
The Answer Really Lies in The Community: Exploring Inequity in Resilience Planning Through Community Voices

A Study of Post-Florence New Bern,
North Carolina

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Introduction

In 2020, there were 22 weather and climate disaster events with losses exceeding \$1 billion each in the United States (NCEI). According to the National Center for Environmental Education (NCEI), 2020 set the record for the number of billion-dollar disasters sustained in year. Since 1980, the US has experienced 285-billion-dollar weather and climate disasters, where overall damages and costs exceeded \$1.875 trillion. In addition, 2020 is the sixth consecutive year (2015-2020) in which 10 or more billion-dollar weather and climate disaster events have impacted the US (NCEI). This increase in billion-dollar disasters reflects a combination of factors at play. Over the past decade, there has been an increase in population and material wealth that leads to higher damage potential. There has also been an increase in exposure as many population centers and infrastructure exist in vulnerable areas like coasts and floodplains. Climate change also plays a role in increasing the frequency and severity of disasters (NCEI).

However, as Jacqueline Patterson, Director of the NAACP Environmental and Climate Justice Program has said “Climate change affects all, but not all people are affected equally” (USDN, p. 10). The statement also applies to those affected by disasters. The most recent National Climate Assessment states that low-income and marginalized groups with “lower capacity to prepare for and cope with extreme weather and climate-related events” will continue to be most affected, and that “adaptation actions for the most vulnerable populations” should be prioritized (Reidmiller et al., 2018). It has been found that over the past century, those least able to adapt, are increasingly concentrated in hazard-prone areas after disaster events occur (Reidmiller et al., 2018; Hardy et al., 2017). However, coupled with exposure to environmental hazards are issues of racism, poverty, housing, age, employment, language barriers, and health that all influence people’s ability to recovery from and adapt to disaster events. While these factors influence vulnerability, disparities are a result of structural racism, discrimination and systemic inequity, further perpetuated by traditional policy and planning practices that fail to include the needs of communities most impacted by disaster events (Hardy et al., 2017; Thomas et al., 2019; USDN; Wilson, 2020).

As cities in the US begin to address climate impacts like natural disasters, strategies incorporating equity into planning and mitigation efforts are needed (Wilson, 2020). However, a recent study found that while equity is receiving more attention in planning discourse, “the uneven impacts of hazards on socially vulnerable populations” are often ignored by traditional planning efforts (Berke et al., 2019; Wilson, 2018). This was observed in 2018 when Hurricane Florence hit the North Carolina coast resulting in \$16.7 billion in damages (NWS). The city of New Bern, NC was hit particularly hard, and in the aftermath of the hurricane stark patterns of inequity were revealed. Recently, a study examined a handful of plans in New Bern, and found that social vulnerability was not prioritized across the City’s network of plans. Further, the study found that resilience was prioritized in neighborhoods deemed less socially vulnerable, however, highly socially vulnerable communities had plan policies that decreased resilience. As the city develops a new resilience and hazard mitigation plan and invests in adaptation, its critical to understand the observed inequities and address them in new plans and policies.

There are many contributing factors that influence the inequitable outcomes observed in New Bern. This paper seeks to understand some of those contributing factors. Through qualitative research, this paper aims to 1) understand the community’s perspective on the challenges facing both recovery and resilience planning in New Bern, 2) elucidate how those challenges may perpetuate inequity in recovery and resilience planning, and 3) use this understanding to find opportunities for New Bern to better address inequity in the planning process. In asking the following research questions, this paper hopes to shed light on the biggest barriers facing equitable resilience in New Bern and potential solutions:

1. What challenges is the community facing when it comes to the recovery process and resilience planning?

2. How do these challenges contribute to the inequity observed in recovery and resilience?
3. In understanding these challenges, how can New Bern begin to address inequity around disaster recovery and resilience?

Literature Review

The terms resilience and vulnerability are distinct but overlapping terms that have a different meaning within different disciplines. Resilience emerged from the ecological sciences to address persistence and change in ecosystems; however, the term has been adapted by the natural hazard's communities of the social sciences (Turner, 2010). According to The National Research Council (NRC), resilience is the "ability to prepare and plan for, absorb, recover from, or more successfully adapt to actual or potential adverse events" (NRC, 2012). This is the meaning of resilience that will be used in this project. The concept of vulnerability developed largely from the social sciences and addresses risks and hazards (Turner, 2010). Turner further explains vulnerability as the degree to which a coupled human-environment system is likely to experience harm due to exposure to a hazard (Turner, 2010). Put simply by Berke et al. (2015), vulnerability is the susceptibility of people and the built environment to loss from hazards.

Social vulnerability is another key term that should be unpacked. Otto et al. (2017) explain that "social vulnerability is used, defined, and conceptualized in many different ways and is often linked to associated concepts such as resilience, risk, exposure, sensitivity, and coping capacity." Social vulnerability often refers to the population characteristics that have historically made certain groups of people more or less at risk when they are exposed to the impacts of a hazard event (Cutter, 2010; Berke et al., 2019). Common and determining characteristics include age, gender, income, race, and ethnicity, and language capacity (Cutter et al., 2003; Berke et al., 2015). However, additional characteristics can include social networks, education, cultural knowledge, and political power (Otto et al., 2017).

It should be noted that there is growing body of literature that debates the use of the term "vulnerable" or "socially vulnerable." There is increasing discussion among disaster scholars and leaders who worry the term is insulting to the communities identified as vulnerable by suggesting that those communities are inherently lacking, rather than focusing attention on the external drivers of vulnerability (Marino and Faas, 2020). Often, the communities labeled as "vulnerable" are stable, innovative, and in fact, resilient given their habitual exposure to risk and hazards. Additionally, the term can shift attention to the community rather than the systems and actors that make them "socially vulnerable" by continuing to marginalize and perpetuate the challenges of inequality (Marino and Faas, 2020). This paper urges readers to understand this context in discussions of vulnerability, especially as terms like "social vulnerability" are still widely used in hazard literature.

Examining hazards in the context of equity is not a new concept. Extensive research has been done on how inequity has influenced how people are impacted, cope, and adapt to hazards since the 1960s (Berke et al., 2019; NRC, 2015). This research has advanced the field's understanding that even if different groups share similar exposure to a hazard, some groups may have a greater capacity to anticipate, cope, and recover from a disaster than others (Berke et al., 2019; Howell and Elliott, 2018). Recognizing that many factors influence vulnerability, Thomas et al. (2019) identify four broad themes in understanding the social aspects of vulnerability to climate change: resource access, governance, culture, and knowledge. Within these larger themes the paper examines the influence of poverty, race, power differentials, civil society engagement, representation, and other factors, to better understand differential vulnerability to climate change.

It has been found that over the past century, those least able to adapt, are increasingly concentrated in hazard-prone areas after disaster events occur. Likely, this is a result of those with resources (less vulnerable) relocating to areas of lower risk (Berke et al., 2019). However, Hardy et al. (2017) stress the importance of examining how race intersects with risk and exposure to climate hazards. Hardy et al. (2017) found that climate hazards, particularly in eastern US, are disproportionately impacting black communities.

The paper states that “vulnerability to sea-level rise on the US East and Gulf Coasts cannot be disentangled from the histories of race and contemporary racial inequities that have shaped the socio-ecological formations facing inundation and other forms of change precipitated by a warming climate” (Hardy et al. 2017). This is particularly true given that, as of 2010, in the US South, African Americans comprised 20% of the population in coastal counties extending from Virginia to Texas compared to only 13.6% nationally (Hardy et al. 2017). However, physical exposure isn’t the only concerning trend. Howell and Elliott (2018) found that wealth inequality and rising natural hazard damages are dynamically linked. As local hazard damages increase, so does wealth inequality, especially along lines of race, education, and homeownership. Further, the more aid an area receives from FEMA, the more inequality grows (Howell and Elliot, 2018). These trends will likely continue as climate change is expected to exacerbate current vulnerabilities and inequalities (Berke et al., 2019; Otto et al., 2017).

Such findings point to the growing importance of resilience for the most resource-deprived communities. The Fourth National Climate Assessment highlights that low-income and marginalized groups with “lower capacity to prepare for and cope with extreme weather and climate-related events” will continue to be most affected, and that “adaptation actions for the most vulnerable populations” should be prioritized. Without this prioritization, we can expect to see the continuous pattern of unequal distribution of climate change impacts (Reidmiller et al., 2018; Wilson 2019).

In the report, *Urban Heat Management and the Legacy of Redlining*, Bev Wilson suggests that there is evidence that equity is receiving more attention in planning discourse (Wilson, 2020). However, Schrock et al. (2015) found that “many U.S. cities continue to ignore equity goals as part of their climate and sustainability plans, or at least treat them as secondary or tertiary goals relative to environmental and economic goals” (Schrock et al., 2015; Berk et al., 2019; Wilson, 2019). Similarly, Thomas et al. (2019) explain that “despite these significant developments, scientific and technical approaches to climate change continue to dominate, leaving the underlying social drivers of vulnerability largely unaddressed.” As a result, sectors of planning often miss the uneven impacts of hazards on historically marginalized communities.

