Affordable Housing

In

McDowell County:

Planning Internship Report

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1.1 Glossary

Amenity migration: The movement of people based on the draw of natural and/or cultural amenities

Cost-burdened: those who pay more than 30% of their income for housing and/or may have difficulty affording necessities such as food, clothing, transportation, and medical care

Gateway communities: communities outside of national parks, scenic public lands, and other natural amenities

Gross rent: amount of money a landlord charges for monthly rent before any rental assistance

Household: one or more individual living in a residence[1]

HUD: Housing and Urban Development

Industry/employment share: amount of jobs in a particular industry out of total jobs in every industry as a percentage

Whole person health: Both physical and behavioral health, which can be affected by social factors, including access to care, housing, interpersonal violence, education, and transportation

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[1] HUD uses the same definition for family or household and divides the term into three types: family/household; elderly; or disabled. These three types determine housing benefit eligibility (Housing and Urban Development, n.d.a; n.d.b). The U.S. Census Bureau requires a family to be "related by birth, marriage, or adoption and residing together… including related subfamily members." The U.S. Census defines a household as "consisting of a householder living with one or more non-relatives only (U.S. Census Bureau, 2021, p. 10-11)."

1.2 List of Figures, Images, Tables and Maps

1.3 Project Details

Internship Details

<u>Site:</u> City of Marion Planning Department

<u>Role:</u> Shadow and learn from the Planning, Building Inspections, Zoning, and Code Enforcement divisions of the Planning Department. Complete and present an independent project to City Council.

Highlights

- Complete a housing market analysis for McDowell County

- Determine what is considered affordable for the region, according to HUD.

- Locate, catalog, and map the affordable rental options in McDowell County in a pilot study using ArcGIS Field Maps with descriptions, pictures, and useful details about the property for public use.

Project Goals

- Share the pilot map and database with local community organizations to support McDowell County's goal for improving each member's whole person health.

- Observe and analyze the housing market in McDowell County

II. Introduction

McDowell County, located in the western part of North Carolina, is home to around 45,000 living within reach of the Blue Ridge Parkway, Lake James, the Catawba River, the Fonta Flora bike trail, and many other scenic options for visitors and residents (McDowell County Tourism, 2021). The allure of McDowell County is its natural amenities, as well as its proximity to urban Asheville. This unique combination of amenities and a rural population contribute to McDowell County's status as a gateway community. These are communities outside of national parks, scenic public lands, and other natural amenities. (Stoker et al., 2021). They are also the desired destination of amenity migration, or the movement of people based on the draw of natural and/or cultural amenities (Sodja, 2021). Along with a few townships, McDowell County only has one city: Marion. The city motto, "Where Main Street Meets the Mountains", sums up the rural comfort and downtown charm that Marion shares. Considering the natural amenities of McDowell, and its ideal location, the potential for growth and development is clear.

Image 1. Photograph of Tom's Creek waterfall in McDowell County.

In 2006, Marion was one of 33 communities chosen by the NC Rural Center for the

North Carolina Small Towns Economic Prosperity (NC STEP) program. The goal of this

program was to revitalize rural communities where manufacturing had previously supported the

economy (Arnett Muldrow & Associates, 2008). The NC STEP program, among other

initiatives, began the era of development for McDowell County. The downtown business has

grown, and the city of Marion logo is seen on every corner. The only other incorporated place in

McDowell is the town of Old Fort, which is becoming a hot spot for cyclists and a newly

prospering brewery scene (Conley, 2020; Kitsbow Cycling Apparel, 2019; North Carolina

Department of Commerce, 2020).

Image 2. Photograph of S Main Street in Downtown Marion.

With the recent economic development in McDowell County, the next concern is housing. The need for housing is expressed through the vacancy rates for the county. The home-owner vacancy rate is 1.9%, while renters are facing a 6.1% vacancy rate (U.S. Census Bureau, 2019b). The attention given to the region's economic growth has been impressive, but without adequate housing, the whole person health will suffer.

