfranchised.

Boundaries of these three communities are marked in purple on **Map 1**. The boundaries were determined by members of these communities at meetings organized by the West End Revitalization Association (WERA), a community development corporation in Mebane.

Demographic Overview

Table 1 gives a demographic overview of Mebane, the Mebane ETJ and the three African American communities. Demographic data for the town of Mebane are taken directly from the Census Bureau web page (<http://www.census.gov/>) and were obtained using American Fact Finder (<http://factfinder.census.gov/servlet/BasicFactsServlet>), using basic tables and detailed tables from Summary File 1 and Summary File 3. Mebane's 2000 population was 7,284, an increase of 53.2% from the 1990 population of 4,754. 77.4% (5,638) of Mebane's residents were white, 17.5% (1,273) were African American, and 5.2% (382) were Hispanic. The age distributions of whites and African American residents of Mebane are similar, with 25% of whites under age 18 compared with 28% of African Americans, and 12.3% of whites age 65 or older, compared with 11% of African Americans. A major difference between the races in Mebane is home ownership. Within the city limits, less than half (46%) of African Americans live in homes they own, while 72% of whites in Mebane do.

Demographic data for Mebane's ETJ were obtained by overlaying the town and ETJ boundaries over the Census Tiger map showing the boundaries of census blocks. The correspondence between the block boundaries and the city limits was exact. The correspondence with the ETJ was reasonably good, but unusual shapes (e.g. the Landi Lane area in White Level) and the size of some rural census blocks required decisions about which blocks to include. Appendix 2 describes the census blocks assigned to the ETJ in detail.

The population in Mebane's ETJ was 4,974, 78.2% (3,890) white and 19.3% (962) African American. The proportion of children and elderly are similar to those in town. The Orange County population in the ETJ has a slightly higher proportion of African Americans (23.1%). Both whites (87%) and African Americans (78%) in the ETJ are more likely to own their homes than Mebane residents, and African Americans are much more likely. The ETJ boundaries do not coincide well with census block group boundaries (the smallest census geographic unit for which income estimates are published), so no direct income comparisons can be made. However, we can compare the general patterns in the areas that include each community.

Map 2 shows Mebane's racial distribution at the census block level, ETJ zone and surrounding areas. African Americans are concentrated in three communities (and in East End within Mebane's city limits). There is a sharp racial boundary between White Level and the Mill Creek development along Mrs. White's Lane. The Buckhorn/Perry Hill community includes more racially integrated areas, especially on the west side of the community north of U.S. 70.

To estimate the population and demographic characteristics of the three African American communities, we overlaid the community boundaries over the Census Tiger map showing the boundaries of census blocks. The communities all include many complete census blocks, but the borders of the communities do not always match well with the census boundaries. Therefore, each partial block was examined to determine whether it should be included.

As stated above, WERA conducted surveys to define the boundaries of each African American community. We estimated the populations of West End, White Level and Buckhorn/Perry Hill by overlaying the community-defined boundaries over census data. However, the community boundaries and the census block boundaries do not coincide, so we made some assumptions allocating populations. The methods and assumptions are described in Appendix 2. In contrast, NCDOT's consultants in their 1998 Community Impact Assessment (CIA) used individual blocks and block groups, but did not consult the communities themselves when defining individual communities. For example, according to the CIA, the discussion of areas that do not qualify as low-income or minority stated: "One area... located on the western edge of Mebane's city limits just east of the West End Community" is 48% minority (below the 51% threshold used by used by the CIA to determine "high-concentration minority." Thus, by dividing this area from West End, the size of this community that might meet environmental justice criteria can be reduced.

This imposition of "neighborhood" definition, used to limit potential civil and environmental justice rights, is not restricted to race alone. NCDOT's CIA³ defines Woodlawn, a white community in Mebane's ETJ, as

"a cluster of approximately 20 homes located along Woodlawn Road and around its intersection with Mebane-Rogers Road. According to information *provided by the project engineer and West End residents* (emphasis added), this area has not been traditionally thought of locally as a neighborhood."

In fact, Woodlawn consists of over 1000 residents and living on over 5 square miles⁴, and has long identified itself as a community, organizing to found its own school in 1911 when Mebane would not allow its children to attend their schools. This Queen Anne-style building is still a community center, owned and maintained by the residents of Woodlawn⁵. Restriction by local government definition is also reflected in the December 8, 1998 CIA, which states that Woodlawn

"might qualify as an area of low-income concentration [according to the US Census].

However, information provided by Mebane's Town Manager indicates that these residents are not actually low-income households."

This use of neighborhood definition reduces the number and size of the communities who have status to oppose government projects.

African-American Communities

West End Community: West End Community was founded during the 1870s as a community of freed slaves. The community is anchored by six historic churches: Johnson's Chapel A.M.E. Church, Church of God, Mebane First Presbyterian Church, Mt. Calvary Living Word Church, St. Luke's Christian Church, and the Holy Church of God.⁶ Most of modern West

³ November 17, 1998 and December 8, 1998

⁴ <http://www.city-data.com/city/Woodlawn-North-Carolina.html>

⁵ listed on the National Register of Historic Places, <http://www.hpo.dcr.state.nc.us/nrlist.htm>

⁶ Johnson's Chapel A.M.E. Church is relocating to Woodlawn Road, still in the path of the proposed rerouting of NC 119.

End is south of US 70 and outside the city limits of Mebane. However, West End north of US 70 includes dwellings, St. Luke's Christian Church, and the Holy Church of God, and a Masonic Temple, and the community boundaries extend into Mebane (See **Map 1**). According to our estimates, the population of West End is 592, and it is 96% African American. Just over 24% (137) of West End's African American residents are under age 17, and just over 10% (59) are ages 65 and older. 52% of the African American households are owner-occupied, with the rest being rental properties.

White Level Community: White Level, a rural community north of Mebane, was also initially settled by African Americans after the Civil War. It is located north of Mebane along NC 119 (See **Map 1**). There are currently two churches in this community, Kimes Chapel Baptist Church and White Level Primitive Baptist Church. The Greater Canaan Baptist Church is building a sanctuary in the community. In addition to NC 119, major roads include Mrs. White's Lane and Landi Lane.

White Level borders land that was annexed by the city in 1993 for the development of the Club at Mill Creek, which began construction in 1994. Note that when the property for the Club at Mill Creek was annexed, the city left Census Block 1001, Tract 212.03, which contains only African American residents, in the ETJ, surrounded by the "City of Mebane" in the form of the Club at Mill Creek. This is discussed in more detail below, in the sections headed "Watershed Restrictions" and "Applications of Zoning Regulations."

The 2000 population of White Level was 358, 73% (262) African American, 19% (69) white and the remainder identifying themselves as "other" race or "have more than one racial identity." Nineteen percent (49) of White Level's African American population is age 65 and older, and 18% (47) of the African Americans in this community are under 18. Only one of the white residents of White Level is elderly, and 26% (18) of the white residents are under age 18. Almost all of the households in White Level are owner-occupied: 90% of African American households and 90% of white households.

Buckhorn/Perry Hill Community: The Buckhorn/Perry Hill community is located east of Mebane, entirely in Orange County (See **Map 1**). This community stretches from south of I-85/I-40 across US 70, extending north up Frazier Road. There are three African American churches in this community: Mount Hope Primitive Baptist Church, Mount Moriah Missionary Baptist Church, and Hunter's Chapel A.M.E. Church. The estimated 2000 population of the Buckhorn/Perry Hill community was 770. This community is 60.8% (486) African American and 33.5% (258) white. This community has a high proportion of children for both whites (26%, or 68) and African Americans (25%, or 120). Correspondingly, the community's elderly population is lower, just under 10% (25) of the white community and just over 12% (59) of the African American community. Most of the homes for both African Americans and whites are owner-occupied, 89% and 91% respectively.

There are significant income differences between whites and African Americans in Mebane and the surrounding area, as shown in Table 2. The 1999 median family income in Mebane was \$55,759 for white families and \$22,917 for African American families. We cannot give the precise income distributions for the three African American communities because the census block group boundaries do not match the community boundaries. However, we can provide income comparisons for areas that include each of the communities. Table 2 shows the median family incomes for white and African Americans in the Alamance County Census Tract 212.03 (which includes West End), the Alamance County Census Tracts 213 (which includes White Level and the Orange County Census Tract 111.01 (which includes Buckhorn/Perry Hill). The relative difference between whites and African Americans in median family incomes is seen

in every tract, though the median family incomes for African American families in the tracts including White Level and Buckhorn/Perry Hill are significantly higher relative to the tract that includes West End and Mebane.

Note that the rate of home-ownership by African Americans in these neighborhoods is considerably higher than the 2000 national average, which is 46.7% for minority households (versus 73.2% for white households).

The Re-routing of NC Highway 119

Re-routing of Highway NC 119 has been on the state's thoroughfare plan since 1970, according to NCDOT files. However, the initial plan showed a route that followed the current highway for much of its route, and Mebane has changed significantly since that time. Highways NC 119 and US 70 are the primary collector roads through the town. Highway 119 currently runs north/south through the middle of town, merging with US 70 (east/west) for several blocks before continuing north/south.

Map 3 shows three of the proposed paths of NC 119 relative to the racial composition of the Mebane area. Seven other routes have also been considered and discarded. The routes are taken directly from a *Microstation* digital design file provided by NCDOT in the fall of 2002. These proposed routes are layered over the town and community boundaries and Census 2000 race data at the block level. The routes represent the major swings under consideration by NCDOT and demonstrate the considerations given to each route.

Map 3 clearly shows that all three proposed routes affect West End, with the central and eastern paths going directly through the community. It also shows that all three of these paths go through the inhabited southern part of White Level rather than crossing the pastures across from Mill Creek that have been proposed for a housing development. The core of White Level, on the southern end of the community, would be affected, including multiple dwellings along NC 119, White Level Road and Mrs. White's Lane, as well as the community store. The easternmost route of these three, which followed the current route of NC119 once downtown Mebane was by-passed, was quickly discarded by NCDOT because of the high number of relocations required and because of the charges of racism brought by WERA. In 1999, on behalf of the African American communities involved, WERA filed administrative complaints with the U.S. Department of Justice. The complaint cited "adverse and disproportionate impact" and "historical patterns of racial discrimination" under Title VI of the Civil Rights Act of 1964 and the 1994 Environmental Justice Executive Order Number 12898. The Department of Justice requested investigations by several agencies, including the Federal Highway Administration, the EPA, and the Departments of Commerce, Agriculture, Housing and Urban Development.

By Federal Executive Orders #12898 and 12250, projects receiving federal financial assistance "shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations...." According to Danica Claypoole of Wilber Smith and Associates, the firm hired by NCDOT to conduct the Community Impact Study, the study is not yet complete, and there is no timetable for completion.

Map 4 focuses on the proposed routes of the NC 119 Bypass through West End. This map also shows the locations of occupied dwellings,⁷ five West End churches, the Masonic Temple, and Craftique Furniture factory property.⁸ The central and eastern proposed routes will materially affect much of West End, both directly by taking homes, land, and community centers, and also indirectly from the impact of proximity to the four-lane restricted-access highway. Parts of the community not directly condemned will be affected by changes caused by the highway, including the physical division of the community, noise, and changes in drainage (damaging septic fields, according to research of other highway projects).