Berke et al. (2019) suggest that a major limitation is the lack of socially vulnerability covered in the research and literature on plan evaluation in hazards. Planning scholars have developed theory and indicators to evaluate plan quality with a specific focus on mitigating risk to physical development (Lyles et al., 2014). However, outside of a few studies, social vulnerability has been largely ignored (Berke et al., 2019). A recent study by Berke et al. (2019) used the Plan Integration for Resilience Scorecard (PIRS) to evaluate plan quality and reveal where and how plans disregard social vulnerability and increased exposure to hazards. Recently, the scorecard was used to examine a handful of plans in New Bern (Zito, 2020). Zito highlighted that social vulnerability was not prioritized across the City's network of plans. Further, she noted that districts with better scores were less socially vulnerable however highly socially vulnerable communities tended to have negative scores or policies that decrease resilience.

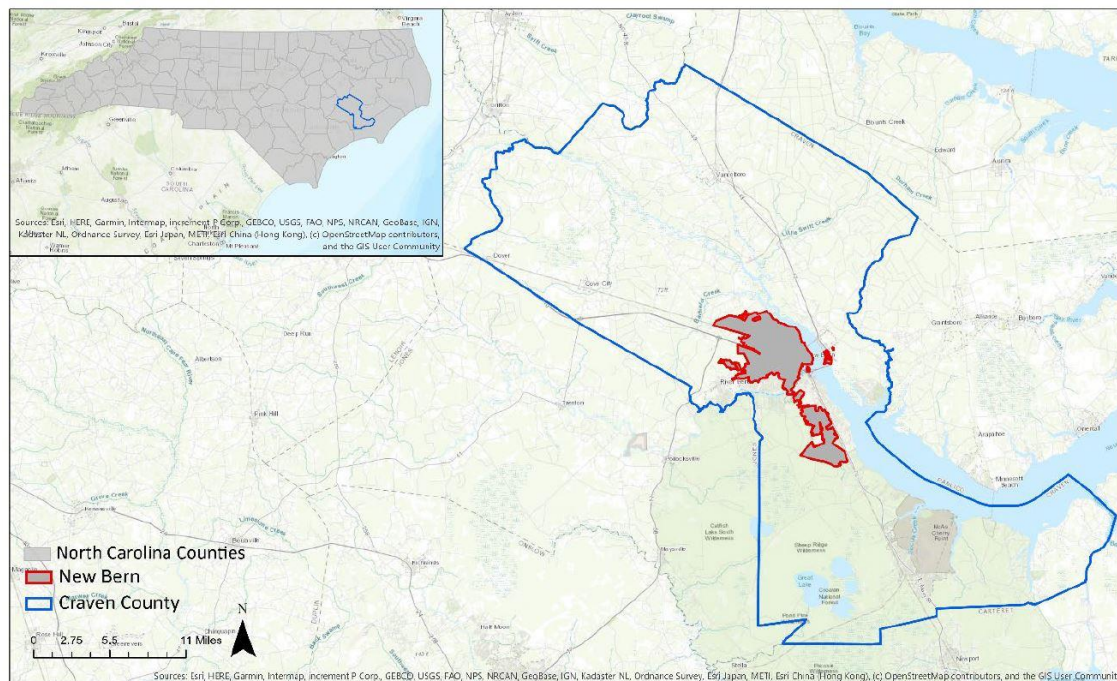
A major challenge in the plan making process is that the creation and decision making around planning policy in the U.S. have primarily been left to scientific and expert guidance. Consequently, public participation has historically been left out or rarely prioritized. This is despite the existing literature that demonstrates that both the quality of hazard mitigation plans and the likelihood that they will be implemented after adoption, tends to increase with the level of public participation during plan making (Burby, 2003). Further, Thomas et al. (2019) explain that representation and inclusion within the adaptation planning process are critical for the success of the plans and their ability to address the needs of those who are most impacted. As defined by Thomas et al. (2019), representation is the ability of different groups to participate in the political processes that establish procedures and influence outcomes, which is crucial for human security in the face of climate-related stressors.

Wilson (2019) explains that disaster events provide an opportunity to expose areas with sensitive populations or low adaptive capacity. Further, planners can examine these areas that have experienced sustained disinvestment and narrow the cities' focus on resilience while addressing the equity dimensions more comprehensively (Wilson, 2019). The literature explored in this paper demonstrates that approaching resilience with business as usual tools will continue to perpetuate solutions that benefit a few and maintain the existing inequalities we see today. Specifically, the literature highlights the importance of including the community in the planning process, and centering issues of equity in resilience plans. With this understanding, this study will use a qualitative approach to explore some of the challenges and drivers of inequity in New Bern, NC. Further this study relies on the accounts of those impacted by disasters to identify challenges and opportunities for equitable resilience in New Bern.

Background on New Bern, NC

The city of New Bern is located in coastal North Carolina in Craven County and situated at the meeting point of the Trent River and Neuse River which both feed into the Pamlico Sound. These characteristics made New Bern particularly vulnerable to devastating floods during Hurricane Florence in September 2018. With some of the most severe flooding along the coast, city reports detail about 2,000 homes and businesses damaged or destroyed at a cost of nearly \$100 million. The entire city was devastated by the storm; however, the extent of the damage and the ability to recover was not equally distributed in New Bern. Florence revealed neighborhoods and communities that were disproportionately at risk from the impacts of the hurricane.

Figure 1. New Bern, NC Context Map



Source: *An Application of the Plan Integration for Resilience Scorecard*, Zito, 2020

With almost 20% of its population living in poverty, half of them black, the aftermath of Florence exaggerated the visible wealth stratification in New Bern. According to Paschal (2018), just weeks after the storm, it was apparent, street by street, which neighborhoods had the means to bounce back, and which households had lost everything. In Paschal's *The Atlantic* article, a long-term New Bern local reported on their return to the city: "when we got there, it was clear to us that the folks who live in historically black

neighborhoods like Duffy Field and Sunnyside and Trent Court have been left to their own devices, that many of the people were not able to evacuate because they're poor" (Paschal, 2018). The images of a street just off the banks of the Neuse River further demonstrate the uneven impacts of Florence. As shown in the images below, on one side of the street there were several trailer homes that were completely demolished, and on the other side were more expensive homes on stilts that remained largely undamaged.



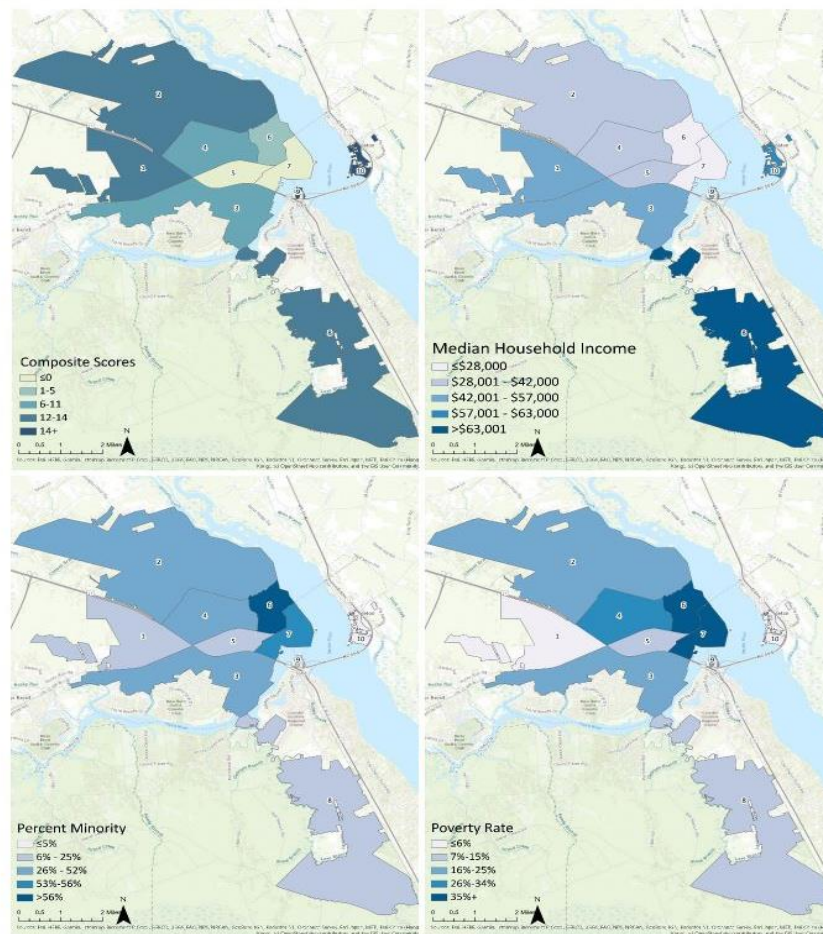
A post-Florence street in the Woodrow neighborhood in New Bern, NC.

Source: *New Bern's Poor Residents Still Bear Florence's Burden*, Paschal, 2018.