Image 3. McDowell County Health Coalition Logo. Source: Google images.

Whole person health is an idea described by the McDowell County Health Coalition as the physical and behavioral health of a person, which is influenced by multiple factors, some of which are social. These factors include housing, access to care, interpersonal violence, education, and transportation (McDowell County Health Coalition, 2021). There are many local organizations in this area with the goal of improving whole person health. These groups dedicate time, money, and volunteers to growing the strength and autonomy of each individual, in the hopes that these efforts will build a stronger community.

I can attest to the sincerity and passion these local organizations have for their hard work. My role as an intern with the Planning Department was not only to learn from each division in the department and create a project, but to connect with the community and seek out a need with which I could make a difference. During my time with the City of Marion, I was introduced to several local community work organizations. In one of the meetings, I had the opportunity to meet Debora Workman with Marion East Community Forum and Niki Palmer with East Marion Pentecostal Holiness Church. While they enlightened me about many different issues facing McDowell County, the greatest was housing. The church and community forum

work together to provide shelter and food for individuals who are homeless in the county. Their

efforts have not gone unnoticed, and their passion for this work has helped so many people, but

they explained that they are in need of resources, funds, and access to more housing options for

this population. They were not the only group with the opinion that the affordable housing

inventory in McDowell is inadequate. I also met with Alex Portelli with the McDowell County

Housing Advisory Network (M-CHAN), a branch of the McDowell County Health Coalition. He

informed me that M-CHAN developed from a need for housing, especially affordable housing, in

the county. This group is very new and in the beginning stages of development.

       At that point, M-CHAN was in research mode, putting emphasis on the need to

gather as much information about housing in the county as possible. This is where my internship

project fit. I offered to put my field research and analytic skills to use and began developing my

project. The need I filled was the inventory of affordable rental options in the county and

creating a database for the public to access.

Image 4. Photograph of the Blue Ridge Parkway view in McDowell County.

The overarching goal of my research is to gather as much information as possible on McDowell county's housing market and deliver this information to the local organizations whose mission it is to improve the whole person health of this community. I will begin with a review of the current literature and studies on affordable housing projects and policies, the effective uses of housing market analyses in community work, assessments that have already been conducted on the market in McDowell County, and studies that use the application of GIS to housing research. This report will consist of two main parts: a housing market analysis for McDowell County, and a pilot study of affordable rental options database and map. The purpose of completing this report is to provide an extensive base of information about the county's current status for demographics, housing, and the economy. In order to gain a complete visual of

the county's affordable rental status, I chose to use a GIS mobile app. A visual representation of this data will provide community organizations with a tool to use while working with the populations they help in the community. The information for this Affordable Rental Options database is spatial in nature, covering different locations across the county. Data from the topics of demographics, housing, and the economy provides the empirical evidence necessary for McDowell County's arsenal of community workers, in collaboration with local government support, to address affordable housing issues, and create a comprehensive housing strategy designed for future housing policy implementation.

        The method I used was a quantitative research design with a descriptive approach. I completed the housing market analysis with census data and local reports on the status of the county's populations and housing units, home sale market, rental market, employment, and affordable housing, in addition to the rental data. The rental data for the pilot study was collected through canvasing a sample affordable rental options in McDowell County. I then added this data to a spreadsheet with the details of the properties and layered on an interactive map with ArcGIS Field Maps. The findings from the pilot study illustrated a lack of affordable housing in sample areas of McDowell, where the vacancies comprised only 1.8% of the properties I collected. The housing market analysis data also revealed a shift in population growth by age cohort with a higher rate of increase for residents over 65 than under 35, most likely influenced by amenity migration. These details, in addition to the remainder of my results, support a need for a comprehensive housing policy and to provide a wider range of affordable rental and home ownership options.