One route proposed for NC 119 would have had a disproportionate effect on African American communities: 87% of property lost by construction of the proposed bypass would be in African American and low-income areas, including churches and a Masonic Lodge in West End and White Level, according to NCDOT. The westernmost path described in this study is the only proposed route that goes through any of the property for the proposed North Carolina Industrial Center. NCDOT is now promoting this western route as their option. This path turns away from West End, skirting the Craftique Furniture manufacturing plant property. According to NCDOT minutes of a January 5, 2000 meeting between NCDOT staff and City of Mebane staff and elected officials, Mebane officials requested the route be moved further east (which would split West End) in order to stay out of the Industrial Park. NCDOT replied that this was not possible because of environmental justice concerns arising from WERA's civil rights action.⁹ The proposed route also goes through southern White Level, rather than through open land opposite the Club at Mill Creek, currently being offered for residential development and advertised as having water and sewer.¹⁰

We contacted Bob Harkrader, Planning Director for the Burlington-Graham Metropolitan Planning Organization (MPO), for the official rationale for the rerouting of the highway. He responded, "The 119 project is designed to relieve traffic congestion in the core area of Mebane and to facilitate north/south travel in our urban area. There are also several economic development opportunities in the immediate area." In a July 26, 2001 interview with the *Burlington Times News*, Mebane Councilman Bob Hupman said, "The city needs the road to deal with its traffic problem, especially with a new 550-acre industrial park being planned west of the city." Opponents of the bypass maintain that there is not currently enough traffic or congestion to justify as much as a traffic light (as there is none) where the current NC119 intersects with US 70 in the middle of Mebane, indicating little evidence of a need to "facilitate north/south traffic."¹¹

In June of 2002, the *Burlington Times News* quoted Mike Mills, NCDOT Division Engineer, as saying "there's no doubt that N.C. 119 project is the most pressing one for Alamance County right now. The bypass would take traffic, including large commercial trucks, out of downtown Mebane as it flows down from Virginia and Caswell County to the interstate." Mills did not quote from a NCDOT feasibility study of NC119 from Alamance into Caswell County that estimated 5% of the traffic on NC 119 in Alamance County is truck traffic. Nor did he mention

⁷ From the Alamance County property tax GIS files

⁷ Three different tax map parcels combined on this map, information also obtained from the Alamance County Property Tax GIS files.

⁹ January 6, 2000 Minutes of meeting of NCDOT, FHWA and City of Mebane officials.

¹⁰ See Figure 1: Land Across From the Club at Mill Creek Advertised for Sale with Water and Sewer (February 21, 2003)

¹¹ The current cost estimate for this project is \$44,900,000. Burlington-Graham Metropolitan Planning Organization, Funding Report. <http://www.mpo.burlington.nc.us/tip/2004-10/bgmpotip.pdf>.

the original feasibility study for the relocation of NC119, which gave no traffic figures to justify the need to build the highway, but stated "No traffic projections are available at this time."

The proposed routes suggest that another goal for the rerouting is to provide better access to the Club at Mill Creek. The land re-zoned for industrial and high-density residential development (i.e. with water and sewer) along the proposed route of the project creates investment opportunities, and some projects appear to anticipate the new highway. First Oakland Properties of Raleigh has developed properties on both ends of the proposed highway, Fieldstone at the south end and the Club at Mill Creek at the north end.

The NCDOT map distributed to the community and posted in the Mebane Town Hall in the fall of 2002 shows a single access road from U.S.70 onto northbound NC 119 and across a break in the median to southbound NC 119. The bypass would go across the western edge of the Craftique land, and the access road would surround Craftique from the east, affecting an African American church (St. Luke's Christian Church). NCDOT would like to avoid Craftique, both because it is an ongoing economic enterprise and because of concern about disturbing documented soil contamination from leaked or spilled solvents on Craftique land in the Water Quality Critical Area. While a cloverleaf interchange might have been safer than a single access road crossing a median, this single-access-road design allows the factory to remain at its site and seeks to minimize direct disturbance of contaminated soils. According to a May 14, 1998 NCDOT memorandum, "The location of this [Craftique] site and possible liabilities for proper clean-up and remediation of contaminated soil and groundwater contributed to the recommendation of (the proposed route)." Run-off from the elevated impervious surface has not been addressed and is a concern for WERA and the residents of West End.

The highway cannot be routed any further west because of the proximity to the Graham/Mebane Lake that provides Mebane and Graham's water. At this time, the watershed issue is the largest impediment to settling on a single route, according to a *Burlington Times News* quote of an NCDOT engineer.

NCDOT is actively promoting the western route, with its three variations at the northern end and has a published schedule for obtaining land in 2006. This route avoids West End south of U.S.70, but affects West End north of U.S. 70 (discounted by NCDOT as not being part of West End, but included by the community's self-definition), Woodlawn, Third Street (see annexation and racial dilution, below), and White Level.

Local government leaders and transportation advisory board members in Mebane and in Alamance County are actively promoting the road as well. The town of Mebane once announced it intended to hire a lobbyist to keep the road construction on track, and officials met in the summer of 2003 with the Secretary of Commerce and the Secretary of Transportation regarding the road's progress. The local Transportation Advisory Committee voted unanimously to recommend the Burlington Graham Metropolitan Planning Organization (MPO) make the NC 119 project its top priority. Mike Nunn, MPO director, blamed delays on "environmental issues."¹² However, on January 22, 2003, Karen Taylor, the Project Development official for NCDOT, stated "The current schedule for TIP Project U-3109 is: Part A (from I-40 to US 70): Begin Right of Way Acquisition in Federal Fiscal Year 2006; Begin Construction in Federal Fiscal Year 2008." Asked about reports of a delay until 2010, Taylor said, "I am not aware that the project has been put on hold. I am currently working on this project to meet the current right of way and construction schedules."

¹² Nunn is also an employee of Benchmark, Inc., a private company with a contract with the City of Mebane to develop the Community Development Block Grant application for sewer for ten West End houses.

In summary: The originally-proposed eastern and central paths of this multi-lane, limited-access highway go directly through West End and will divide the community. With the western route, the effects on West End are reduced, but the effect north of US 70 is difficult to assess in detail. The center of White Level community would be destroyed no matter which route is taken.

Sewer Service for African American Communities

A central issue in the WERA civil rights complaint is the lack of water and sewer services to the African American communities. In this section, we examine the pattern of sewerage service relative to race in the Mebane area. Properties inside the city limits are by law to be provided city services, including sewer.

Map 5 shows Mebane sewer lines relative to the racial composition. GIS data locating sewer lines were obtained from the Piedmont Triad Council of Governments as *ArcView* files. These were layered over the boundary files and the Census 2000 race data at the census block level.

The Mebane sewer treatment plant is contiguous to and immediately south of West End, an area largely without sewerage. Until recently, trucks removing sewerage sludge from the sewer plant drove through the West End community. Sewer lines extend north to the newly built Club at Mill Creek, but the historic White Level community on the other side of the road is not served. The sewer lines also run east to the Petro Truck Stop, a residential area south of I-85/I-40 on Buckhorn Road that Mebane satellite-annexed and rezoned as Business. The sewer lines serve neither the African American homes bordering the truck stop nor those in the areas just north of the interstate.

Dwellings without city sewerage use septic systems. If septic systems function properly, they provide adequate sanitation. However, septic systems in all three of the African American neighborhoods are reported to have failed or to be near failure. Septic systems can fail as a result of soil compaction, poor percolation of drain-field soils, and growth of roots into the drain lines. All of these factors appear to be affecting septic systems in these communities. In many cases, the failing systems cannot be replaced because of changes in regulation. Either soils in the drain fields do not meet current percolation requirements, or regulation changes since the septic systems were initially installed now require larger drain fields than are possible on small lots.

Failed septic systems reduce property values and can result in condemnation because of health risks. It is difficult to obtain detailed information about septic function because occupants fear their house may be condemned if health officials know that their septic system has failed. This threat is real in White Level. Individuals in Mebane have tried to buy a property at the northern terminus of the proposed bypass owned by an African American family. When they refused to sell, a contractor living in Mill Creek, then associated with a company owned by a member of Mebane's City Council, reported to the Alamance County Health Department that Mrs. Love's septic system had failed. The health department allowed the family to install an expensive short-term fix to the septic system, yet fear of similar attempts to force condemnation make African American homeowners hesitant to allow a systematic survey of septic system function.

Failed septic systems present a public health risk of water contamination. One of the most common organisms found in well and surface waters contaminated by poorly functioning septic systems is *E coli*. This opportunistic pathogen can cause episodes of diarrhea in persons that consume the contaminated water. It is extremely harmful, even potentially fatal, in children and the elderly. In addition, *Cryptosporidium parvum* and *Giardia lamblia*, two waterborne pathogens, may also be found in cases of septic contamination of well and surface water and pose serious public health risks to exposed populations.

Supported by grants to WERA, Dr. Mark Sobsey, an expert in water-borne pathogens at the UNC School of Public Health, and Chris Heaney, a graduate student at the School of Public Health, worked with community members to collect well and surface water for testing. Heaney reported:

A round of 7 surface water samples collected during extreme drought conditions showed no evidence of microbial contamination. Following rain events, second and third sampling rounds of 5 samples each resulted in levels of contamination exceeding the USEPA and NC Division of Water Quality Maximum Contaminant Limits for fecal coliforms, *E. coli*, and *enterococci* in waters to be used for primary contact recreation. Third round surface water samples also were positive for total coliphages, with concentrations ranging from 1.5 to 46 infectious units per 100mL.¹³

According to Heaney, these contaminants are human in origin, not due to animal waste. This contaminated surface water can also contaminate wells. The health of the residents of these three communities is threatened by the lack of city sewerage.

Map 6 focuses on sewer service in White Level and The Club at Mill Creek. The location of occupied dwellings comes from the property tax GIS files of Alamance and Orange Counties. There is a clear boundary of both race and provision of sewer service between Mill Creek and White Level, with white-owned dwellings having sewer service and African American-owned dwellings having septic systems.¹⁴ Along Mrs. White's lane, the northern boundary of much of the Club at Mill Creek, one side of the road is white with sewer service and the other side of the road is African American with no sewer service.

Requests for sewer service from this community have been made and rejected. For example, citizens petitioned on April 7, 1997 but City Manager Robert Wilson responded that the city can't send water and sewer beyond city limits. Again, on October 6, 1997, property owners of White Level, just north of the Club at Mill Creek, petitioned for sewer service and annexation if that was necessary to have sewer extended. According to council minutes, the county engineer provided an estimate at the request of Mrs. Miles, a resident, of a "cost of \$720,000 to provide sewer service including the construction of a lift station and force main." Following discussion, the Council verbally agreed that the area could be looked at for a Community Development Block Grant. (As of this writing — five years later — this has not been acted upon.) Later in the same meeting, the Council approved city financing for a lift station and over-sizing of sewer lines to serve newly annexed properties on South Third Street, including Fieldstone subdivision. The approved cost was \$268,000.

All of White Level is in the Water Quality Critical area and Water Quality Balance of Watershed area for Graham/Mebane Lake, which provides the town's water. The presence of failed septic systems in the watershed critical area places the entire water supply at risk. Development itself poses a risk to the watershed, but the land for Mill Creek was removed from the watershed critical area by the town council in 1993 when zoning and annexation were approved, an issue we return to below.

Map 7 focuses on sewer service in Buckhorn/Perry Hill. Key community centers are also threatened by the lack of sewer in this community. Specifically, Mount Moriah Missionary Baptist Church and Hunter's Chapel A.M.E. Church (both of which lie only a few hundred yards from the sewer line which serves the truck stop) have problems with their septic systems. This map shows the sewer extension made to serve the businesses in the Manufacturing district in the

¹³ UNC-CH masters thesis, 2002.

¹⁴ The COG GIS files do not show sewer lines into the northeast section of Mill Creek where there are many houses.

ETJ and the satellite-annexed Petro Truck Stop. The dwellings bordering the Petro Truck Stop are not allowed to connect to these sewer lines. Asked about this situation, Mebane Town Manager Robert Wilson did not address Mebane's sewer lines (which already adjoin the neighborhood), but commented that Orange County refused to extend sewer to the area because that would allow the "Mexican mall" (the flea market across the street) to expand.¹⁵

The precise extent of the problem is not known because neither Orange County nor Alamance County keep systematic records of failed septic systems. Officials in Orange County are aware of the failed septic systems in this community, but have taken no action. Orange County does not give building permits for most of Buckhorn/Perry Hill — even for additions to existing houses — because the septic systems are not adequate. At the Orange County Water Summit on May 16, 2002, Barry Jacobs, Chair of the Orange County Commissioners, described Buckhorn/Perry Hill — which is clearly within Orange County — as "a no man's land between Mebane and Efland, not really in anybody's service area." This attitude of local government officials is apparently not unusual, as the exact same characterization was used in an article found in NCDOT files, referring to a community known as "Lost City"¹⁶, quoting Moore County N.C. Chief Deputy Sheriff Lane Carter. "There's something you've got to understand about Lost City: nobody wants it. It's bad land. No man's land." Except it's not, in the purest sense, a no man's land. It's a poor man's land, and bringing it up in conversation seems to make officials uncomfortable."