In 2019, a DCRP master's student, Francesca Zito, evaluated a collection of plans to examine the degree to which risk reduction was integrated into plans adopted by New Bern, NC (Zito, 2020). Specifically, Zito evaluated five plans used to guide future land use and development patterns, particularly in hazardous areas. A list of the plans she evaluated can be found in Appendix A. She also evaluated the degree to which the policies that incorporate risk reduction, prioritize mitigation in socially vulnerable populations in different geographic areas of New Bern. Using the Plan Integration for Resilience Scorecard methodology, developed by Berke et al. (2015), Zito scored individual policies within each plan based on whether they would increase or decrease resilience. Policies that increase vulnerability (and in turn decrease resilience) were given a score of -1. Policies that decrease vulnerability (and in turn increase resilience) were given a score of +1. For a more fine-grained spatial assessment and comparison, Zito evaluated the plans by 10 districts, delineated by the 10 census tracts that encompass New Bern. Each plan was scored and evaluated individually, and scores were also totaled across the five plans to provide an overall composite score that indicates how integrated for resilience the plans are across each district – a higher score meaning more integration.

Based on scorecard results, Zito concluded that some neighborhoods in New Bern are likely to become more resilient while others are at risk of becoming more vulnerable. Figure 2 shows the composite scores for each of Zito's 10 districts for New Bern compared against demographic indicators. What this figure shows is that districts five, six, and seven had the strongest negative composite land use and development policy scores. They are also among the most socially vulnerable with lower income levels, higher poverty rates, and higher proportions of minority residents. Conversely, districts one, two, eight, nine, and ten have more positive/higher scores, and are less vulnerable in terms of income and poverty rate.

Figure 2. Demographic Indicators (2018): Top Left: Composite Scores; Top Right: Median Household Income Bottom Left: Percent of Population Identified as Minority, Bottom Right: Poverty Rate



Source: *An Application of Plan Integration for Resilience Scorecard*, Zito, 2020

In summary, Zito found that communities with a higher percentage of people of color and higher rates of poverty were not prioritized across the community’s network of plans, leading to an inverse relationship. That is, districts with positive, or relatively higher composite scores are those that are less socially vulnerable, while highly socially vulnerable communities tended to have strong negative composite scores. This pattern reinforces uneven losses in the aftermath of disaster events, echoing the literature on unequal vulnerability to natural disasters.

In 2020, New Bern began working on a multi-phase, long-term hazard mitigation and resiliency plan. The City has hired Moffatt & Nichol, in partnership with NEMAC + Fernleaf and the Craig Group, to develop a comprehensive city-wide resiliency and hazard mitigation plan. Around the same time, the city adopted a new Redevelopment Plan targeting neighborhood included in Zito’s least resilient districts (five, six, seven). The population in these neighborhoods are predominantly black, resource limited, and extremely vulnerable to flooding. Since Hurricane Florence in 2018, the city has received over \$2 million dollars in grants to improve resilience in New Bern. With plan development underway, and new investments being made, it is imperative that New Bern decision-makers learn from and understand the contributing factors that led to the inequities highlighted in the aftermath of Florence.

In order to understand this inequity, it's important to understand New Bern's unique and complicated history. It is also important to understand the demographic distribution within the city today. This context is critical to understating the information and stories shared by the interview participants.

New Bern, NC History

Starting from the late colonial period, New Bern and surrounding parts of Craven County had a substantial black population that included both enslaved people and an unusually large number of free people of color. For most of New Bern's history, it was a majority-black community. Even before the Civil War, New Bern was a haven for black artisans to cultivate skills and live in what was a fairly urban area compared to the rest of eastern North Carolina (Bishir, 2013). In 1862, New Bern was captured by Union soldiers, establishing it as a liberated city. New Bern quickly became a refuge for freed black people, and by the mid-1860s, the city was a center for black political leadership in North Carolina (Bishir, 2013). Unfortunately, by the late nineteenth century, black disenfranchisement was in full force, and the city saw a growing separation of races and classes, both residentially and in other community institutions. Up until this point, black and white residents in New Bern interacted regularly throughout the city, sharing churches, political office, business, and mixed-race residential areas. However, with the onset of Jim Crow laws, the black population in New Bern was displaced to particularly swampy and low-lying land, and forced to create their own sense of place in the city (Hanchett and Little, 1994; New Bern Redevelopment Plan, 2020). The black population created and maintained their own thriving community in what is called Five Points. Five Points was a thriving area with black owned business, churches, and neighborhoods. A map of the Five Points can be found below in Figure 3.

Figure 3. Map of The Greater Five Points Area



Source: Greater Five Points Transformation Plan

In 1922, a fire started in a chimney and swept across New Bern. Today the disaster is known as the Great Fire. Over 1000 homes were destroyed, about 25% of the city. The Great Fire left 3000 people homeless, 90% of which were black residents, forever changing the landscape of the Five Points area (Bishir, 2013;

New Bern Redevelopment Plan, 2020). The city would not allow reconstruction of many of the burned homes, forcing a large portion of the black population to leave due to lack of housing, and in turn devastating the economy of Five Points. As a result, New Bern shifted from predominantly black to predominantly white between 1920 and 1940 (Bishir, 2013). Fortunately, during WW II the construction of military bases in eastern North Carolina brought an economic boom for the black residents living in New Bern which brought a resurgence of the black-owned business and vibrancy to the Five Points area. However, the economic success of the 1940s did not last. By the late 1950's and early '60s, Five Points was facing significant social and economic challenges. A huge contributor was the widening of Broad Street in the 1950s (Hanchett and Little, 1994). The four-lane highway destroyed the Five Points business district that was once thriving with black-owned stores and restaurants. Coupled with Jim Crow and attacks from white supremacy groups, like the KKK, the Five Points area lost its economic momentum (New Bern Redevelopment Plan, 2020). The Five Points community has struggled with both large economic transitions, but also with targeted racist policies since its establishment.

Today, the Five Points area remains a historically black community and is located directly west of historic downtown New Bern. It encompasses the neighborhoods of Greater Duffyfield, Dryborough, Walt Bellamy, and two public housing neighborhoods, Trent Court and Craven Terrace. A map of the specific neighborhoods can be found in Appendix B. The area is home to over 3,300 residents (11% of New Bern population), 89% of which are black. Today the Five Points area displays decades of public and private disinvestment. As characterized by the Greater Five Points Transformation Plan, the area suffers from dilapidated housing, minimal public transit, higher incidents of chronic health conditions, and poor educational attainment. According to the New Bern Redevelopment Plan adopted in 2020, while property values are rising in New Bern as a whole, the home values in the Five Points area are less than two thirds of the city average. A breakdown of existing parcels by use and acreage was developed for the redevelopment plan, and the data show that the Five Points area has a vacancy rate of almost 50% (Greater Five Points Transformation Plan). A breakdown of total parcels can be found in Appendix B. A further breakdown and comparison of demographics between the five points area and the entire city can be seen in Table 1, below.

Table 1 – Demographic Comparison: Five Points and The City of New Bern

	TRENT COURT/ CRAVEN TERRACE	GREATER FIVE POINTS	CITY OF NEW BERN
Total Population	1,181	3,343	29,524
Race			
White	4%	7%	58%
African American	95%	89%	33%
Other	1%	4%	9%
Hispanic/Latino	0%	2%	6%
Age			
Under age 17	38%	28%	23%
Above age 55	17%	23%	31%
Total Households	522	1,501	12,770
Average Household Size	2.26	2.30	2.25
Household Type			
Male & Female Householder	8%	13%	41%
Female Householder	75%	34%	16%
Median Household Income	\$8,652	\$29,026	\$37,180
Poverty Rate	83%	36%*	24%
Educational Attainment (25+)			
High School Diploma or Higher	80%	80%	84%
Degree or Higher	2%	19%	24%

*Census tract level

Source: U.S. Census Bureau 2010, American Community Survey 2008-2012 (block group level), New Bern Housing Authority

Source: Greater Five Points Transformation Plan

Table 1 contains data from 2010 and 2012. As of 2019, New Bern had a population of almost 30,000 people, comprising almost a third of Craven County's population. The city has a median household income of \$43,204; however, if you compare median income between black and white residents, there are stark differences. Median income for white households is \$53,462 compared to only \$27,179 for black households. Table 2 further details the basic demographic characteristics of New Bern.

Table 2. Demographic Characteristics of New Bern

Demographic Indicator	New Bern, NC
Total Population	29,895
Median Age	40.4
Race Characteristic	
Percent White	54.3%
Percent Black	30.2%
Percent Asian	5.9%
Percent Other Race or Two or More Races	1.3%
Ethnicity	
Hispanic or Latino	8%
Not Hispanic or Latino	92%
Median Household Income	\$43,204
Total Housing Units	15,793
Owner Occupied	53%
Renter-Occupied	41%
Vacant	12.9%
Population Living in Poverty	18.7%

Source: American Community Survey 5-year Estimates (2015-2019)

The Stanley White Recreation Center

The Stanley White Recreation Center was located in the heart of the Duffyfield neighborhood and was a critical community gathering space, integral to the social fabric of the neighborhood for decades. Unfortunately, it was severely damaged by Hurricane Florence. In 1948, the Cedar Street Recreation Center was built for New Bern's black residents during segregation. Cedar Street was eventually replaced by Stanley White Recreation Center, which was built in 1975, just west of where the old Cedar Street center used to stand. Unfortunately, Stanley White has not been open since the hurricane and was torn down in early 2021. Pictures of the vacant lot are shown below. FEMA granted New Bern over \$5.5 million dollars to rebuild the recreation center, though, the location for reconstruction has been heavily debated.