III. Literature Review

3.1 Introduction

The lack of affordable housing in the United States is a crisis. As an acknowledgement of this crisis, HUD is assigning $5 billion in American Rescue Plan funds to promote affordable housing programs and services throughout the country (Housing and Urban Development, 2021). These funds are in response to a limited amount of affordable housing supply, and an increase in affordable housing demand. Another way to define this supply-demand-relationship is with the vacancy rate. While the data to calculate an affordable housing vacancy rate is limited, the most recent vacancy rate for all homeowners in the United States is 1.6% (Census Bureau, 2019e). That means that if an individual or family were to search for a home to purchase throughout the entire United States, they would have 1.6% available homes to choose from. Combine that with the fact that according to HUD (2020) around 580,000 people experience homelessness on a given night, and the "crisis" label becomes a lot less radical and lot more factual.

This is not to say that the nation has survived over 240 years without addressing the lack of housing, and affordable housing in particular. Affordable housing has been on the federal government's agenda as far back as 1892 (Caves, 1989). From President Hoover to President Biden, affordable housing has gone through many changes. It began as a federal hand reaching in to establish a new construction workforce that could address the shortage of homes available. This then grew into the group called the Division of Building and Housing and the Better Homes organization, which conducted research on housing design and home ownership. As the topic of housing grew, so too did its governmental presence and site development. By the 1980's, the

Housing and Community Development Act was assisting in funds for Urban Development

Action grants, Section 8 subsidy programs, and rehabilitation (Caves, 1989). Around this time,

attention was also given to the homeless population when Congress appropriated $500 million

for homeless assistance (Edson. 2011). Despite the federal government's policy proposals and

ongoing discussions over the years, affordable housing remains an issue.

The goal of this literature review is to provide a summary of the current literature in

affordable housing over time, to identify how housing market analyses have developed and been

utilized for the advancement of affordable housing, to establish what market analysis work has

already been done in my study area, and to provide a review of ArcGIS applications in the

housing topic. I will use this scholarship to provide a foundation of existing knowledge to

support my research and my overarching goal.

3.2 Affordable Housing

According to HUD, households are cost-burdened if they spend 30% or more of

their income on housing costs (North Carolina Coalition, 2019). With this qualification, 27.8%

of all households in the United States, and 21% of the households in McDowell County are cost-

burdened (U.S. Census Bureau, 2019b). The issue of affordable housing is clear. The causes,

however, are not so obvious.

Two key factors that contribute to whether or not a housing market is affordable are

supply and demand. The literature suggests that there are multiple barriers to building up supply

as well as regulating demand. One of those barriers to increasing affordable housing supply

come from a stigma with the phrase, "affordable housing", and the issue of "NIMBYism"

(Goetz, 2008; Nguyen, 2005). NIMBYism stands for "not in my back yard" and refers to

residents of a community having negative attitudes towards affordable housing developments in

their area; one common deflection is that the existence of those developments might depreciate the value of their own properties (Nguyen, 2005). Another big obstacle for increasing supply is at the source, with housing policy. Scholarship on affordable housing development brings focus to the imbalance of incentives in housing policy that favors single-family unit development funded by private owners over multi-family units (Bratt, 2018; Opiyo et al., 2018). Even in instances where developers contribute a significant amount of their work to affordable housing developments, they have voiced concerns when balancing their bottom line with the incentives provided (Bratt, 2018). In addition, affordable housing project managers mentioned a similar balancing act between the level of incentives distributed and providing affordable prices for lower income residents who already are not making enough to afford what is on the open market (Bratt, 2018). This leads into one of the socio-economic concerns of demand which is inequity of choice. Potential home buyers are not all restricted by the same forces of demand. For those with more disposable income, there is a greater level of purchasing power and therefor choice (Opiyo et al., 2018). These obstacle with demand, and especially supply, have escalated the affordable housing issue to the crisis it is today.

In McDowell County, the imbalance of incentives in housing policy is a real challenge facing affordable housing advocates. For gateway communities, like McDowell, additional concerns for supply and demand are unique to their topography and change in demographics. These areas may have less construction occurring due to the protection of national forests, game lands, and watersheds (Sodja, 2021). With consideration for the special concerns of gateway communities, steps towards addressing this challenge will require a combination of for profit, nonprofit, and government agencies making big changes.