Craig Benedict, Orange County Planning Director, was asked about plans for sewer service in Buckhorn/Perry Hill. He reported that until "saturation" of growth in Efland, the county has "no time line" for sewer lines into Buckhorn/Perry Hill. He explained that county was concerned that providing infrastructure in this area would lead to sprawl. This is also the reason given Efland residents with failing septic systems, when they have tried to hook up to the Efland sewer line which goes through their front yards. The concern about sprawl may be misplaced because there has been only one approval of a 37-lot subdivision with sewer connections in the Efland area since the Efland/Cheeks sewer lines were installed approximately 15 years ago. The Orange County Economic Development web page (<http://www.co.orange.nc.us/ecodev/stats/utilstat.htm>) notes "Sufficient sewer capacity exists in all service areas." Mebane's sewer lines north of the interstate, which serves the Petro Truck Stop, extends into the portion of Mebane's ETJ that is zoned for manufacturing, although Mebane City Council members have stated that they cannot extend sewer service into areas outside of the city limits (see the quote from Robert Wilson, Town Manager, above).

Under pressure from the civil rights complaint, Mebane hired a firm to prepare an application for a Community Development Block Grant to provide sewer service to a small area within West End. **Map 8**, showing dwellings and property boundaries,¹⁷ is based on the map prepared by Benchmark LLC for Mebane's application for a Community Development Block Grant submitted in October of 2002. Community Development Block Grants are intended to bring infrastructure and repairs to substandard housing. At least ten houses must be served to qualify for a grant. According to the property tax data overlaid on the map of the proposed sewer line provided in the application, this method shows Mebane's plan to extend sewer lines and service to 13 houses in this area. The map and text of the application states that the sewer line would serve 8

¹⁵ Personal communication, spring, 2003.

¹⁶ Located between Southern Pines and Pinehurst, NC.

¹⁷ Several dwellings on the city map do not appear on the property tax map. The Mebane map also shows an existing sewer line from the sewer treatment plant (located under the label at the lower right corner) not shown in the COG GIS files. We checked, and the Mebane map is accurate.

standard houses, 3 sub-standard, 7 severely sub-standard houses, and 5 vacant houses. Such a line would clearly leave most of the West End neighborhood without sewerage. However, the summary of the application states that the application “will address all the housing, water and sewer needs in the targeted area, with the exception of one unpaved street, which is to be paved by NCDOT.”

The City is required to contribute funds to every block grant project, and it proposed to contribute \$75,000 toward over-sizing the line, stating that the neighborhood has additional sewer needs which could not be met in this grant because of funding constraints, and over-sizing the line would prepare for later service to those still-needy houses. There is a sewer line several blocks to the north of this proposed extension (see Map 5), which could have been used to serve the neighborhood, but the CDBG grant would have allowed the town to extend sewer service to the border of the proposed North Carolina Industrial Center at little cost to the town or to the developers or investors in the Industrial Center.

Mebane's CBDG application states “The City is unaware of any plans for future [within three years] commercial, industrial or residential development within a ½ mile radius of the project area.” (See Map 8.) Yet City officials, staff and Benchmark employee Mike Nunn have worked closely with the MPO, the N.C. Department of Commerce, and the N.C. Department of Transportation to re-route NC 119 to serve the industrial park, even insisting upon an additional access specifically for the industrial park when NCDOT preferred to restrict access for the entire road¹⁸. Mebane Councilman Ed Hooks was the chair of the MPO, and Mike Nunn was a member when the MPO voted to make the relocation of NC119 its highest priority and to request NCDOT provide two access drives onto NC119 from the North Carolina Industrial Park, which lies adjacent to the western terminus of the requested sewer extension. The application contains a certification signed by Mayor Stephenson which states “data in this application is true and correct” and that “this document has been duly authorized by the governing body of the applicant.” That application also contained an affirmation by Mebane Mayor Glendel Stephenson stating “The city of Mebane hereby assures and certifies that there are no open, unresolved, or pending Civil Rights Lawsuits against the city government applying for infrastructure funds.” This CDBG application was not funded.

Application of Zoning Regulations

As shown in **Map 1**, almost all of the neighborhoods in question fall within Mebane's Extra-Territorial Jurisdiction (ETJ). This means that Mebane controls all zoning and land-use decisions in these communities, but the residents of these areas have no voting rights or representation.

Once land joins the city or its ETJ — whether voluntarily or involuntarily — the city controls its zoning. WERA has alleged that Mebane’s application of zoning is destroying the viability of on the African American communities of White Level and Buckhorn/Perry Hill. We looked at three different zoning mechanisms and the process by which they are applied to assess the evidence. Zoning can be a powerful tool for community good, but the way that it is applied can also have negative effects.

¹⁸ The August 8, 2001 letter which accompanied the City Council’s Resolution Urging NCDOT to Expedite ...NC119 included a preliminary plat of the NC Industrial Center as approved by the City Council August 6, 2001.

Non-Residential Uses: Manufacturing Versus Residential Zoning

As discussed above and illustrated in **Map 8**, the land in Buckhorn/Perry Hill that lies south of US 70, north of Interstate 85/40, and west of Buckhorn Road is in Mebane's ETJ. The neighborhood immediately adjoining Buckhorn Road is 90-100% African American. The rest of that area is integrated, with most residents along U.S. 70 and Washington Street. The land on the east side of Buckhorn Road (where zoning is regulated by Orange County) is also 90-100% African American and has been rezoned as an Economic Development District.

In August of 1991, Mebane changed the zoning of part of Buckhorn/Perry Hill from R-20 (residential with minimum lot size of 20,000 square feet) to M1 (heavy manufacturing). When residential land is zoned non-residential — whether manufacturing, business or economic development district — the houses within that zone are grandfathered in as existing uses; if they burn down or need to be repaired, they can be. But, according to Montrena Hadley, Mebane Planning Director, if the residents want to add on to the houses or subdivide their land for residential purposes (for a relative or for anyone else), they cannot do so without getting the land re-zoned back to Residential. However, this is deemed to be "spot-zoning," and is discouraged. Thus, these African American-owned properties will pass from their families and disappear from the community as owners eventually sell to manufacturing firms. Since industrial land with a house on it is worth less than empty industrial land, their houses essentially become worthless. According to the Land Loss Fund, African-Americans are losing land at a rate of 9,000 acres per week. Most of the research and programmatic efforts concentrate on farm loss due to competitive pressures on all farms and the discrimination by financing institutions and the government.¹⁹ But, as we see in this case, land loss can be caused by other, heretofore unrecognized, sources, such as city zoning changes and application of local land-use regulations.

Annexation and Extra-Territorial Jurisdiction (ETJ)

Map 9 shows Mebane's zoning compared with the racial composition. Both West End and White Level are zoned residential, as is most of the land surrounding Mebane's ETJ.

On June 1, 1998, Mebane satellite-annexed 132 acres of residential/agricultural land on Old Hillsborough Road in Orange County for use by Synthon, a pharmaceutical firm, and on June 15 rezoned it M-2 (Manufacturing). The land could have been re-zoned without annexation, but the city had an immediate user for the land and could not tax the land without annexation. By law, the city must extend services (such as sewer) to annexed areas, but as this was a voluntary annexation, requested by the property's owners, this law does not apply and city services have not been extended (possibly because the firm slated to buy the land has – as of this time- not yet built on it).

In the public hearing to annex this property, Mebane's Mayor opened the public hearing by limiting speech to "anyone who is involved with the property itself or is a resident of the city of Mebane." This effectively barred all residents of this integrated neighborhood in the ETJ from speaking — except the owners of the land who would be selling — and appears to be allowed by North Carolina statute.²⁰ At the subsequent public hearing to rezone the land to manufacturing, the Mayor gave speakers five minutes each and stated the hearing would only continue "until speakers became repetitive, at which time the public hearing would be ended." Still, approximately 40 people spoke. Though the majority of speakers opposed, the Council approved the rezoning.

¹⁹ In 1984 and 1985, the USDA lent \$1.3 billion to farmers nationwide to buy land. Of the almost 16,000 farmers who received those funds, only 209 (1.3%) were Black.

²⁰ NC General Statute Chapter 160A Article 4A Section d (**160A-31. d**).
<http://www.ncleg.net/gascripts/Statutes/Statutes>

The land was satellite-annexed, which means that it is not contiguous to the former city limits, but is now in the city. Satellite Annexation is limited by law. Recently, when the African American residents of White Level requested sewer and brought up the possibility of annexation, they were told that it couldn't be done because of that limit, which caps the amount of land that is satellite annexed as a percentage of the land in a city. When asked what the current percentage was, the city official stated he didn't know.

The issue of whether or not to be annexed presents a quandary to any community needing services, as was pointed out in an article dated 2/07/2000 found in NCDOT files. "There's the rub: According to the North Carolina League of Municipalities, the city ... would be obligated to provide standard services – [sewer], street lights and the like – within two years if it annexed [an area] without a request from the residents there. If the property owners make such a request, they forfeit such timely service and still have to pay the city's taxes."

Some communities attempt to incorporate themselves rather than be zoned by another government entity or to avoid other undesired outcomes. Woodlawn, north of Mebane but in its ETJ, tried to incorporate to prevent the encroachment of the proposed relocation of NC119. The referendum did not pass, and local residents attributed this to unsigned flyers they found in their mailboxes, which stated that their area would not receive fire or EMS protection if they incorporated (an assertion which is not true).

Watershed Restrictions

In addition to the use of non-residential zoning, there are other ways that zoning applications can impact neighborhoods. Governments protect their water quality by imposing restrictions in the form of a zoning overlay. A "Water Quality Critical Area" (WQCA) is an overlay that can be applied to any zoning district. In such a case, the land is subject not only to the requirements of the underlying use district but also the additional requirements of the overlay district. In all such cases, the most restrictive requirements shall prevail. The state defines a water quality critical area, but the counties and towns apply the rules,²¹ and a town may also apply the overlay zoning.

Graham/Mebane Lake, formerly known as Quaker Creek Lake, serves as a raw water source for the cities of Graham and Mebane. This 650-acre reservoir is situated northeast of the town of Haw River on Quaker and Back Creeks.

Dense development poses a risk to the watershed, so overlays restrict density. While water quality is critical to all, our task in this investigation is to investigate whether the burden of ensuring high quality water falls disparately on a single group. In the White Level area to the east of Back Creek, the buffer in the critical area is much smaller and narrower than to the west of the creek/reservoir. **Map 10** shows that the area contiguous to the reservoir to the east is in Mebane's ETJ and not currently designated WQCA. The land in both the White Level neighborhood and the Club at Mill Creek had been designated WQCA and WQCA/ Balance of Watershed. When the Mebane City Council removed the land for the Club at Mill Creek from the watershed critical area in 1993, it left the restrictions on the remainder of the neighborhood.

²¹ According to Craig Harmon, Planning and Administrative Services Director of Alamance County, "The WCA is the area extending either one mile from the normal pool elevation of a water supply reservoir or to the ridge line of the watershed (whichever comes first); or one mile upstream from the intake located directly in the stream or river (run of the river), or the ridge line of the watershed (whichever comes first). The only way to change this designation is to legally prove to the County's Board of Adjustment that your property does not meet the qualifying definition listed above."