The vacant lot where the Stanley White recreation center used to stand in New Bern, NC

Currently, the city has proposed moving the center toward the edge of Duffyfield, oriented toward Broad-Street, or downtown New Bern. They argue that this new location will protect the center from reoccurring floods. However, some residents argue that the structure should be rebuilt in its previous location, as it has significant value to the historically black community it was previously centered in. One interviewee said, “there has been a battle regarding Stanley White since Florence.”

This disagreement has been exacerbated by the fact that, allegedly, the city originally told the community they would rebuild the center in its original location. According to interviewees, the city co-signed a letter to FEMA with a community organization, requesting support to rebuild the center in its original location. However, while waiting for FEMA’s response, the city purchased land to relocate the center. According to one resident:

Then the city did some backhanded stuff and bought some property before FEMA even approve the expenditure of the money, knowing that they were supposed to have brought community members together to say hey let's talk about this community's input.

This was after they had already done the resolution telling the residents of Duffy Field that they were going to build it back where it is as long as FEMA tells them that they can. So, FEMA comes back with a decision after they [the city] bought this property, and says, “yup, build it back where it is.” Well now we [the city] can write a letter to FEMA and tell them we actually found a better location outside of the floodplain. It was a lot of finagling politically.

As a result, decisions around the Stanley White center have come to a standstill. With this context, readers will better understand the points raised by interviewees and the challenges they discussed in their responses.

Methodology

Eight semi-structured interviews were conducted with adult residents living in New Bern, all of whom were present during Hurricane Florence in 2018, between December 2020 and March 2021. Selected participants volunteer or work for either a community organization or the city. All participants engage in work that is related to disaster recovery, resilience, education, or planning. The rationale for focusing on these individuals is that they all have experience interfacing with the resilience planning process, and, thus, can reflect on challenges and opportunities. However, it was also important to speak with participants who engage closely with community members in order to understand the perspective of those who lives are impacted by New Bern’s plans and policies. Interview questions focused on four broad themes: Profile of Interviewee and Organization; Neighborhood Perspective on Disaster Impacts; Neighborhood Perspective on Recovery; Engagement in Recovery & Resilience Planning. Interviews were conducted via phone or video conference, and lasted between an hour to two hours. The interviews were audio recorded and transcribed using an online transcription software.

Study Sample

Participants were recruited using snowball sampling. Initial participants were identified via University of North Carolina faculty and students with existing connections to New Bern residents. After the interview, respondents were asked to recommend anyone else who could speak to the types of questions asked. A purposive sampling method was also used to select particular participants from the recommended contacts. This particular selection was used to create balance within the interview sample. Specific attention was given to the neighborhoods and communities participants worked with to ensure the study captured a range of perspectives that speak to the dynamic communities and neighborhoods across New Bern.

There are a few limitations associated with both sampling methods. The snowball method can lead to selection bias where the researcher is speaking to people all with similar characteristics and views based on

the initial identification from a previous participant. The purposive method was used to help mitigate some of those pitfalls by choosing participants with different experiences; however, this method is prone to errors of judgement by the researcher, resulting in a sample that may not necessarily be representative of the larger population. However, this study does not claim to be representative, but rather provide useful insight from engaged and experienced community members.

Participants were not asked demographic information; however, three out of the eight self-identified as black. Participants were asked how long they lived and worked in New Bern. Three were born and raised in the city, two of which were from historically black neighborhoods. Four participants have lived and worked in the city for 10+ years, and one participant moved to New Bern a few years before Florence. All participants engage in work that is related to disaster recovery, resilience, education, housing, or planning.

Data Analysis

The data analysis for this paper drew on two methodologies: first, *A Purposeful Approach to the Constant Comparative Method in the Analysis of Qualitative* by Borije (2002), and, second, *Iterative Thematic Inquiry: A New Method for Analyzing Qualitative Data* by Morgan and Nica (2020). Iterative Thematic Inquiry (ITI) uses the concept of theme as both the essential mechanism for developing research results and a means for communicating those results. The Morgan and Nica (2020) approach uses four main steps to analyze qualitative data: Assess Initial Beliefs as Themes; Build New Beliefs During Data Collection; List Tentative Themes; and Evaluate Themes Through Coding. This paper slightly diverged from the methodology in steps one. Step one uses preconceived beliefs about the study to develop an initial set of themes. This paper did not do that. The researcher did grapple and understand that initial beliefs were present, however, they used an inductive approach – did not develop themes until interacting with the data. After every data collection process (interview), the researcher would list initial themes that were apparent after the first engagement with that set of data. Using both the ITI method and the constant comparative method (CCM), the researcher would both expand and revise the initial themes developed. These themes were broad and continued to build after every interview. The researcher used this initial list to develop an extensive codebook that was applied to each interview once data collection was finished. Drawing from the CCM method, by comparing the data, the researcher was able to inductively, categorize, code, and eventually connect overarching themes.

This process was conducted as follows: 1) Listen to recorded interviews and assess the interview transcripts for common concepts or themes; 2) Add common concepts and themes to ongoing list generated for every interview; 3) Review and refine list of concepts and themes to develop a code book; 4) Code interviews using ATLAS.ti qualitative data analysis program and expand the code book when new trends arise; 5) Compare the thematic elements developed through coding and initial notes and search for overlap and commonality; and 6) Review coded interviews to further draw data into emerging thematic categories.

Findings

The interviews conducted for this study are meant to provide valuable insight regarding challenges and barriers facing equitable resilience planning in New Bern. The findings shed light on how New Bern residents perceive and engage in the planning process. The participants' stories, experiences, and insight, speak to some of the factors contributing to uneven resilience across the city. The results presented in this section can be used to further understand these complex challenges and provide insight that can inspire approaches to resilience planning that best serve all of New Bern's residents. The following section will discuss three important and interconnected themes that arose in the interview analysis.

Avoidance/Lack of Confronting Racism in New Bern

The majority of interview participants recognized the role of race in shaping disaster impacts, recovery, and the resilience process. Most interviewees suggested that there was a blatant disregard on the part of the city to confront and recognize racism and its role in New Bern's history and current demographics. For example, a black participant born and raised in New Bern who works on disaster recovery shared:

I'm from here. I'm telling you. I've been to Alabama. I've been to Georgia. New Bern... the race relations are well behind the times. There is a definite divide, you can see it just driving down the street.

Many respondents discussed New Bern's history and the ways that the historical legacies of, ongoing, racism continue to influence the city today. For example, when asked to discuss the impacts of Florence, the same participant further described the current implications of the historical displacement of black residents to low-lying land.

Duffy Field was hit hard. And when I say downtown was hit hard, but downtown is a bunch of people with money. Particularly, downtown is... when you look at the history of New Bern, downtown – this is an area where black people actually forced out of, and into Duffy Field which is a flood zone. During redlining. Okay. All of these things from the past still play into the present. They play into the present very much so.

However, despite participants' recognition of the racial inequity in disaster vulnerability and recovery, they suggested that a larger sense of denial about the city's history and ongoing racial inequality pervades the community at large. A white resident, born and raised in New Bern and currently working on resilience education, described their experience with people who seemed unaware of the racial tension in New Bern or the ways that those divisions were amplified with Hurricane Florence.

You have the racial and economic divisions and some people will say, 'well, this is horrible. How is New Bern having these problems?' I said, well go to any city in America. We're more residentially segregated today than we were in the 1950s. If you think that New Bern is an anomaly. Then, then you're just naive.

Similarly, a black resident working on disaster recovery described her frustration in trying to raise the issue with an official who refused to accept that racism was still a problem. While the quote above describes a population of New Bernians that deny racism, the following quote is from a black resident who expressed feelings of being unheard in an attempt to discuss and confront the importance of race in New Bern.

The rest of us are screaming 'pay attention. Hey! Yes!' And they're like 'naw, it ain't there'. It does have to do with leadership. I actually, one day, a couple years ago, got into a back and forth with a representative. He is not going to be a representative anymore... This man said there is no systemic racism because there are laws in place to keep that from happening.... We got into this back and forth about it. That's a big part of the problem. And by virtue, and nature of history, it's just to set us in different arenas, right?

Another resident is working with a community organization focused on redevelopment plans and projects. The communities of focus are majority black, and when asked to discuss their experience working on plans, the interviewee said "So, I'm working with an area that's been blighted and underserved, and I can tell you that when I brought up the issue of race... I was told that race is not something we really want to talk about."

These quotes provide perspective on how vastly different people perceive racism and its impacts in New Bern. This is true even amongst those working together on disaster recovery and resilience in New Bern. And, as stated in the participant's quote, this is a "big part of the problem"—one person sees racism as a

fundamental driver of disaster outcomes, while a more powerful colleague does not believe racism is even a problem.