Historically, the federal government has made their own attempts to encourage and facilitate movement for affordable housing development. The creation and implementation of federal programs geared towards addressing the lack of affordable housing took off in the late 1920's with President Herbert Hoover (Caves, 1989). At that point the main program was the Division of Building and Housing, using previously unemployed citizens as its workforce. The next step was in 1932 with the Reconstruction Finance Corporation which provided loans for low-cost housing projects, in response to the home foreclosures of the Great Depression (Caves, 1989). In 1937, the United States Housing Act created the legal and financial structure for public housing that remains a standard today. This structure was based on federal funds providing support to local public housing agencies. Some examples of this standard in practice were building projects which housed mostly nuclear families that were struggling due to the Depression. After World War II, these buildings housed mostly veterans due to the Lanham Act, which required public housing authorities to shelter defense workers in their buildings (Edson, 2011).

3.2.1 Project-Based versus Tenant-Based

As time went on, affordable housing was mostly divided into two approaches: project-based or tenant-based assistance. In the 1960's, project-based housing was focused on rehabilitating entire neighborhoods with the Demonstration Cities and Metropolitan Development Act of 1966 (Caves, 1989). Part of this was due to the behaviors of middle-class families flocking to homeownership and leaving single-parent households in the existing buildings. By 1998, Congress required that 40% of public housing units be held for households making 30% of median income. This ratio went through many versions before settling at 30%. Before 1981, the Public Housing Authority set income limits at 80% of median income. This was

moved to 50% that year, and it was not adjusted to 30% until the Quality Housing and Work

Responsibilities Act of 1998 (Housing and Urban Development, 2021a). Rehabilitation-themed

solutions returned in 1993 when the National Commission on Severely Distressed Public

Housing partnered with the Public Housing Authority (PHA) to demolish and replace multiple

housing project developments (Edson, 2011).

        These developments were labeled "public housing", while another form of

assistance fell under the category of "housing vouchers (Housing and Urban Development,

2021d)." These housing voucher developments occurred when landlords contracted with PHAs

to rent some or all of their units to low-income families (Housing and Urban Development,

2021d). This was, and still is, in contrast with public housing developments which base rent

amount on an income percentage formula developed by HUD (Housing and Urban Development,

2007; 2021d). This percentage formula is generally around that 30% mark that was determined

in 1998 (Housing and Urban Development, 2007; 2021a).

        Project-based was the method of choice for governmental attempts to address the

lack of affordable housing, with the construction of multi-family buildings. These were the

multi-story developments of the 1950's and 1960's (Edson, 2011). These same units were the

eye sores of communities and came to their eventual demise in the 1990's when the HOPE VI

program headed their demolition (Edson, 2011). Emerging from the project-based ashes, tenant-

based assistance become prominent (Johnson, 2016). The official name of this assistance is

"housing choice vouchers (Housing and Urban Development, 2021d)." Some other terms for this

type of assistance were "housing allowances", "housing vouchers", "rental vouchers", "rent

certificates", or "Section 8"- but to keep in comparison with project-based, I will refer to them as

"tenant-based assistance", or "tenant based" (Johnson, 2016; Housing and Urban Development,

2021d). Tenant-based assistance took government funds and gave individual households

vouchers to cover rental expenses (Johnson, 2016). These vouchers could be used at different

locations. This opened an opportunity for households to move into different neighborhoods, gain

more selection with their housing choices, and support more independent choice patterns

(Johnson, 2016). Tenant-based also made for a better use of government funds by accounting for

inflation, and raising rents annually (Edson, 2011).

Currently, this tenant-based voucher program is run by funds provided by HUD to

PHAs. The PHAs then disperse vouchers to eligible individuals until they run out, then the PHA

starts a waiting list. The rent amount is based in the same percentage formula as project-based:

around 30% (Housing and Urban Development 2007; 2021a). While tenant-based assistance is a

fairly successful program, the lack of available units cannot meet the demand and opportunity

that tenant-based assistance brings. This is where affordable housing has hit a wall that requires

creative and alternate solutions.