The city council minutes regarding the actions describe deleting sections of the regulations applying to both districts, but the sections referenced in the minutes (ARTICLE VI, Sections 62 and 63, and ARTICLE V, Sections 42 and 43) do not exist in the referenced article, and the copy of the Zoning Regulations we were provided by the city still shows the old language. Because of these problems, we are unable to make definitive statements about the current situation, but in the future, we hope to look into this further to establish what happened, and if it happened legally and without disparate impact.

On the southern and eastern side of the new dividing line is a white subdivision with water and sewer. On the other side is an African American neighborhood with septic tanks, many of which are reported to be failing or to have already failed. The presence of failed septic systems in the watershed critical area places the entire water supply at risk, but the city has ignored petitions for sewer by White Level residents. (See discussion of sewer, above).

Owning an existing structure in land designated as Watershed places additional burdens on the homeowner. According to Mebane's Zoning Ordinance, "Any existing building or built-upon area not in conformance with the limitations of these provisions that has been damaged or removed for any reason may be repaired and/or reconstructed, provided: (1) Repair or reconstruction is initiated within twelve (12) months and completed within two (2) years of such damage or removal." Thus, houses that are damaged must be replaced/repared within a time frame that would only be a hardship for low-income owners. In addition, "The total amount of space devoted to built-upon area may not be increased." Houses on lots that don't meet the certain watershed requirements may not be expanded. (This is also true of existing residential structures that become non-conforming uses when zoned business/manufacturing; See "Zoning," above.)

Some of the consequences of owning land in a WQCA can be demonstrated by the case of an African American family on NC 119 North. From her original 56-acre farm, the owner gave building lots to several of her children before the Mebane/Graham Lake was expanded and her farm became part of a Water Quality Balance of the Watershed district. When she tried to subdivide part of the remainder to give to her other children, she was told she was now governed by subdivision and WQCA regulations, which require at least two acres on a road paved to state standards with curb and gutter.²² The latter requirement does not appear in the city of Mebane's published zoning regulations section on watershed overlays, which specify don't mention curb and gutter, but do specify Best Management Practices. An inquiry to the Planning Director was not definitive. If the land's owner was informed correctly, she — like many of her neighbors in this part of White Level — is unable to afford such improvements, which cost approximately \$150 per linear foot. Thus, in order to give her children an inheritance from the land, she must sell it to a developer²³ like First Oakland Properties, which developed the Club at Mill Creek just down the road.

The disparity in the burden borne by landowners in the African American neighborhood as opposed to the white neighborhood that had its watershed designation removed is clear in **Map 10**. A block of land just south of the Club at Mill Creek remains under the more restrictive Water

²²Mebane Zoning Ordinance http://www.cityofmebane.com/zone_ord/zonedoc.htm. See Article 11 NCDOT, "Best Management Practices For Protection of Surface Waters," states "Use design alternative such as grass medians and shoulders in lieu of impervious materials" and "Select roadway options with shoulder sections over curb and gutter sections."

²³ The house and land in question are eligible for the National Register of Historic Places, according to the 1996 Historic Architectural Resources Survey Report for the relocation of NC 119, but the owner has said she was never informed of this fact.

Quality regulations, even though it is surrounded by land with the newer, less restrictive regulations. The residents of this more-restricted area, which is also outside the city limits through surrounded by the city, are African Americans.

The Process of Zoning Change

The City Council considers requests for and extension of city services (e.g. water and sewer) and for changes in zoning and use from city residents, ETJ residents, and developers from other locales. Despite the regulations that nominally govern these processes, the actions of the governing body can help or hinder each applicant. Applications can be greatly expedited, become problematic or next-to-impossible. In all cases, concerned citizens should pay attention to the following issues:

- Was the applicant's request addressed by Council and/or staff officially or unofficially?
- If the request was slated for follow-up by Council or staff, did such follow-up ever occur?
- Did the Council allow sufficient time for presentations/discussions?
- Were the legally-prescribed processes followed?
- Was the Planning Board involved?
- Did the Council allow sufficient time for presentations/discussions?
- Were those who requested to speak in favor/opposition treated fairly and respectfully by the Council and staff?
- Did the Council respond to the concerns voiced by speakers?
- How long did it take to go through the process (including special meetings called by the council, simultaneous/sequential meetings of city council and board of adjustment, etc.)?
- Was the issue properly placed on the agenda by the city council?
- Were public hearings properly advertised in advance?
- Was the land in question already in Mebane's ETJ?
- Were any special actions required for the process to proceed (such as deletion and/or amendment of zoning regulations)?
- Were any subsidies paid on behalf of the developer (such as oversizing sewer lines)? And if so, are such subsidies provided for all such applicants?

The Mill Creek Example

We examined the minutes of the Mebane City Council from November 1981 through June 2001. Two cases stand out as indicative of the Mebane City Council's treatment of African American residents in its ETJ versus its treatment of non-resident developers of land in the same neighborhood).

On October 6, 1997, African American property owners of White Level, just north of the Club at Mill Creek, petitioned for sewer service and annexation, stating they would apply for annexation only if sewer service could be provided. "On behalf of the applicants, Mrs. Miles explained the problems that she is having with her septic tank." The Council verbally agreed that the area could be looked at for a Community Development Block Grant. No Council discussion of annexation was recorded. Through 2001, the minutes show no follow-up.

This case stands in contrast to the case of the developers of the Club at Mill Creek, illustrated by the following condensation of Council Minutes of September 13, 1993 (with explanations of the action's implications). Mill Creek is a golf course community of 750 homes on 650 acres and, coincidentally, the northern terminus of the proposed relocation on NC 119.

Approval for this development was extraordinary in many ways. For readers who are not familiar with such processes, unusual occurrences are *italicized*.

The Mill Creek annexation process moved very rapidly and decisively, in spite of opposition from residents and environmentalists, and despite the fact that the land in question was outside of Mebane's ETJ and inside a Water Quality Critical Area and Water Quality Balance of Watershed. The case involves a voluntary annexation, instigated by First Oakland Properties (developers of the Club at Mill Creek) and three landowners of the property in question, for the purpose of development. On September 13, 1993, the Council sat in regular session and considered the issues. The meeting included a regular Council meeting, several Public Hearings, a meeting of the Board of Adjustment, and a continuation of the regular Council meeting – all of which occurred to consider the matter of the Club at Mill Creek. In sequence, *all* of the following actions were taken unanimously. Decisions were made and actions were taken in one night that usually require weeks to complete.

As described in the council minutes, these meetings (of the council → public hearing → the board of adjustment → council → the public hearing → council, steps 1-8 below) appear to have occurred consecutively, without adjournment of any other meeting, with the same participants involved in all of the meetings. This is also true of the September 16 meeting (steps 10-16: council → public hearing → council → board of adjustment → council).

September 13, 1993:

(1) Council approved a zoning amendment allowing Zoning Permits with Vested Rights, deleting a Water Quality Critical Area and Water Quality Balance of the Watershed, and reclassifying all R-40W and R-80W to R-20 Residential. The first change allows a particular development to proceed, even if the zoning restrictions change, under the prior zoning regulations. The second change removed the designation requiring special environmental limitations such as density restrictions. The third change reduced the minimum lot size from one and two-acre minimums to ½-acre minimum, and allowed a rezoning request to even smaller lot sizes and other (non-residential) uses.

Eight people spoke against the changes, questioning the timing as paired with the request for re-zoning for the Mill Creek property, questioning the hasty way the decision was being made. Staff stated that the matter had been “under consideration for some time.” However, there is no mention of this matter in the Council minutes for the previous two years. According to the minutes, most comments and questions from the public received no response from the city council or staff.

(2) In a Public Hearing, the council heard a request to rezone land for the Club at Mill Creek from R-20 to R-12, R-8 and B-3. This changed the minimum lot size (already reduced in step one, above) from 20,000 square feet to 12,000 and 8,000 square feet²⁴ for residential use²⁵ and allowed business uses, as well.

At the public hearing, First Oakland Properties introduced “a host of experts in their fields,” including Dr. Charles Peacock, Professor of Crop Sciences and Turf at N.C. State University. Dr. Peacock “reported that there was no documentation that golf courses are polluters if properly managed,” and that the owners would hire a Superintendent who would be a college graduate, experienced and licensed, and would keep records on pesticides applied.

²⁴ Just less than ½ acre to less than 1/3 acre and less than 1/5 acre.

²⁵ “EPA found that the higher the development density and built-upon surface area, the greater the likelihood of diminished water quality.” -North Carolina Department of the Environment and Natural Resources, Division of Water Quality

Among those speaking to the issue was Marvin Collins, then Director of Planning for Orange County. He informed the council that any action on Mebane's part would have no effect on the acreage involved lying in Orange County. The Council took a break to consult with its attorney, and then decided to proceed with the portion lying in Alamance County, to consider a petition for annexation of the entire property involved, and then re-consider the portion in Orange at a later time..

Collins also "expressed concerns that the transportation will not be adequate for the additional cars and that the Highway 119 by-pass will not be the solution." He also questioned the legality of the public hearing advertising and identification of properties in that advertising. In addition, he "suggested additional monitoring and reporting of run-off from the project, and expressed concern that delineation of basic FEMA Flood Plain lines were not shown on the plan and recommended that the City hire a professional planner." Three other people spoke against the re-zoning. The re-zoning was approved unanimously.

(3) The Board of Adjustment then met to consider a Special Use Permit to allow a golf course.²⁶ *No discussion* was noted in the minutes, but the permit was granted with conditions that addressed some of the concerns from the Public Hearing. The conditions were not listed.

(4) The Board voted to permit a Special Use Permit for cluster housing in the R-12 parcels in question, with *no discussion* noted. It was noted, however, that the request came "following the Public Hearing" (of earlier that evening).

(5) The Council met and approved the Subdivision Plat of the Club at Mill Creek subdivision, with *no discussion* noted.

(6) The Council voted to allow a Zoning Permit with Vested Rights for the property in question. It was again noted that the request came "following the Public Hearing."

(7) The Council voted to accept a petition for annexation for the Mill Creek property.²⁷

(8) The Council voted to Investigate the Petition for Annexation for the Mill Creek Property (in order to establish a Certificate of Sufficiency of the petition).

The next day (September 14, 1993), the Council met at noon in a Special Meeting to receive the Certificate of Sufficiency.²⁸

(9) There was one required signature missing, so the Certificate could not be received. Council voted to continue the meeting at 5:00 *that afternoon*, or to re-schedule when the signature was obtained.

(10) Council met at noon *two days later* (September 16, 1993) to receive the Certificate of Sufficiency, and set a public hearing on the issue of September 28th (12 days²⁹ later) at 3 p.m. (*during work hours*).

(11) At the public hearing Sept. 16, 1993, the Council voted to annex, unanimously. *No discussion was noted*.

(12) The Council voted to extend the city limits *effective immediately*. *No discussion* noted.

²⁶ "The location of golf courses and sod farms near populated areas causes concern about non-point source (NPS) pollution effects on the water quality of surrounding rivers, lakes and streams. Of particular interest is the impact of herbicides, fungicides and fertilizers on surface water quality." U.S. EPA Region 4 Protection of Water Quality Associated with Golf Courses and Sod Farms <http://www.epa.gov/region4/water/nps/projects/al98-2.htm>

²⁷ There was apparently no discussion that this would leave a parcel of land outside of the new city limits but totally surrounded by the city.

²⁸ Usually, the Certificate is received at the next regular meeting of the council one month later

²⁹ We have not ascertained how long it takes to give notice of a public hearing, and what is involved.

(13) Council voted to rezone from Orange County AR/PW II (agricultural/ residential *protected watershed*, minimum lot size one acre or 43,560 square feet) to R-12 (residential, *minimum lot size 12,000 square feet*) “for properties being annexed ...lying in Alamance and Orange Counties formerly outside of Mebane’s ETJ.”

(14) Board of Adjustment met (same meeting)³⁰ and approved a Special Use Permit to allow a golf course in land now annexed.

(15) Council approved cluster development in R-12 in land now annexed.