The same respondent, working on redevelopment explained that avoiding conversations about race has introduced tension when certain resiliency strategies are proposed in majority-black communities, but not the white communities that were devastated by Florence. For example, a flood-prone building in the majority black community may be relocated to other parts of the city while an equally at-risk buildings in the majority white community will be raised and adapted in its current location. In the quote below, the respondent is referring to the community's response when the topic of relocation is discussed.

And again, you know, when you look at the white community versus that community [Five Points Area], they'll say, 'well, you know, you don't, you don't tear anything down, right, you just make it better.' And so that was something that came up, which is understandable, like, these are all things that when you look at segregation, and redlining and everything else, you know, and the structural systems that are put in, you know, and you don't talk about that, and you don't unpack any of that, it becomes problematic.

A black respondent, from Duffy Field, shares a similar sentiment that this lack of acknowledgment stands to perpetuate the injustices experienced by the city's most vulnerable residents.

By virtue of not acknowledging history and how it got us here, we repeat the same cycle. We're supposed to learn from history, how can we learn from it if we don't even want to? If we think we're past it? 'That's not a problem anymore. Oh, race relations in New Bern are wonderful.' No, they're not. Everybody claims that.

But the reason for that is, we need to wake up, and we've got to acknowledge that that history has happened and it has brought us here. Because that's the only way we can really find a solution.

When asked about how well they thought New Bern's resilience plans align with the community's defined needs, one interview working on resilience education said that the plans are "good for what they are", but that they deal with issues so politically sensitive that they may not get implemented. Specifically, this respondent discussed the political unwillingness to address certain challenges in the majority-black communities, like the Five Points area, particularly because of the deep racial tension in New Bern.

Where for a politician to touch that area it's a no-win situation. You got to be willing to set your house on fire to be involved with it. And most politicians are not. Most, most people would rather go to the feel-good areas. And there's some areas and those that are going to require difficult decisions of prioritization. And where there has to be great sensitivity to not making one thing worse by making another thing better. And so, I think that it's not that those plans don't involve some fine words, the question will be, is there the political will? Is there the political will to address them?

This quote reflects many of the larger issues around the ways in which the city has failed to confront racism in planning. Racism exists in New Bern and is intimately tied to the distribution of people in the city. There is a sense of denial and discomfort in discussions of racism in New Bern, both historically and today. Issues like flooding are depoliticized and resilience plans fail to recognize racism as a root cause of vulnerability or appreciate racial tensions in the community. As such, plans meant to address flooding are typically ineffective or unable to be implemented.

Cumulative Mistrust

The mistrust that respondents described is rooted in multiple issues, both distinct and layered, that have evolved over time. The culmination of historical and experienced racism, patterns of disinvestment, and feelings of neglect have contributed to mistrust in the disaster and resilience planning process. This is

particularly true for the Duffy Field community, which has been the focus of many planning efforts. For example, when prompted to speak about plans created to reduce flood risk, one interviewee, born and raised in Duffy Field, shared this insight:

I do know that the redevelopment commission, which is specific to Duffy Field, has some mitigation plans that they've been working through. Now, let me tell you this about Duffy Field, do the research. Within the last 20 years, there have been 10 different plans for this community and none of them have ever been completed. None of them. Promise after promise, after promise and then they wonder why the community doesn't trust them.

The same participant explained that after years of unkept promises the community no longer feels as though their input is valued. Or, as another respondent working on redevelopment in the Five Points area, said “you [people in the community] get beaten down like you get jaded.” The former Duffy Field resident working on disaster recovery further explained:

Well, now the community feels like, what's the point. Nobody is going to listen to us. You're going to do what you want to do anyway. And then it makes you wonder, where did the money go though. The money that you were planning to use for these plans...where'd it go?

These statements demonstrate how mistrust can accumulate and breed a lack of confidence in the planning process. However, interviewees discussed mistrust, not only in the planning process, but mistrust of the actual plans. For example, an interviewee who works with a resilience education organization, was asked about flood reduction plans and he said plans are “still undermined by issues of distrust. Both within New Bern, to some degree, along racial and economic lines.” This interviewee was particularly concerned with the controversy around the Stanley White recreation center, discussed in a previous section. Specifically, he noted how racism and mistrust have heightened frustrations around moving the Stanley White center outside of a predominately black neighborhood.

And also, those long-term issues of mistrust based on race and economic conditions have made it challenging developing those plans and challenging implementing anything for those plans. I mean the Stanley White issue that I cited, you know, I don't need to go any further. That's just an example of how a normal linear process that would determine the best way to do something gets belated by issues of trust.

The same respondent further explained how racism in particular, rooted in New Bern’s history, has created feelings of mistrust in the planning process today.

There was incredible black leadership. We were electing blacks to Congress, to the state senate. And these were, these were people being elected by both blacks and whites. And because of that...because of that success, New Bern got a huge target drawn on its back by white supremacists. That leadership had to be destroyed and it was. So, in came full force Jim Crow. So, when you talk about something like the Stanley white issue we've got to remember that the collective memory for the last two or three or four generations, as it is in much of America, is of substantial distrust. So that it only takes a little bit of a rumor, a little bit of suspicion, to be magnified into major distrust.

Several participants spoke of their experiences with racism growing up in New Bern, which created deep feelings of mistrust and resentment in their responses. One participant, in particular, reflected on what it was like growing up black in New Bern. They once worked for the city and discussed segregation, gerrymandering, attempts to weaken the black vote, and described the physical differences between the built environment in the majority-black neighborhoods compared to other parts of the city. For example, the respondent recalls observing uneven investment between the majority-black communities and the

wealthier and majority-white communities, "So, I saw a lot of stuff that wasn't fair, wasn't right, and I realized that certain neighborhoods have been overlooked." In the following quotes, the resident further explains their experiences with disinvestment in the Duffy Field community and how this has manifested in deep mistrust of the city.

They were going to redo areas such as Duffy Field. But every time they got ready, the money came in, they wind up doing something down in that downtown area. And then when they got ready to do what they want to do in Duffy Field. ...they say we don't have it. We run out of money. Run out while you're working around the bridge, you doing everything down there. When the money was supposed to have been for this area. And I learned that when we get... when they used to get certain money in for...I'll say the Duffy Field area, or one of the other black communities, that they wind up buying things and doing other things with the money and then when the Duffy Field issue comes up, they don't have that kind of money and they talk about raising your taxes.

Later, the same resident summarized:

Once they[black residents] ain't trust you, they ain't going to trust you no more. So, it's about trust. I think once a crook always a crook.

To me, you [the city] watch out for one [white residents]. But you don't watch out for the other [black residents]. OK.

In analyzing the interviewees' responses, it is apparent that the sources of mistrust are many and that the causes are layered and complex. These challenges have undermined residents' perception of the planning process and willingness to participate. This has been particularly true for black residents who have confronted a long history of exclusion, marginalization, and disinvestment, breeding, in turn, a lack of confidence and trust in planners and their work.

Poor Community Engagement Practices

It has been discussed at length in planning literature, that both a lack of community engagement and poor practices can undermine the quality and implementation of plans, the planning process, and residents' trust in that process. Many interviewees discussed barriers to participation, highlighting the city's poor engagement protocols, as well as the consequences of not properly engaging the community. For example, a respondent working on disaster recovery discussed the inaccessibility of public meetings due to the level of complexity and jargon used in the conversations.

That's another thing in these meetings. Even when the community is there... stop talking over their heads with all these big words and acronyms, that nobody understands. Some of them I even have to Google and I'm in the rooms with y'all. Stop doing that. That's a big part of the problem. Especially when you're dealing with an area...when the communities you're working with are ones where their education level is between that of 8th and 11th grade.

Some of the other challenges participants shared included receiving late notice about public meetings and participation events, meeting times that conflict with work schedules, and having to rely on online, internet-based, meeting notification. One respondent, that works closely with the Duffy Field community, summarized many of these participation barriers when discussing the poor engagement efforts meant to determine the next steps for the Stanley White recreation center.

They never gave the dates until less than a week before. Then they decided they were going to put the flyer out on a website that's not user-friendly, and in an area where access to broadband is not really easy due to income and inability to afford it. And then you say 'hey nobody's showing up'. But you didn't go knock

on doors. You created this advisory council that was supposed to more directly connect the community to what the city was doing, and yet the community is at the third meeting saying, 'these people never spoke to us'. So, the engagement piece is a big problem for us. In general, there is no true engagement. True engagement is not posting a flyer on social media, or on a website. It's not picking 13 people that you feel are the community leaders and having them speak for 500 to 600 people. That's a big part of our problem.

When asked what could be done to engage more people in the planning process one participant, who works for an affordable housing organization, discussed the importance of bringing the conversation to the communities you want to engage.

Simple, we have to meet the people where they are. The planning has to be moved from downtown and moved right into the neighborhood. We have to meet the people where they are and really talk with them about what's going on and get input from folks there and really have a clear dialogue about what we're doing and why we're doing it.

We have to step outside of the meeting room in City Hall and take it to the church parking lot or take it to the Community Center. Take it someplace where we can just have the face to face, well it's kind of hard with COVID, but have the face-to-face conversation about, you know, what you need. What's going to make it better for you and what's going to be best for your kids, your grandma, and so forth and really just have that conversation, say, 'Okay, here's what we can do'. Instead of holding the meeting and giving people two minutes to voice their opinion, it's...that's not the way to do it.