3.2.2 Community Land Trust

One of the suggested solutions found in the literature is community land trusts

(Ehlenz, 2018; Meehan, 2014). A community land trust is a community development strategy in

real estate. This is where an organization, or other entity, takes ownership of the land and the

individual households retain ownership of their homes (Ehlenz, 2018). The first official

community land trust was organized by Robert Swann, an activist, builder, and community

economics theorist (Meehan, 2014). This community land trust was developed in the early

1970's to give African American farmers access to productive land. In more recent examples, the

community land trust managed by the Dudley Street Neighborhood Initiative provided a safety

net against foreclosure for families in Boston. Outside of foreclosure protection, community land

trusts also provide a means for community groups, nonprofits, and local residents to create a

democratically governed body with the common goal of promoting the health and prosperity of

their community (NYC Community Land Initiative, 2017). As far as alternative options for

affordable housing goes, community land trusts are a fairly successful option.

3.2.3 Affordable Housing Cooperative

Another type of affordable housing is an affordable housing cooperative. This is

where a corporation owns a housing property and each tenant pays a fee which gives them the

title of shareholder in the co-op (National Association of Housing Cooperatives, 2021). This

shareholder status is a membership that provides rights, like to live in the unit as long as you

want, and to vote in the corporation's affairs. These rights are contingent on a member's

adherence with the guidelines and regulations of the co-op. Unlike previous affordable housing

options, like project-based housing, the tenants are part owners to their property, and have a say

in the actions that control that property (Sazama, 2000). Another version of an affordable

housing co-op is a limited equity cooperative, where affordability restrictions are in place on the

resale of initial membership shares (Sazama, 2000). With both of these options, members are

encouraged to contribute to the plans for their property and stay involved with its success. The

value placed on civic involvement with co-ops promotes a stronger incentive for members to

take better care of their homes.

3.2.4 Mixed-Income Housing

One of the more commonly used types of affordable housing is mixed-income

housing. This approach is a design tool that combines lower- and middle-income residents into

one development project by placing the income eligibility requirements on tiers. According to

the scholarship, the rationale behind mixed-income housing is that it provides a benefit by place

and people (Lucio et al., 2014). One program within this branch of affordable housing was

HOPE VI (Lucio et al., 2014). The goal of this program was to redevelop public housing and

impoverished neighborhoods through mixed-income development with a benefit by place and

people motivation. The benefit by place was explained as a benefit to lower income residents

simply by being in a more affluent neighborhood. In addition, the benefit by people assumed that

by living in proximity to higher income residents, lower income residents would build their

social capital and find an increase in better opportunities (Lucio et al., 2014). Both of these

benefits have been disputed in the literature and practical cases with this type of affordable

housing. McFarlane (2019) of UCLA Law Review suggested that the management of mixed-

income housing is discriminatory and accommodates existing privilege while ignoring the needs

and rights of those underprivileged. Lucio et al. (2014) highlights how there has been little

evidence found to support any positive relationships resulting from the mixed-income design. In

fact, many studies have been conducted to question the benefits by place and by people that have

been listed as advantages of mixed-income housing (Greenbaum et al., 2008; Kleit, 2005). While

this affordable housing type has been used often, it does not have the independence and foresight

towards autonomy that some of the other affordable housing types have to offer.

3.2.5 Community Development Corporation

Like community land trusts and housing cooperatives, affordable housing tends to

begin with a group of dedicated individuals who all have an interest in supporting a community.

Another group that works in this same fashion is a community development corporation (CDC).