(16) Council approved subdivision plat of Club at Mill Creek with Zoning Permit with Vested Property Rights for land now annexed.

Note: One other item was brought up at this public hearing, for a zoning permit with Vested Property Rights for a small subdivision. “After considerable discussion,” this was approved 3-to-1 (with one member absent). This was the only item during the public hearing where any discussion was noted, and the only item that did not pass unanimously.

Later Developments:

(17) October 4, 1993 (page 001409) “It was requested that staff perform testing of streams before the Club at Mill Creek Development begins to obtain baseline data.” No discussion, nor a motion, nor a vote, nor any recording of who made the request appears in the minutes. No record in future minutes that this was discussed, researched, voted on or approved. No results were ever reported.

(18) October 4, 1993. Council approved request from First Oakland Properties be allowed to pay water and sewer impact fees in phases and to exempt the greens acreage from the total.

Note: This is the first mention of extending water and sewer to Mill Creek.

(19) October 4, 1993. Council informed that Alamance County had approved Mebane’s extension of its ETJ due to the Mill Creek annexation. *No discussion* of Orange County’s action or inaction.

(20) May 10, 1994, page 001435: Council voted to approve oversizing the sewer line along Mill Creek “to service the Club at Mill Creek” from 10” and 12” to a 15” line, with the *City paying for the cost of oversizing at an estimated cost of \$36,240*. “The oversizing would accommodate potential future flows in the drainage basin.” Unanimous approval.

(21) May 10, 1994 Page 001436: A Public Hearing was held on a proposed Ordinance To Extend The ETJ Of The City Of Mebane “due to the recent annexation of the area known as the Club at Mill Creek” and to set the zoning at R-20. *No discussion* noted. No acreage recorded. No boundaries were discussed. No map was referred to. Unanimous approval.

(22) July 11, 1994, page 001443: Mill Creek requested a release of water from Lake Michael. Motion tabled for more information.

(23) September 13, 1994, page 001449: Council voted to approve a request from Mill Creek to purchase raw water from Lake Michael to be used for irrigating the golf course. Unanimous approval. *No discussion* of price or precedent.

It is beyond the scope of this study to delve further into this matter, but the rush to incorporate and serve the Club at Mill Creek makes a stark contrast to the treatment of residents of the neighboring White Level community and the West End and Buckhorn/Perry Hill communities when residents requested city services. In addition, the speed of the process and the lack of detail provided in the minutes (see especially notes 3, 17, 21 and 23, above) make public oversight of

³⁰ The Board of Adjustment and Council members appear to be the same group of people as the council members.

City Council actions difficult. In future work, we hope to further analyze the city's annexation policies and practices to compare treatment of various other applicants.

Other City Process Issues

The City of Mebane staunchly defends its actions, but access to information about city government actions can be difficult to obtain. City council minutes often lack key detail, such as the location and ownership of land being considered for annexation, rezoning, or addition to the ETJ. In addition, these minutes are not readily available, being kept in a vault in City Hall. Requests to read the minutes were met with an inquiry regarding the purpose of the inspection.

The City has maintained that it is not a leader in the re-routing of NC Highway 119. In a July 1999 letter from Mebane Mayor Glendel Stephenson to NCDOT employee James Bridges, the Mayor states "It is certainly not a City of Mebane project." However, NCDOT files contain numerous contacts by Mayor Stephenson³¹, City Manager Robert Wilson, Councilman Ed Hooks³² and others in the Mebane government urging NCDOT to "tie down the alignment,"³³ and complaining about NCDOT dragging its feet,³⁴ holding up the road's progress. The Council considered formally lobbying the state to expedite construction.³⁵ In addition, the Council passed a "Resolution of the City Council of the City of Mebane Urging [NCDOT] to Expedite the Planning and Construction of the NC 119 Connector,"³⁶ prefaced by the City's reasons for its "willing[ness] to do whatever it can to get this project back on track." These did not mention reducing truck or car traffic from the current route through town, but did note "the construction of said NC 119 Connector will materially benefit industrial and commercial development in those areas of the City of Mebane and its environs which lie south of US Highway 70." Of the nine additional "whereas" clauses, five referred to the need for an overpass across US 70 so that Mebane could provide a rapid response in case of a fire emergency across the railroad track, which "could be materially hampered by traffic on the ... railroad line blocking crossing access". The Resolution did not mention that Mebane has fire stations on both sides of the railroad³⁷, or that only eight to nine daily trains, including four Amtrak,³⁸ run through town each day, traveling at 20-79 miles per hour.³⁹

The 1998 NCDOT Community Impact Assessment (CIA) states, "What is clear is that the minority of residents felt that the NCDOT was acting as an agent of the city" and concludes, "This project is strongly supported by local government officials." The November 2002 NCDOT Community Impact Assessment Executive Summary stated, "City of Mebane officials supported the bypass because they saw it as an economic development tool the city needed in order to attract industries to the industrial park, create jobs and encourage residential development."

³¹ April 9, 2002 to Doug Gaylon, NC state transportation board.

³² April 9, 2002

³³ Sept. 4, 1998, Robert Wilson to James Bridges, NCDOT.

³⁴ Oct. 29, 1998, Robert Wilson to James Bridges, NCDOT.

³⁵ June 1, 2001

³⁶ August 6, 2001

³⁷ Nor did the Resolution mention plans (now completed) by NCDOT and the railroad to improve Mebane's rail passing sidings by building a new two-mile-long siding to reduce train traffic congestion and delays.

<http://www.bytrain.org/redbarinfo/news/ontrack/ontrack9.html#rrsidings>

³⁸ www.bytrain.org/quicklinks/reports/PotentTriadComm.

³⁹ Between Durham and Greensboro passenger train speeds increased from 25-55 mph to a maximum of 59 mph, while freight trains increased from 15-45 mph to a top speed of 49 mph. Straighter stretches of track between Greensboro and Charlotte enable passenger trains along this section to operate at top speeds of 79 mph, while freight trains operate up to 60 mph. <http://www.bytrain.org/redbarinfo/news/ontrack/ontrack9.html#speed>

According to the 2002 CIA, “The growth philosophy expressed by the City of Mebane officials was in direct conflict with the majority of residents who lived outside the city limits and many of those who lived in the city limits. These residents wanted Mebane to remain a quaint, small town located in a rural landscape. Many new residents said they moved to Mebane because of those very qualities.” The 2002 CIA lists four communities that objected to the by-pass, including West End, White Level, Fieldstone (a new white subdivision within the city limits), and Woodlawn (also majority white). Residents listed as in favor of the highway relocation included those living on Fifth Street (existing NC119), who hoped for a reduction in traffic (especially truck traffic) on their street, and the residents of The Club at Mill Creek. The latter looked for improved access to their development without impinging upon any of their land, and a way to “increase development within their subdivision” (which recently declared bankruptcy, according to one resident on the Homeowners Association Board of Directors).

The City maintains it acts in good faith at all times. Mayor Stephenson stated “The City has also asked that if there was anything we could do, should do, or ought to do to make the situation surrounding the relocation less disturbing to our citizens, whoever they might be, that you please inform us and we would take appropriate action to respond to the needs. You have never provide such information to us; therefore, we proceed on the assumption that there is no particular action the City should take at this time.” In fact, NCDOT files show meetings and communications on January 6, 2000 and July 24, 2000 listing what steps Mebane might take to make amends to the citizens of West End, including obtaining grants for water and sewer, paving unpaved roads, and annexation of West End. Mayor Stephenson’s letter, which concluded, “We have been as straightforward and caring as possible” was written before the January 5, 2000 meeting between NCDOT staff, City of Mebane Councilman Ed Hooks, City Attorney Charles Bateman and City Manager Robert Wilson, where Mebane officials requested the route be moved further east (which would split West End) in order to stay out of the Industrial Park. At that time, NCDOT replied that this was not possible because of environmental justice concerns.⁴⁰

In another instance, City Officials contributed to NCDOT’s failure to apply environmental justice criteria to one community in Mebane’s ETJ. In the relocation of NC 119, the effect of the road on Woodlawn was not considered in detail, either in this report or by NCDOT. The amended Community Impact Assessment dated Dec. 8, 1998, states that Woodlawn, which is almost all white, has a median household income (MHI) which is less than the county’s MHI, the definition used by the CIA to determine Low-Income Areas. “However,” the report states, “information provided by Mebane’s Town Manager indicates that these residents are not actually low-income households. This area will not, therefore, be considered further in this analysis.” In their efforts to stop the road, residents apparently have not been made aware that they have rights as an area of Low-Income citizens protected by a federal Environmental Justice Executive Order.

Though we have not delved into the issue of income as an area of discrimination affected by local government actions, we hope to look into this in future work.

Conclusion

This report assesses charges of racially-disparate impacts in 1) the proposed relocation of NC 119; 2) the provision of sewer services; and 3) application of zoning and land use regulations in Mebane's ETJ. We examine a range of evidence from public sources on the current situations for each of these charges, using Geographic Information Systems to show relationships between race and the proposed highway routes, the availability of sewer and the zoning designations. We

⁴⁰ January 6, 2000 Minutes of meeting of NCDOT, FHWA and City of Mebane officials.

reviewed Mebane city Council minutes, questioned local and state officials, and examined other public records and statements. The evidence presented supports the charges of disparate and negative impact in the three African American communities of West End, White Level and Buckhorn/Perry Hill:

Highway Relocation — The routes under consideration for NC 119 are a major threat to the West End community as well as the southern part of the White Level community. Two routes provided by NCDOT go directly through West End, and the third route threatens the northern part of West End. All routes terminate in White Level.

Provision of Sewer Services — The health of the residents in all three communities is at risk due to surface water contamination from failed septic systems. Sewer lines border all of these communities, but the town has not extended sewer services to these communities. Even the proposed extension of sewer to part of West End using a Community Development Block Grant appears to be designed more to extend the sewer lines to the border of the proposed industrial park than to provide sewer service in a meaningful way.

Application of Zoning and Land-Use Regulations — Mebane rezoned African American-owned land along Buckhorn Road and selectively applied water quality and other land use regulations in White Level. (Both of these areas are in the ETJ, where the residents have no voting representation.) The term for these actions is “expulsive zoning.”

It has been said that infrastructure is the key to economic progress for depressed neighborhoods. By withholding infrastructure (sewer, water, paved roads), rezoning residential neighborhoods and denying residents civic engagement through the application of ETJ, governments can squeeze neighborhoods until they die.

This case study of Mebane demonstrates the analytic power of GIS. We created a set of maps based on publicly available land use, tax, demographic, and zoning data. By layering and synthesizing the data, GIS maps create images with a power and clarity that go beyond words. As more public data (on land use, infrastructure, roads, housing, etc.) become available in GIS formats, this spatial data can be combined with census and other demographic data to identify racially disparate impacts.

Next Steps

We recently obtained the initial NCDOT feasibility study for the relocation of NC 119. This study states that only twelve homes and one church would have to be relocated. The map in this study (not digital) appears to go through the farmland west of West End now proposed for the industrial park and appears to go through the farmland opposite the Club at Mill Creek, now advertised for sale as a housing development with water and sewer (See Figure 1). The process that resulted in moving the route from the empty land into West End and White Level must be carefully analyzed.

Engineering reports from the town should be analyzed and mapped to show the extension of sewer and public water services over time to assess whether race of neighborhoods affected the probability of extension of water and sewer. We have been told that large parts of the African American neighborhood East End, which is totally within Mebane's city limits, did not receive sewer lines until the late 1990s, including three houses with outhouses that were hooked to sewer lines in 1999. We need to compile and analyze all data on public utilities.

We also need to examine the historical pattern of annexation and the extension of Mebane's ETJ in relationship to race. Annexation is key to provision of services. Systematic efforts of the town to exclude African Americans from annexation while including them in the

ETJ — and thus controlling land use decisions — raises fundamental issues, including voting rights.