This respondent also suggests that community meetings should create a dialogue where residents can discuss challenges and offer solutions, while city representatives can listen, discuss potential solutions, and explain why certain decisions are made.

Many respondents discussed the lack of space and opportunity for community members to participate in the decision-making process. When asked, 'what are the remaining needs of the community [post-Florence]?' a respondent working with a disaster recovery organization discussed the need to create a seat at the table for people who are still suffering from the aftermath of Florence.

And the most important thing, I think, is needed for communities that are still suffering, is for those of us who are making these decisions to include them and listen. True engagement. Truly getting people from the community at the table. Don't create these groups to represent a community and the majority of the people that are on them, aren't even from the community – haven't even driven through the community. I think that's, that's engagement. Real engagement.

The same respondent also said that better inclusion would enhance the quality of the city's plans.

If the people impacted the most were truly included in that engagement, I think mitigation plans could surpass anything we've ever thought of. Instead of the people at the table thinking they have all the answers. The answer really lies in the community that's not at the table.

This participant is speaking from her personal experience engaging the community in recovery work. She works specifically with low to moderate-income people across New Bern; however, as someone born and raised in Duffy Field, she is often identified as a representative of that community. This respondent has participated in many public meetings and community engagement initiatives and notes that she is often the only person participating as a representative of the Duffy Field/black community.

So, there are many times that I'm at tables. And I'm trying to figure out why I'm the only one. Why am I the only me at this table? Or, where are the other people that are familiar with this community? So, a big piece of it is too, is not just engaging them, but actually creating space at the table to have these capacities.

This reflects a broader problem of tokenism in the participation process – relying on a small number of people of color from Duffy Field, to represent the entire community's interests and needs. Another black respondent who used to work for the city of New Bern described similar experiences. "Now they don't mind calling certain people. They used to call me all the time. And I'm not even in office no more now."

This resident describes his experience with the city consistently turning to a handful of specific voices to receive guidance or share information with the "black community". These two interviewees are expressing frustration around the lack of opportunities for community members to genuinely participate, and the reliance on select voices to represent the many.

The examples presented thus far highlight some of the respondent's frustrations with community engagement experiences they have encountered in New Bern. Respondents also discussed, at length, the consequences of these poor engagement practices. For example, a respondent working on redevelopment in New Bern, argued that high levels of mistrust have grown out of poor community engagement. When asked what can be done to engage people in the plan-making process, this is what they shared:

I think you have to convince them that whatever it is that they say is going to be listened to, and it's gonna make a difference. I mean, there's a basic sense of distrust, that they're just going through these motions in order to fulfill some requirement from FEMA and that's it

The Stanley White recreation center came up in every interview, but particularly when respondents were discussing participation in the planning process. Respondents used Stanley White as an example of what happens when residents are not properly involved in the planning and decision-making process. A white New Bern resident, who works on resilience education, shared this thought about the lack of engagement in the Stanley White relocation conversation.

But it's a good example of when you handle something inappropriately, and you don't involve the local community, and particularly seeing as the decision was made virtually by well-off-white people, for a black neighborhood. Then you invite this kind of controversy. So as a result, that project has not even begun. So here we are, three years into it, and there is no recreation center for that community because it's become such a politically hot football that it has not been able to be accomplished.

An interviewee raised in Duffy Field shared another perspective on the challenges with the Stanley White center.

That left the community out of the loop, and my issue with it...and my issue that has always been with it. It's not where you build, it's the fact that I do not feel the community is truly engaged, which is a big problem here.

These examples highlight several common themes that were discussed throughout the community engagement conversation. It is not necessarily the decisions themselves that are problematic, but the lack of community engagement in the decision-making process that presents challenges. This is particularly important to consider when the proposed policies attempt to increase resilience. Insufficient community engagement can lead to mistrust, frustration, and lack of transparency. Additionally, limited community engagement leads to decision that do not reflect the on-the-ground realities.

Discussion

This paper asked three questions to gain a better understanding of the biggest barriers facing equitable resilience in New Bern. What challenges is the community facing when it comes to the recovery process and resilience planning? How do these challenges contribute to the inequity observed in recovery and resilience? In understanding these challenges, how can New Bern begin to address inequity around disaster recovery and resilience? The research presented in this study found that the avoidance and lack of confronting racism in New Bern, coupled with issues of mistrust and poor community engagement practices, are contributing to patterns of inequitable resilience in New Bern.

Racism exists in New Bern and is intimately tied to the distribution of people in the city. There is a sense of denial and discomfort in discussions of racism in New Bern, both historically and today. Hardy et al. (2017) argue that as communities and policy-makers plan for climate hazards, it is “important to recognize the landscapes of race and deep histories of racism that have shaped the socio-ecological formations of coastal regions.” As one New Bern interviewee echoed, “But quite frankly, when the past is still in the present you can't, you can't deny it. From the beginning, for us to fix the issue we have to acknowledge that black people were put in this area because it was the land nobody wanted.” Hardy et al. (2017) further support this sentiment, by explaining that if such history goes unrecognized, it is likely that status quo planning practices will perpetuate environmental racism, characterized by policies that benefit some populations while abandoning others. The authors call this lack of recognition *color blind adaptation planning*, which is defined as “planning practices and policies that altogether overlook racial inequality—or worse dismiss its systemic causes and explain away racial inequality by attributing racial disparities to non-racial causes.” In New Bern, issues like flooding are depoliticized and resilience plans fail to recognize racism as a root cause of vulnerability or appreciate racial tensions in the community. As such, plans meant to address flooding are typically ineffective or unable to be implemented.

Additionally, avoiding the topic of racism in discussions of resilience to natural hazards inherently overlooks the key issues that make some populations more vulnerable than others. Structural and institutional racism has resulted in the disproportionate distribution of benefits and burdens in society, which results in increased vulnerability to natural hazards. Ignoring issues of race ignores the structural practices and policies that determine access to resources, power, and people's overall ability to cope with natural hazards. For example, racism and poverty have direct impacts on income and wealth, health status, and neighborhood conditions, all of which contribute to communities' sensitivity to hazardous impacts and their ability to adapt (Thomas et al., 2019).

It is apparent from interviewees' responses, that historical and experienced racism, along with patterns of disinvestment, and feelings of neglect have contributed to mistrust in the disaster and resilience planning process. In analyzing these responses, it is clear that a few major consequences have developed as a result of mistrust. For example, mistrust rooted in disinvestment and experienced racism has challenged the acceptance of proposed resilience policies and practices. This has been particularly true for black residents who have confronted a long history of exclusion, marginalization, and disinvestment, breeding, in turn, a lack of confidence and trust in planners and their work. As respondents shared in their interviews, resiliency methods, like relocating a building out of a flood-prone location, received pushback from residents living in communities that have been displaced and disinvested in for decades. The Stanley White recreation center is a perfect example. It is also an example of how issues of mistrust coupled with poor community engagement can foster animosity towards policies that seek to increase resilience. As participants noted, “It's not where you build, it's the fact that I do not feel the community is truly engaged, which is a big problem here.” As Thomas et al. (2019) explain, “Scientifically sound and socially robust approaches to resilience involve the community in every stage of the process: identifying issues, designing responses,

implementing actions, and evaluating results.” However, respondents explained that mistrust is a fundamental barrier to participation. Mistrust rooted in disinvestment and failed engagement practices, have discouraged New Bern residents from participating in the plan making process. This is not to say that the New Bern residents have a lack of interest in participating, but rather a reflection on the city’s neglect to engage communities in a meaningful way.

The poor engagement practices described in the interviews both reinforce these feelings of mistrust, but will also likely lead to lower quality plans that may not reflect the needs of New Bern residents. The existing literature demonstrates that both the quality of hazard mitigation plans and the likelihood that they will be implemented after adoption, tends to increase with the level of public participation during plan making (Godschalk et al., 2003). However, it is not enough to open up a seat at the table, the techniques, and strategies used to engage the public is just as important (Arnstein, 1969; Stevens et al., 2010). One interviewee suggested that New Bern planners create an engagement process that fosters dialogues with the community. Rowe and Frewer (2005) call this *public participation* where, “the act of dialogue and negotiation serves to transform opinions in the members of both parties.” Such activities have shown that public participation is higher when planners implement information sharing techniques that are “direct, interactive, and personal in nature” (Stevens et al., 2010). For example, community forums, goal-setting workshops, and advisory committees. Further, techniques that strive for dialogue and deeper information sharing can amplify the feeling of control resident have over their lives, provide a sense of belonging in their community, and foster more responsive resilience policies that better reflects residents’ preferences (Stevens et al., 2010). Creating space to have conversations centering residents’ needs may provide an opportunity to address the challenges of mistrust and racism expressed by the interviewees in this study.

While dialogue and information sharing are critical for the participation process, the processes may fall short in effectiveness if none of them provide decision-making power to participating residents. For example, participants discussed issues of tokenism, particularly for people of color, which can be confused with or substituted for real participation. In Sherry Arnstein’s *A Ladder of Citizen Participation*, she describes the eight rungs of citizen participation ranging from *manipulation* to *citizen control* (Arnstein, 1969). The top three rungs are *partnership*, *delegated power*, and *citizen control*. The *partnership* model provides the community with a level of negotiation and discourse while *delegated power* gives community members the power to make decisions and provide accountability to the public. *Citizen control* transfers full power to the community providing them with the authority to prioritize programs and direct the planning process completely.