In general, a CDC works as a nonprofit and gains funding through public grants and private

donations (Erekaini, 2014). There are instances, however, where a CDC may use other means to

generate income. For example, a CDC in Chicago, Bickerdike Redevelopment Corporation, manages some rental properties and owns a for-profit construction company (Erekaini, 2014). Whether or not they obtain funding private, public, or a mixture with some revenue, CDCs are some of the most valuable and productive contributors to the affordable housing arena (Bratt, 2009). Their contributions are not only in residential properties, but also commercial properties, community facilities, and neighborhood amenities (Krigman, 2010). A study conducted by the Urban Institute determined that CDC labors yield measurable gains for communities through raised property values. Also, in that study, the residents who were members on CDC teams, or collaborated with a CDC, all maintained their activism and community involvement after affordable housing projects were complete (Krigman, 2010). Some of the criticisms of CDCs name reliance on federal funding, too much focus on business and not enough on community relationship building and excluding private market actors in their development strategies (Krigman, 2010). These criticisms, however, are not echoed in the majority of studies. Bratt (2009) found that CDCs were resilient against weak market conditions, and extremely inclusive with local residents. While not a perfect system, CDCs have the ability to bring more communities to the table and encourage residents to get more involved in the strength and progress of their home.

3.2.6 Shared Equity Homeownership

While community land trusts separate which slice of equity a homeowner versus an organization might own, shared equity homeownership (SEH) is an alternative approach to affordable housing where an organization does not own any part of the property, but rather supports the homeowner, with a few restrictions (Thaden et al., 2013). The nonprofit or government organization will act as a steward. This steward "(1) provides pre- and post-

purchase education; (2) approves first mortgages, refinance loans, or home equity lines of credit;

(3) assists with major home repairs; (4) intervenes to prevent foreclosure; and (5) monitors

compliance with use, occupancy, maintenance, and resale restrictions (Thaden et al., 2013, p.

1176)." In a study conducted by the Urban Institute, homes managed by SEHs were sold for 25-

50% below appraised value (Thaden et al., 2013). While in these programs, homeowners learned

how to become independent in the financial system. Once these homeowners moved out of the

SEH homes, 68-78% of households

 entered market –rate homeownership (Thaden et al., 2013). Even as encouraging as these

percentages are, there are some perceived disadvantages to SEH. During a focus group for a

study on the foreclosure crisis and SEH evaluation in Nashville, some of the participants were

concerned with SEH governance and restrictions on homeowner's freedom (Saegert et al., 2015).

Other issues brought up were homes as inheritance, never owning full equity in the home, and a

reduced reality of ownership. Still others felt that SEH was akin to a traditional mortgage where

the bank owns the home and can impose restrictions on how the home is kept up. The general

consensus was that SEH is in between renting and homeownership, as far as freedom is

concerned (Saegert et al., 2015).

3.2.7 Mobile Homes

While not a modern or inventive option, mobile home parks are a central

component to affordable housing in the United States (Durst and Sullivan, 2018). According to

an analysis from Virginia Polytech Institute, mobile homes make up the largest group of

unsubsidized affordable housing in the United States, with 18 million residents nationwide

(Durst and Sullivan, 2018). These homes are unique due to their option of ownership or rental

use of the home, and/or the land. They have similar natures to community land trusts where a

landlord owns and leases the land to the tenant who owns the mobile home residing on the land.

This relationship can promote the autonomy of homeownership, while limiting the pressures of

land ownership (Brooks and Mueller, 2020). While mobile homes are an affordable option, the

clustering of these homes into a mobile home park, depreciates values of nearby properties

(Brooks and Mueller, 2020). According to the analysis from Virginia Polytech Institute, several

factors contribute to the negative perception of mobile home parks (Durst and Sullivan, 2018).

The lots in these parks are leased by private landlords, with fewer restrictions on qualifying items

to obtain a lease. In some locations zoning regulations prohibit parks from being built within

stick-built home neighborhoods or residential zoned areas with natural amenities (Durst and

Sullivan, 2018). The zoning regulations that do exist in these parks are less strict than those of

other neighborhoods with larger lot size requirements, larger road width requirements, setbacks,

streetlights, and other benefits (Durst and Sullivan, 2018; McDowell Planning Department,

1997). A study conducted by the Department of Agricultural Economics, Sociology, and

Education with Pennsylvania State University found that higher percentages of mobile homes

existed in counties of lower population size and higher rates of growth (Brooks and Mueller,

2020). This study determined that counties with higher natural amenities (such as: proximity to

hiking and biking trails, rivers, lakes, waterfalls, and mountain views) and an increased

immigration of retirees and the neighboring counties' workforce, are growing at higher rates. As

a result, these counties are experiencing a housing crisis, especially for those households with

lower income (Brooks and Mueller, 2020).