One rich source of public GIS data is property tax records, and we have only begun to make use of this information. Incorporating tax records into a GIS analysis provides a potent tool to show the effects of access to infrastructure on property value and how decisions to provide infrastructure change property values.

This case study of Mebane also provides a template for identifying and addressing similar racial disparities in access to basic amenities that exist in other North Carolina communities. By creating an empirical foundation of spatial data mapped using GIS and then adding the detailed local information from public records, we can examine similar situations across the state. An initial screening shows similar discriminatory patterns exist across the state in the location of roads, the patterns of annexation, the provision of water and sewer, and the use of the ETJ.

Looking at a community through this analytical perspective provides a new tool and a new understanding of environmental justice — for Mebane and for other communities experiencing similar injustices. We hope that this type of analysis will prove useful for Community Development Corporations and other community development groups, as well as municipal and county boards and governments, that wish to analyze their own local situations and instigate change.

Table 1: Demographic Profile of Mebane, Mebane's ETJ, West End, White Level and Buckhorn/Perry Hill, Census 2000

	Mebane	Mebane's ETJ	West End	White Level	Buckhorn/Perry Hill
2000 Total	7,284	4,974	592	358	770
Black	1,273	962	568	262	468
	17.5%	19.3%	96%	73%	60.2%
White	5,638	3,890	24	69	258
	77.4%	78.2%	4%	19%	33.5%
Other Races	373	122	0	27	44
	5.1%	2.5%	0	8%	5.7%
Black 0-17	28%	22.6%	24.1%	18%	25%
White 0-17	25%	24.4%	37.5%	26%	26%
Black 65+	11%	13%	10.4%	19%	12%
White 65+	12.3%	11.7%	4.2%	1.4%	10%
Black Home Owners	46%	78%	52%	93%	89%
White Home Owners	72%	87%	54%	90%	91%

Table 2: 1999 Median Family Income for Census Tracts That Include African American Communities, Census 2000

	White	African American
Mebane	\$55,759	\$22,672
Census Tract 212.03 (West End)	\$51,171	\$23,333
Census Tract 213 (White Level)	\$62,155	\$39,167
Census Tract 111.01 (Buckhorn/Perry Hill)	\$50,746	\$33,227

Figure 1: Land Across From the Club at Mill Creek Advertised for Sale with Water and Sewer (February 21, 2003)



Appendix 1: GIS Technical Notes

We had two sources of boundary lines for Mebane city limits: Census Tiger files and the Piedmont Triad COG Arcview maps. While the boundary lines matched in most places, they diverged several times, notably around the Club at Mill Creek and the satellite annexation on Buckhorn Road.

The TIGER map set has expected mean error levels of tens of meters. In a test in rapidly-growing Maricopa County, Arizona, where census mapping of new developments is far ahead of well-controlled topographic mapping, mean errors of 160 m were calculated, with 10% of locations having errors over 400 m. (GPS TIGER Accuracy Analysis Tools (GTAAT), Evaluation and Test Results, John S. Liadis, TIGER Operations Branch, GEOGRAPHY DIVISION. <http://www.census.gov/geo/www/tiger/gtaat2000.pdf>).

For the Mebane maps, divergence between the TIGER mapping and Piedmont Triad COG maps was highest in new developments and places far from major road intersections. In these places, TIGER boundaries typically followed the digitized deed maps, which were frequently at odds with USGS topographic maps. We adjusted the boundaries of census blocks to match the city limits boundary where an intended correspondence was clear.

Map 8 shows the proposed sewer lines in the town's Community Development Block Grant Application. This is based on the Project Area Map for the application prepared by Benchmark LLC, a planning consulting firm retained by the town.

Appendix 2: Demographic Notes

Census Data

The goals of the U.S. Census are to identify every household and to collect the age, sex, race and relationship to the head of the household for each individual in each household. The information on the Census "short form" – name, sex age, relationship to householder, Hispanic origin, race and owner/renter status – is collected for each individual. Further information on social, economic and housing characteristics is collected from a sample via the so-called "long-form." The Census Bureau must keep information on income and other data private.

Data on race, household size and housing tenure (ownership or renting of housing) are available at the census block level. Blocks are the smallest unit in census geography. In general, the smaller the area of a census block, the greater or denser the population. This is seen on the maps, where large blocks on the edge of town cover large areas. The smallest geographic unit at which income data are released is the block group, but we use only data for the entire town of Mebane. The 2000 income data for Mebane are from Summary File 3.

Mebane Data: Demographic data for the town of Mebane are directly from the Census Bureau web page (<http://www.census.gov/>) and were obtained using American Fact Finder (<http://factfinder.census.gov/servlet/BasicFactsServlet>), using basic tables and detailed tables from Summary File 1 and Summary File 3.

ETJ Data: Demographic data for Mebane's ETJ zone were obtained by overlaying the town and ETJ boundaries over the Census Tiger map showing the boundaries of census blocks. The correspondence between the block boundaries and the city limits was exact. The correspondence with the ETJ was reasonably good, but unusual shapes (e.g. the Landi Lane area in White Level) and the size of some rural census blocks required decisions about which blocks to include. The census blocks we define as Mebane's ETJ are: blocks 2007, 2008, 2031, 2032, 2038,

2040, 2041, 2045, 2046, 2047, 2048, 2998, 3012, 3013, 3018, 3021, 3024, 3025, 3027 in Orange County; and 1001, 1002, 1003, 1005, 1006, 1007, 1008, 1012, 1014, 1015, 1016, 1017, 1018, 1024, 1025, 1026, 1027, 1028, 1029, 1032, 1040, 1041, 1047, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2007, 2008, 2008, 2009, 2010, 2029, 2030, 2031, 2034, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2062, 2064, 3008, 4022, 4023, 4031, 5000, 5001, 5002, 5003, 5004, 5005, 5006, 5007, 5010, 5020, 5021, 5023, 5030, 5031, 5032, 5033, 5034, 5037, 6006, 6007, and 6008 in Alamance County.

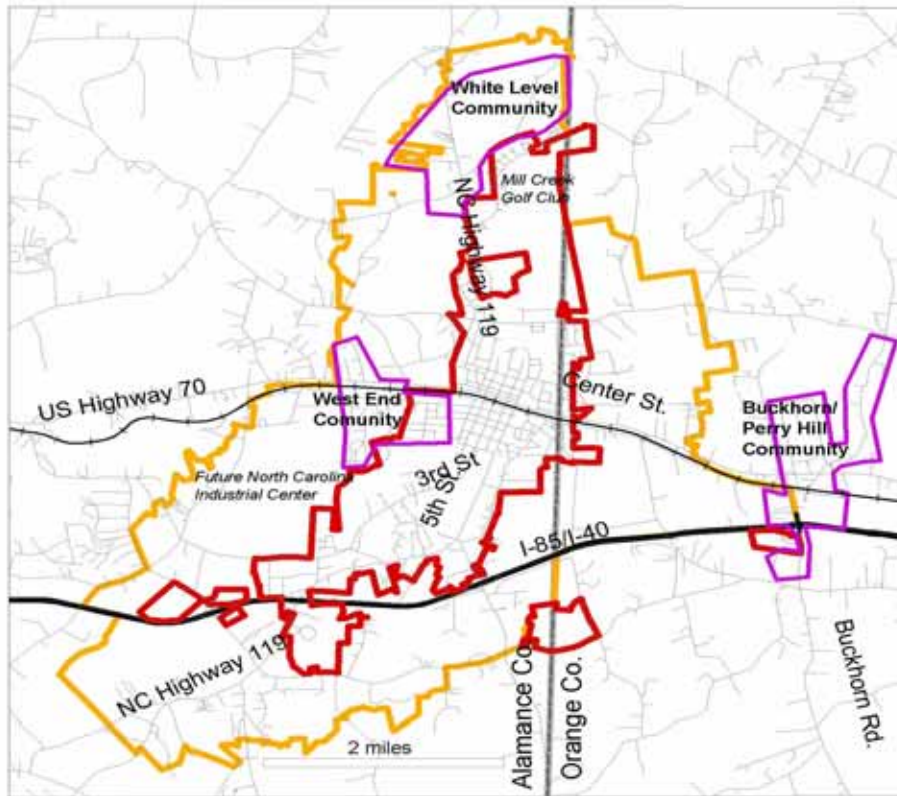
Community Data: To estimate the population and demographic characteristics of the three African American communities, we overlaid the community boundaries over the Census Tiger map showing the boundaries of census blocks. The communities all include many complete census block, but the borders of the communities do not always match well with the census boundaries. Therefore, each partial block is examined to determine whether it should be included or if I can partially be included.

West End: West End is defined as all of Alamance County blocks: 1012, 1015, 1016, 1017, 1018, 1022, 1023, 1024, 1028, 1029, 1030, 1032, 3008 and 3009, as well as the African American residents of blocks 1008 and 1019 in Census Tract 212-03. Block 1008 is a large block north of US 70, extending from the West End area of James Walker Road, Allen Baynes Road, and St Luke's Church Road to the Woodlawn area. The Woodlawn area is predominantly white, so the white population in this block was not included. Block 1019 is entirely in the city limits and is very large for its population. Much of the growth in this block during the 1990s was along 3rd Street toward the interstate, including a new apartment complex and several subdivisions. We attempt to exclude this population with our assumptions. as noted above.

White Level: White Level is defined as all of Alamance County blocks 2001, 2028, 2029, 2030, 2036, 2054, 2055, 2056, 2057, 2058, 2059, 2063 and 2064 in Census Tract 213-00.

Buckhorn/Perry Hill: Buckhorn/Perry Hill is defined as all of the population in the following blocks in Orange County Census Tract 111-01: 2054, 2055, 2056, 2057, 2058, 3006, 3007, 3008, 3009, 3025, 3026, 3027. Although block 2006 includes houses in Buckhorn/Perry Hill on the east side of Frazier Road, this block extends to Richmond Road, where there is an African American neighborhood that is not part of Buckhorn/Perry Hill. Only African Americans in block 2007 are included. This is a large block that is bordered by Frazier Road to Lebanon Road. There are several primarily white subdivisions on Lebanon Road that clearly are not part of Buckhorn/Perry Hill.