Planners and other decisionmakers should strive to achieve participation that echoes Arnstein’s top three rungs. It is not sufficient to involve or assign members of marginalized groups to decision-making positions without the power to decide. Public meetings and surveys can be useful steps for collecting information, however, according to Arnstein’s standards, public processes must concede and redistribute real decision-making power, and subsequently redistribute political power between powerful stakeholders and other participants.

Conclusion and Recommendations

As the impacts of climate change become more evident, the need to address inequity in natural hazards resilience becomes increasingly urgent. Climate change is increasing the frequency and intensity of weather and climate disasters in the US. Similarly, 2020 was an unprecedented year for billion-dollar disasters (NCEI). With plan development and investment underway, and New Bern actively addressing these threats, it is imperative that New Bern decision-makers learn from and understand the contributing factors that led to the inequities highlighted in the aftermath of Florence. Thomas et al. (2019) argue that “any effort to

reduce uneven vulnerability requires understanding why it exists in the first place.” While this study sought to understand challenges of inequity in New Bern from a qualitative point of view, it is widely understood in planning literature what factors contribute to inequity in resilience at large. Thomas et al. (2019) refer to such factors as *structural deficits* – issues like racism, lack of income, education, health care services, and political power, that contribute to vulnerability. The challenges discussed in this paper – lack of confronting racism, cumulative mistrust, and poor community engagement – perpetuate the issues associated with structural deficits and create barriers for addressing them.

The challenges discussed in the findings section of this paper are not necessarily unique to the city of New Bern. Many local jurisdictions, like New Bern, take steps to reduce people’s exposure to natural hazards, ensure systems are in place to respond to emergencies, and improve assistance after a hazard event. However, these solutions are often not enough to address the social inequities brought about by structural deficits (USDN; Thomas et al., 2019; and Wilson, 2020). *Bev Wilson (2020) and Hardy et al. (2017)*, argue that cities can use adaptation and resilience as an opportunity for social reform and revise the inequalities that have developed within the built environment. To do so, cities must shift away from a one-size-fits-all approach to planning towards one that is tailored to fit the unique social contexts of communities (Janes, 2013). Specifically, for the city of New Bern, resilience planners will need to find way to address issues of race head on, intentionally and thoughtfully include residents in the plan making process, and use a combination of resilience tools to address the structural deficits that perpetuate inequity in vulnerability.

Institutionalize Racial Equity in The Resilience Planning Process

For racial equity to be advanced, especially in governments that may unintentionally create or sustain social inequities, explicit discussions of race and racism are vital. It is suggested that the planning department explicitly acknowledge New Bern’s history and challenges with racism in its new resilience and hazard mitigation plan. The city’s Greater Five Points Transformation plan and New Bern Redevelopment Plan detail the racist policies and practices that have led to the current segregation observed in the city today. Including a similar explanation in the resilience plan, acknowledges the connections between structural racism and vulnerability to natural hazards. This also creates an opportunity to include resiliency policies that address the root causes of vulnerability.

The Urban Sustainability Directors Network (USDN) suggests the institutionalization of racial equity in the decision-making process. This institutionalization requires a step by step evaluation and consideration for how race factors into adaptation and resiliency decisions. The USDN suggests a three-step process for how to strategically approach this tactic. The first step is *Normalizing*, which seeks to normalize conversations around race and the effects of racism and it creates a shared understanding of organizational priorities, viewpoints, and values. The next step is *Organizing*, which is meant to build partnerships and mechanisms for engagement. This is about organizing planners and partners to mobilize and engage people to get the critical feedback and support they need to grow and continuously advance the work through an iterative and cyclical process. The last step is *Operationalizing* which involves the operationalization of strategies, uses data and tools that enhance strategies to advance racial equity within the planning process (USDN).

To implement such a framework, it is recommended that New Bern planning staff develop a racial equity toolkit that specifically outlines how conversations about race will happen, who should be involved, and how to apply these discussions to resilience planning. It should be a formalized document that is co-developed with city officials, facilitators, and communities of color. The toolkit development team can also co-create decision-making roles for planners and community leaders of color in New Bern. This tool kit should be applied to the city’s hazard mitigation and resilience plans and other hazard/climate adaptation

projects implemented in New Bern. A strategic approach like the Racial Equity Toolkit encourages discussions at the onset of project formation to include issues of power and racial inequalities. This step also prioritizes equity rather than reducing it to a subsequent component of policy and plans.

The City of Seattle created a Racial Equity Toolkit which involves a six-step analysis that is applied to Seattle's policies, programs, and budget decisions to understand how the city's choices will impact racial equity. A similar program could be applied to resilience and other climate adaptation strategies in New Bern. Information about institutionalizing racial equity in Seattle, Washington can be found in Appendix C.

Develop Resilience Plans Centering Community-based Engagement

As discussed above, New Bern planners should revise and strengthen their approach toward community engagement. While, more space should be created for residents to be involved, it's not enough to open up a seat at the table. Planning staff should think critically about the techniques and strategies used to engage the public and strive for the top three rungs of Arnstein's participation ladder.

It is recommended that New Bern create a *Co-Design* process to develop resilience plans that center the needs of its residents.¹ Planners can better collaborate with residents by ensuring that engagement activities are not a one-way transfer of information from the planning team to the community by providing a variety of opportunities for residents to share feedback, participate and contribute input. Some of the techniques that can be used include meetings, focus groups, mapping, email, open forum, and polling software. Planning staff can show meaningful efforts of power-sharing by allowing residents to set agendas and develop and decide on final resilience policies. It is also important to involve a range of stakeholders like, community organizations, non-profits, advocacy groups, local businesses, and a wide range of local residents. New Bern planners should specifically seek underrepresented groups, investing in outreach practices that bring in those who typically are not involved in public participation. Other important considerations include providing non-English materials and congruent meetings for non-English speakers, hold multiple meetings in a variety of locations throughout New Bern, and think critically about how meetings and participation opportunities are advertised to the public. This type of engagement can be used throughout the plan making process and enables different groups to participate in the political processes that establish procedures and influence outcomes crucial for human security in the face of natural hazards (Thomas et al., 2019). An example of a community-planner co-design process used to create a flood adaptation plan for Louisianan parishes can be found in Appendix C.

Create Comprehensive Hazard Adaptation and Resilience Solutions

As discussed in the previous section it is not enough to focus on adaptation and resilience strategies that prioritize physical resilience with little consideration for the systematic inequity that accompanies the impacts of natural hazards. However, traditional adaptation strategies coupled with long-term actions that are aimed at addressing structural deficits can create more effective solutions that enable communities to adapt to flood-based hazards and improve their quality of life and community. New Bern should pursue solutions designed to build community resilience through traditional flood adaptation measures, and reduce social inequities concurrently. The Venn Diagram in Figure 4 provides an example of what inequities can

¹ Louisiana's *Strategic Adaptations for Future Environments* Plan (LA SAFE) utilized an integrated approach they deemed the "Co-design" process. This process combined planning expertise, science, and community members across the coast facing flood challenges. The LA SAFE planning effort was iterative, continually moving between outreach and engagement, research and analysis – and the LA SAFE team met with stakeholders and community partners every step of the way.

be addressed for New Bern to curb vulnerability. Addressing these issues will require altering the way planners and policymakers approach adaptation and resilience planning.

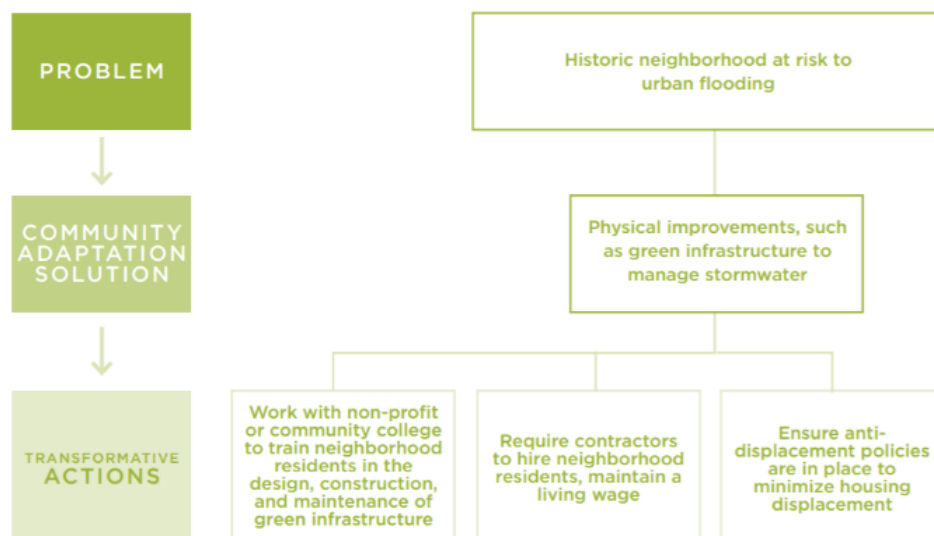
Figure 4. Example of Structural Deficits That Can Be Addressed



Source: *Guide to Guide to Equity Community Driven Climate Preparedness Planning*, USDN

Planners can create a systematic process for thinking through this type of plan development in order to create comprehensive solutions. An example from USDN is shown in Figure 5. The flow chart shows how planners can define a problem, use a traditional adaptation strategy, think through equity considerations, and create solutions that address both hazard risks and underlying challenges like employment and affordable housing. A chart summarizing useful examples and tools used by other localities to achieve the recommended goals described above can be found in Appendix C.