      Overall, there have been several different approaches to affordable housing

throughout history. While not all have been successes, these efforts have taught lessons and

provided valuable data on which features are useful and which ones are not. What I have brought

up in this literature review are the different options that exist in affordable housing, and most of

them are not being utilized in McDowell County. We are still learning what works for our

community, and it is important to refer to the literature on affordable housing and be open to

tailoring past policies with new ideas that make sense for McDowell. The real takeaway is that

communities keep trying something new and keep working together. One of the tools that

communities and researchers have used to gather information on their housing markets and

understand which affordable housing options might work, is the housing market analysis.

3.3 Housing Market Analysis

Housing market analyses got their start as real estate appraisals. In the late

eighteenth century, a political refugee from France, Charles-Maurice Talleyrand conducted an

analysis of the American farmer and his choices with real estate in the Frontier (Baer, 2017). He

was also an investment advisor for European clients interested in purchasing property in the

United States. In the first housing market analysis, Talleyrand calculated the following

categories: population growth, land sales, private versus corporate competition with land sales,

property taxes, demand for more land, and price of supply (Baer, 2017). After the spark was lit,

the federal government began to collect and catalog the housing market in the early 1930's, and

the first United States census, including housing characteristics and household demographics,

was completed in 1940 (Baer, 2017).

Since then, housing market analyses have been used for all kinds of reasons. Plenty

of benefits are found in the business and economic sphere, while they have use in the community

and development arenas as well. In an analysis conducted for Minnesota Downtown and

Business districts, the community housing needs, as well as Downtown market opportunities,

were assessed (University of Minnesota Extension, 2011). The authors of the study projected

housing needs through an analysis of the demographics, population growth, existing housing units, and the local economy. This makes housing market analyses invaluable to community development. In another analysis of the New Bern residential market, the researchers identified local challenges for construction with the flood plain, land use, and competition (RKG Associates, 2015). New Bern researchers also noted the opportunities in the market where the City owned land, where housing authorities had property available for use, and potential partnerships between private and public entities (RKG Associates, 2015). Not only did the analysis provide much needed hard data to support future community partnerships, but it also encouraged points of change that might foster stronger relationships between residents, municipalities, and developers. The results of this New Bern study were overall inspired by a modern approach to development, where sustainability and collaboration were paramount (RKG Associates, 2015). Building off of the presented benefits for communities that market analyses can provide, GEM Public Sector Services (2009) concisely and expertly explain the usefulness of these reports while conducting a study area market analysis for Crescent Springs, Kentucky: "the market analysis has become a planning tool as well as a determinant of the need for specific projects (Section II p.3)". These analyses are practical preparation documents, tailored to the subject area where needs have yet to be systematically measured. They give researchers the opportunity to gather and analyze data, then present those results to organizations and groups with goals of community prosperity and development. Market analysis is the foundation from which grassroots efforts can justify their work.

Like with the first housing market analysis, a report should cover a study area's population, demographics, housing and rental market, as well as the status of its economy and employment (Baer, 2017). According to Ellen Dunham-Jones (2010), professor with the School

of Architecture at Georgia Tech, demographic shifts can drive the market, which makes the

population and demographic data invaluable to a true housing market analysis. In McDowell

County, there have been several reports made on the economy and employment, with little

research done for the housing market.