Map 1: Mebane Today









Mebane, NC

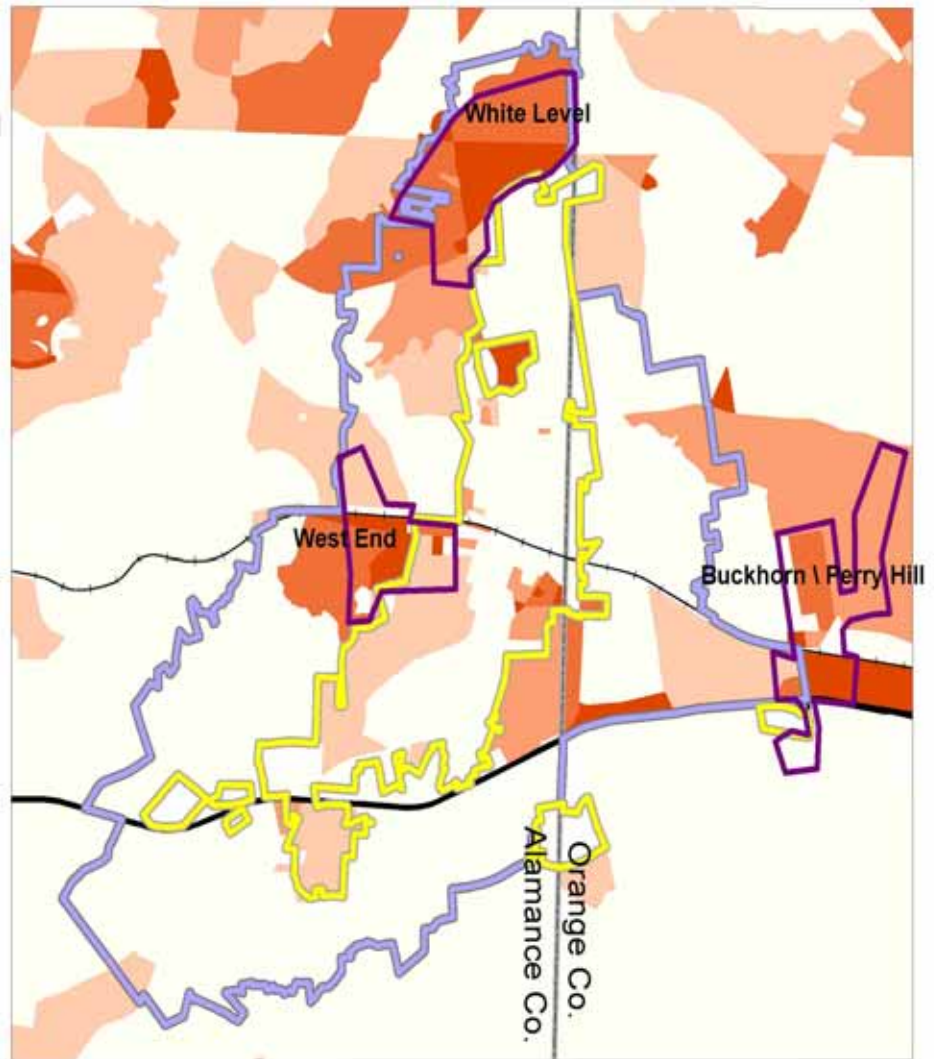
Map 2. Mebane: Racial Composition

Mebane - Racial Composition

-  Mebane City Limit
-  ETJ boundary
-  African-American
Communities





Percent African-American,
Census 2000

-  0% - 20%
-  21% - 40%
-  41% - 60%
-  61% - 80%
-  81% - 100%
-  no data



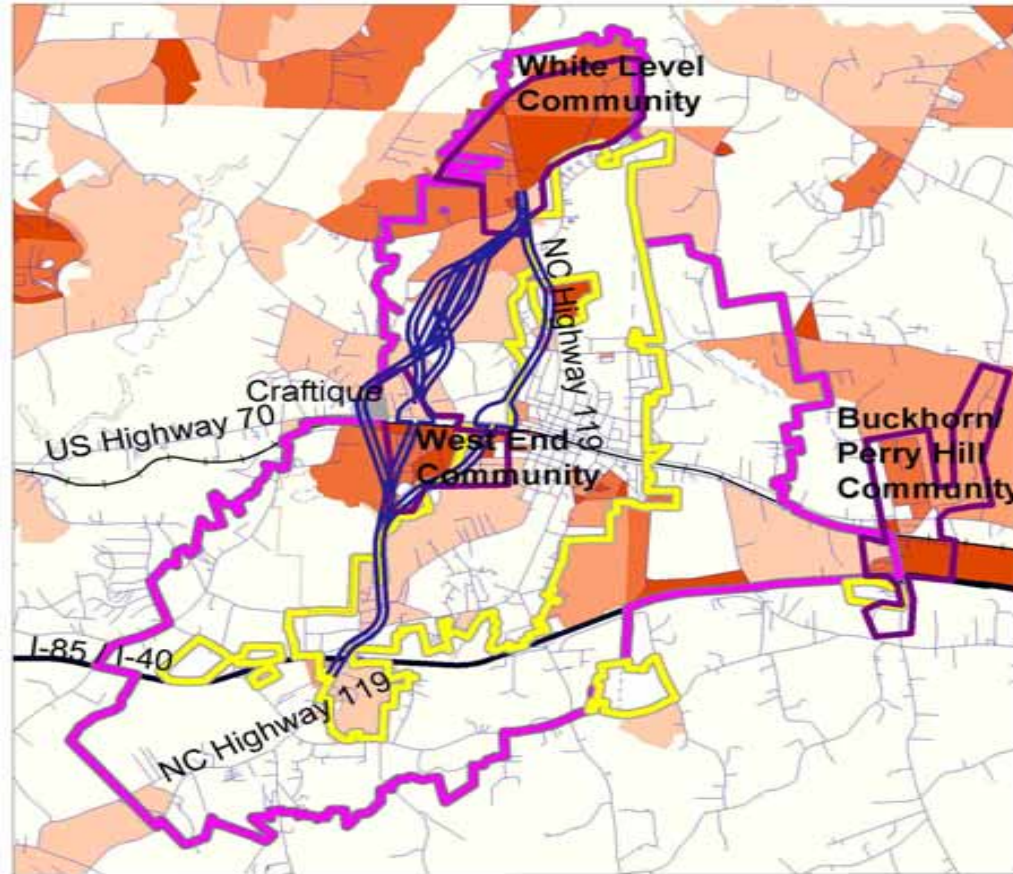
Map 3. Proposed Path of NC 1999 Bypass and Mebane African American Communities Composition

Proposed Path of NC 119 Bypass, and Mebane African-American Neighborhoods

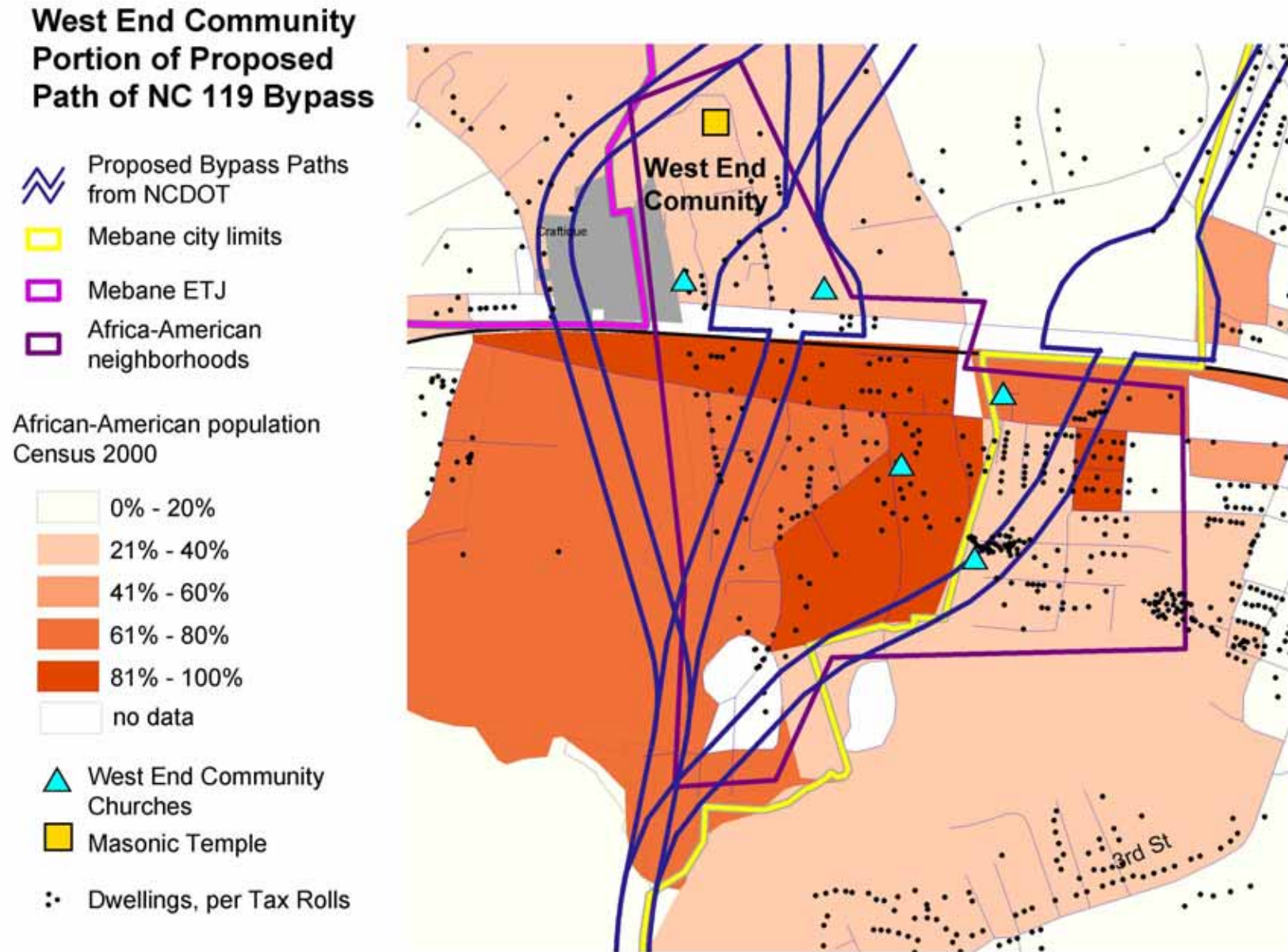
-  Proposed Bypass Paths from NCDOT
-  Mebane city limits
-  Mebane ETJ
-  African-American neighborhoods

Percent African-American, Census 2000

-  0% - 20%
-  21% - 40%
-  41% - 60%
-  61% - 80%
-  81% - 100%
-  no data



Map 4: West End Community Portion of Proposed Path of 119 Bypass



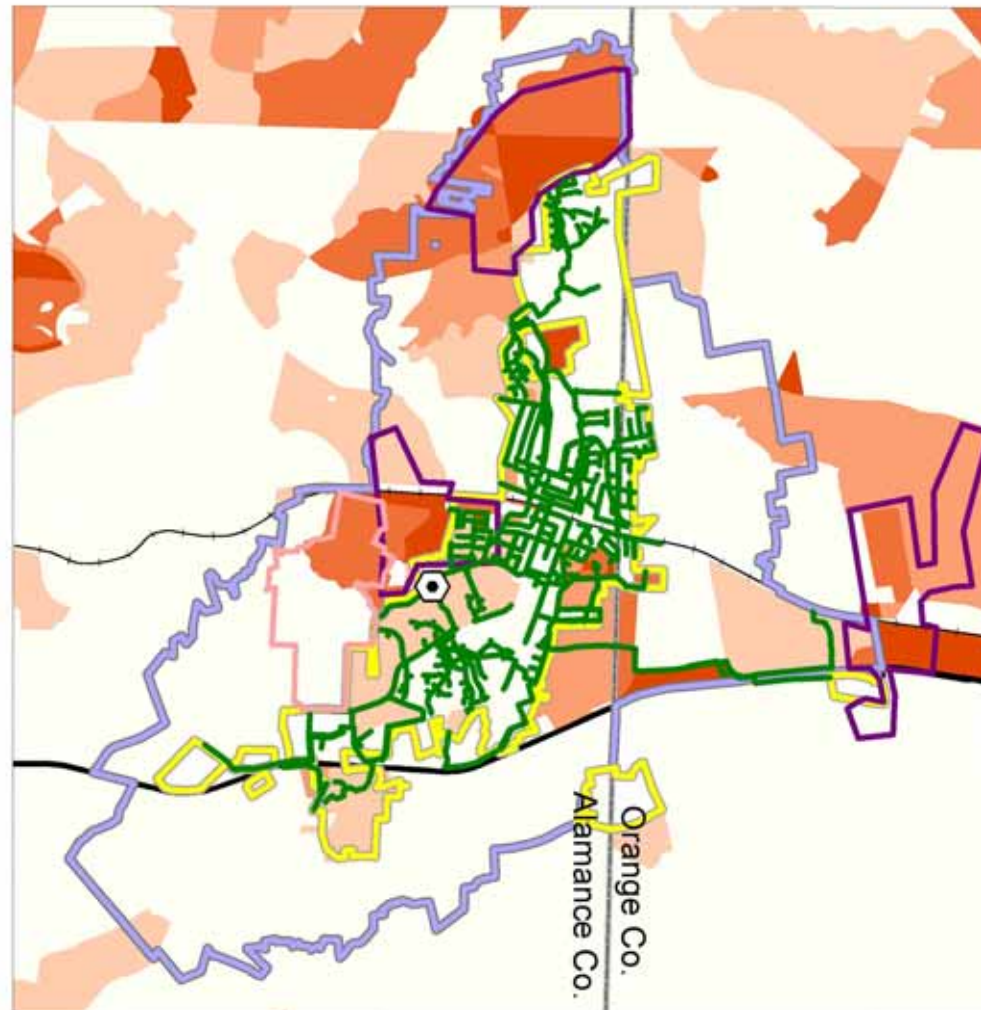
Map 5. Mebane Sewer Lines, Compared to Racial Composition