Figure 5. Example of How to Rethink Adaptation and Resiliency Solutions



Source: *Guide to Guide to Equity Community Driven Climate Preparedness Planning*, USDN

Appendix A

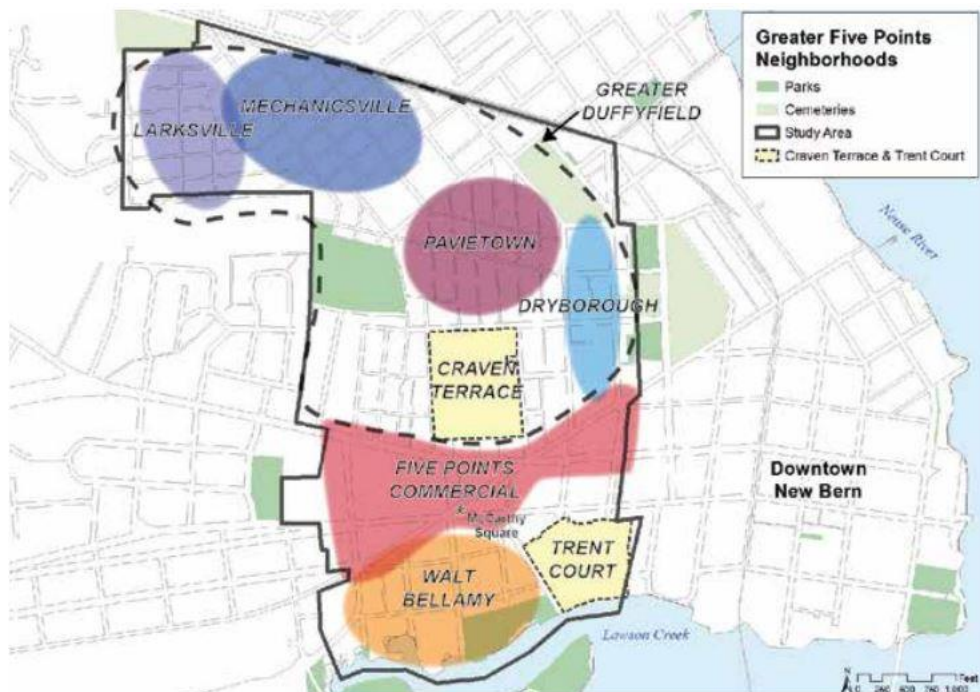
Collection of Plans used in *An Application of the Plan Integration for Resilience Scorecard, New Bern, NC* (Zito, 2020)

Plan Title	Year Adopted	Geographic Coverage
Pamlico Sound Regional Hazard Mitigation Plan (Draft)	2020	Regional – Beaufort, Carteret, Craven, and Pamlico Counties
Hurricane Matthew Resilient Redevelopment Plan	2017	Countywide – Craven County
CAMA Regional Land Use Plan	2010	Regional within Craven County – New Bern, River Bend, Trent Woods
New Bern Area MPO Metropolitan Transportation Plan: Destination 2040	2016	Regional within Craven County – New Bern, River Bend, Trent Woods, Bridgeton, <u>Unincorporated areas surrounding</u>
New Bern Gateway Renaissance Plan	2013	Small Area – New Bern Five Points Neighborhood

Source: *An Application of the Plan Integration for Resilience Scorecard, New Bern, NC* (Zito, 2020)

Appendix B

Map with neighborhoods in the Five Points Area



Source: Greater Five Points Transformation Plan

Five Points Area Parcel Breakdown by Existing Land Use

Existing Land Use	Parcels	Acres	% of Total Parcels
Commercial	66	21.1	3.5%
Duplex	47	6.0	2.5%
Industrial	6	4.6	0.3%
Institutional	58	41.9	3.1%
Multi-Family	24	58.5	1.2%
Office	13	6.6	0.7%
Recreation	4	16.7	0.2%
Single-Family	670	80.6	35.3%
Trailer Residential	118	18.8	6.2%
Vacant	893	124.7	47.0%
Total	1899	379.5	100.0%

Source: New Bern Redevelopment Plan, 2020

Appendix C

Recommendations Examples and Resources

Seattle, Washington Racial Equity Toolkit

The City of Seattle created a Racial Equity Toolkit which involves a six-step analysis that is applied to Seattle's policies, programs, and budget decisions to understand how the city's choices will impact racial equity. The assessment is driven by community stakeholder involvement and identifies program, partnership, and policy strategies for addressing impacts. Emphasis is also placed on evaluation and raising awareness about racial inequities within Seattle. A similar program could be applied to natural hazards resilience and other climate adaptation strategies. A strategic approach like the Racial Equity Toolkit encourages discussions at the onset of project formation to include issues of power and racial inequalities. This step also prioritizes equity rather than reducing it to a subsequent component of policy and plans.

More info: <https://www.seattle.gov/civilrights/what-we-do/race-and-social-justice-initiative/racial-equity-toolkit>

Louisiana's Strategic Adaptations for Future Environments Plan

To address our changing coastline and increased flood risk across our communities and economies, LA SAFE introduced an innovative approach to community adaptation. Through the State's partnership with FFL, a first of its kind collaboration between a state government and a philanthropic organization to address climate change and adaptation, LA SAFE assembled partners from across sectors and committed to a community-driven planning process — including 71 individual public events across the six-parish region engaging nearly 3,000 individual residents.

In order to prepare for a more resilient future, LA SAFE utilized an integrated approach combining planning expertise, science, and most importantly, community members across the coast who face the challenge firsthand. The LA SAFE planning effort was iterative, continually moving between outreach and engagement, research and analysis — and the LA SAFE team met with stakeholders and community

partners every step of the way. The process relied on grassroots input from start to finish and will continue to engage and encourage residents through Foundation for Louisiana's LEAD The Coast Program far beyond the completion of LA SAFE adaptation projects.

[Guide to Equity Community Driven Climate Preparedness Planning by Urban Sustainability Directors Network](#)

Delivering more equitable outcomes requires a different approach to planning. Many climate preparedness and adaptation guides exist and most acknowledge the importance of equity and public participation; however, few address equity issues by addressing specific adaptation solutions, tactics for inclusive community engagement, or the root causes of inequities in climate risk. This document addresses these gaps. The purpose of the Guide to Equitable, Community-Driven Climate Preparedness Planning is to provide guidance to local governments in designing and implementing a more inclusive, equitable planning process.

Summary of Useful Examples and Tools Used by Other Localities

Location	Project Title	Description	Successful Strategy
Seattle, Washington	Racial Equity Toolkit	The vision of the Seattle Race and Social Justice Initiative is to eliminate racial inequity in the community. To do this requires ending individual racism, institutional racism, and structural racism. The Racial Equity Toolkit lays out a process and a set of questions to guide the development, implementation, and evaluation of policies, initiatives, programs, and budget issues to address the impacts on racial equity.	-Institutionalization of Racial Equity -Inclusion and Engagement
San Francisco, California	A Work Plan for Public Engagement and Equity in Climate Adaptation Planning	In 2012, the San Francisco Bay Area's Joint Policy Commission commissioned the local non-profit 'Bay Localize' to prepare a regional work plan for community outreach and social equity in Bay Area climate adaptation planning. This report presents a work plan for regional agencies to partner with community groups on climate adaptation, and support local governments in doing so as well. It also provides parallel recommendations for funders and community groups.	-Inclusion and Engagement -Comprehensive Adaptation (Somewhat)
King County, Washington	Equity Impact Review	The Equity Impact Review (EIR) process merges empirical (quantitative) data and community engagement findings (qualitative) to inform planning, decision-making, and implementation of actions that affect equity in King County. Purpose: Ensure that equity impacts are rigorously and holistically considered and advanced in the design and implementation of the proposed action (plan/policy/program development, operations modification, capital programs/projects, etc.)	-Inclusion and Engagement
Norfolk, Virginia	Ohio Creek Watershed Project	The Ohio Creek Watershed includes two residential, predominantly African American neighborhoods: Historic Chesterfield Heights, and Grandy Village. The Ohio Creek Watershed Project is part of Norfolk's Resilience Strategy and supports its three goals: Design a coastal community capable of dealing with the increased risk of flooding; Create economic opportunity by advancing efforts to grow existing and new industry sectors; Advance initiatives to connect communities, deconcentrate poverty, and strengthen neighborhoods	-Inclusion and Engagement (Somewhat) - Comprehensive Adaptation

Source: Urban Sustainability Directors Network

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