Mebane Sewer Lines, Compared to Racial Composition

-  Mebane City Limit
-  ETJ boundary
-  African-American
Communities
-  Mebane Sewer Plant
-  Sewer Lines

Percent African-American, Census 2000

-  0% - 20%
-  21% - 40%
-  41% - 60%
-  61% - 80%
-  81% - 100%
-  no data



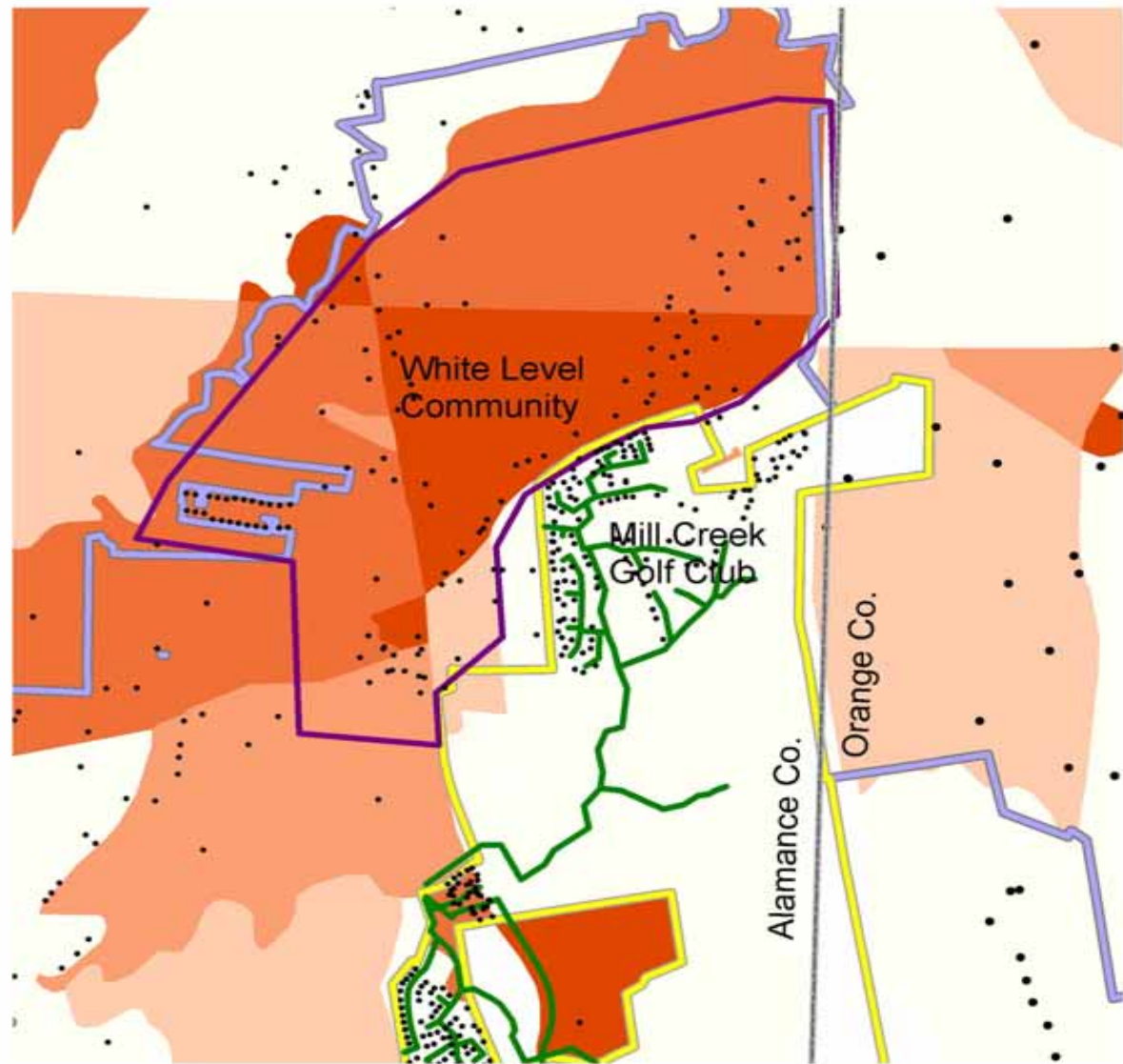
Map 6. Sewer Service to White Level Community and Mill Creek Golf Club

Sewer Service to White Level Community and Mill Creek Golf Club

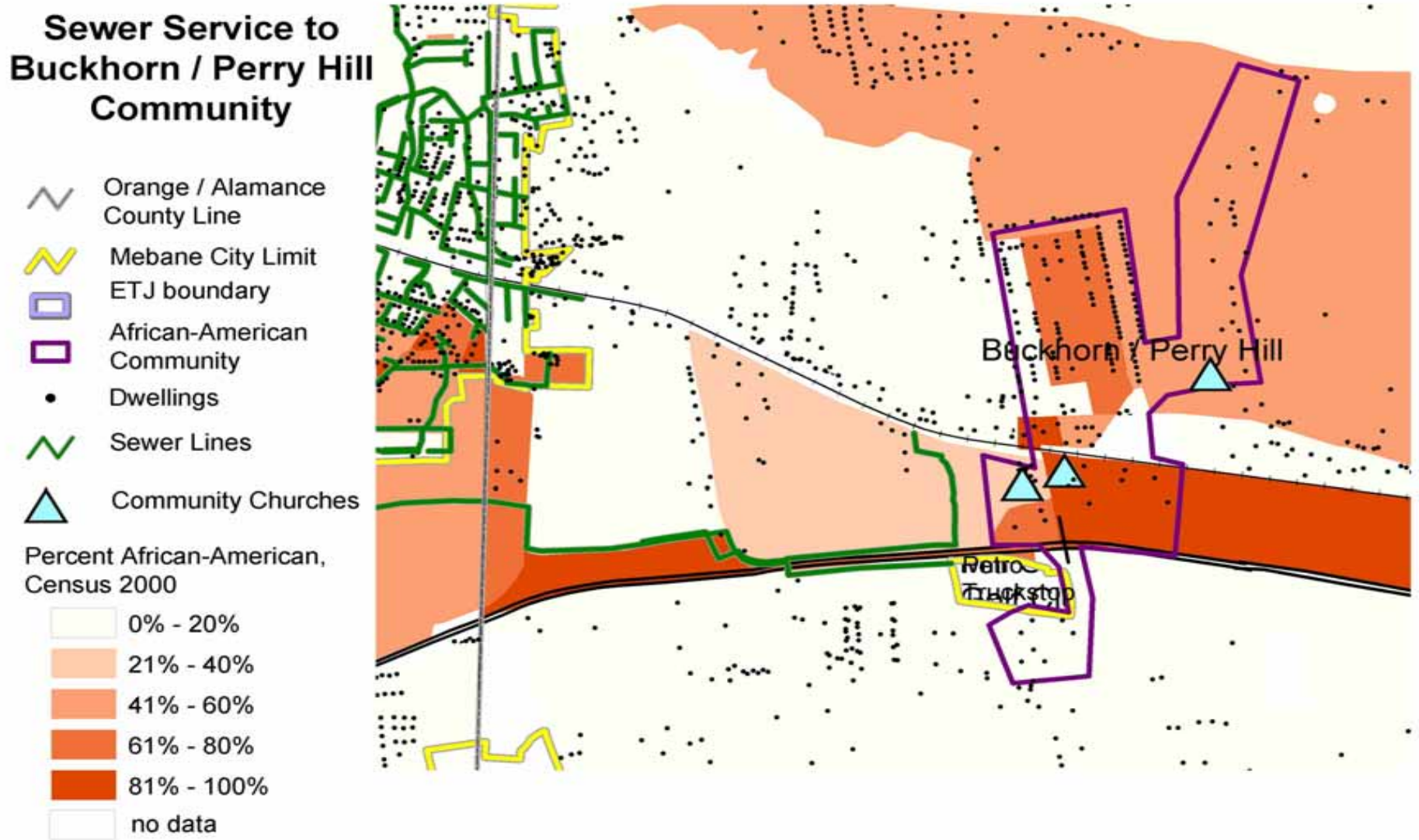
-  Mebane City Limit
-  ETJ boundary
-  African-American Communities
-  Dwellings
-  Sewer Lines

Percent African-American, Census 2000

-  0% - 20%
-  21% - 40%
-  41% - 60%
-  61% - 80%
-  81% - 100%
-  no data



Map 7. Sewer Service to Buckhorn/Perry Hill Community









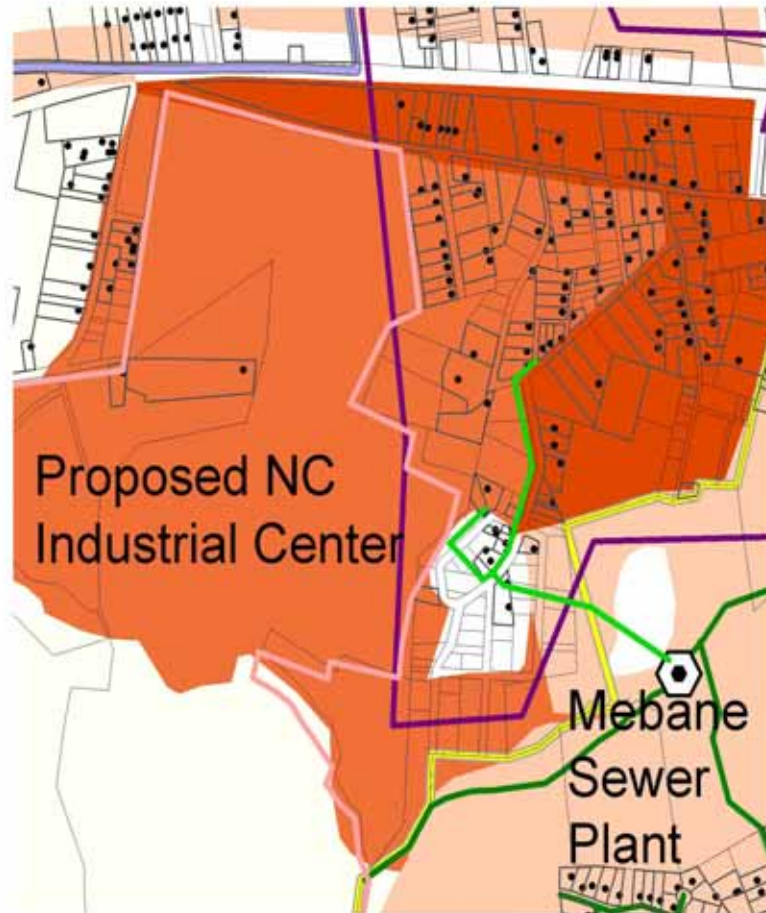
Map 8: Proposed Sewer Extension, CDBG West End

Proposed Sewer Extension, CDBG-West End

-  NC Industrial Center (per NC DOT)
-  Mebane City Limit
-  ETJ boundary
-  African-American Communities
-  Mebane Sewer Plant
-  Sewer Lines
-  Proposed Sewer Line Extension
-  Dwellings

Percent African-American,
Census 2000

-  0% - 20%
-  21% - 40%
-  41% - 60%
-  61% - 80%
-  81% - 100%
-  no data



Map 9. Mebane Zoning and Racial Composition

Mebane Zoning and Racial Composition



Zoning Classifications (Left Map)



Percent African-American (Right Map)



Map 10. Mebane's Watershed after Mill Creek Actions

Mebane's Watershed After Mill Creek Actions