       The North Carolina Housing Coalition (2019), for example, designed a county

profile for the housing need in McDowell. It provides a legible display of the percentage of

households cost-burdened in the county (21%), as well as the annual amount a household needs

to earn in order to afford a two-bedroom apartment with Fair Market Rent, calculated by HUD

(North Carolina Housing Coalition, 2019). This report is only two pages of sentence-long

statistics and graphics, but it packs a punch. The data was collected from the American

Community Survey, the Bureau of Labor Statistics, the North Carolina Court System, the

National Low Income Housing Coalition 2018 Out of Reach report, and the U.S. Department of

Energy. This gives the report a perspective developed by data collected in Census gathering and

national averaging.

       Another analysis of McDowell County is the Strategic Employment Plan Initiative

completed by the McDowell Economic Development Association and the Region C Workforce

Development Board (2018). The main goal of this analysis was to identify who was working in

the county, who was not, and why. They used factors like age, disability, part-time or full-time,

level of education, and industry (McDowell economic Development Association, 2018). They

conducted interviews, focus groups, and surveys with residents, community groups, school staff,

and employers. This unique plan gives insight and an incredibly local perspective on the

workforce and employment sector of McDowell County.

One of the more prominent items in McDowell County's history of research is the City of Marion Economic Initiative Plan: NC STEP Program 2006-2009 (STEP Steering Committee, 2006). The STEP (Small Towns Economic Prosperity) program was developed by the NC Rural Center to support small communities with technical and financial assistance designed to promote their rural economy. Within the document for this program in McDowell are the NC STEP program and its community outreach, community profile, training, workshops, and networks; NC STEP economic initiatives, local branding strategies, technological infrastructure, water and sewer, downtown development, and adaptive development; stakeholders; grant funding opportunities; community-led priorities; and a retail market assessment and marketing plan (STEP Committee, 2006). The groundwork used for the NC STEP program began in focus groups with participation from over eighty community members. From those discussions, several subjects of major interest were identified: land use; economic development; downtown; historic preservation; housing and neighborhoods; parks, recreation, and cultural arts; public facilities; transportation; and civic capital. The plan has steps detailed for every area of interest, along with stakeholders, members and their responsibilities, funding details, timelines, and descriptions for each goal. Even though the timeline for this plan was 2006-2009, its results are visible in the community, today. The "Made in McDowell" branding strategy transferred into the logo for its city of Marion: "Where Main Street Meets the Mountains (Arnett Muldrow & Associates, 2008)." The advertising design from the Retail Market Assessment and Marketing Plan for Marion incorporated elements that you can see in today's downtown Marion. This market assessment, along with the STEP program, provide a thorough idea of what residents in the county thought should be done to improve their economy, housing, and community as a whole (STEP Committee, 2006). In a focus group concerning housing, the

participants emphasized how "good quality housing" and "safe and attractive neighborhoods

foster a strong sense of community (p.7)." The residents of the county proved that they know

how to follow through with plans and show how much they value their home.

The last local report I would like to review is the only document I found that was

strictly assessing housing and prepared locally. The Housing Report for McDowell County,

North Carolina, was prepared by T.R. Brown: Research and Analysis (2019) out of Asheville, for

the formerly named Isothermal Regional Council of Governments in Rutherfordton- now called,

Foothills Regional Council of Governments. This report was limited to senior and working age

populations, evaluating tenure trends, household, and population (Brown, 2019). The goal of the

report was to speculate, through analysis of household projections and population trends, what

housing developments McDowell county could support. Brown (2019) took into consideration

the population change due to births, deaths, and migration; he measured populations by age and

working versus non-working; he evaluated trends in housing based on past levels of homeowners

versus renters; and the number of current homes occupied versus vacancy rates. The results were

that over a five-year period, researchers proposed, McDowell County will need eight different

types of housing to support the population and housing trends and projections. These units

covered market rate, affordable, and subsidized. They also included categories for families,

seniors, for-rent, and for-sale (Brown, 2019). His analysis also highlighted an important detail

when considering the financial ability of residents. While the median income of McDowell

County is listed as $46,900 on the North Carolina Housing Coalition's (2019) profile, Brown's

(2019) data showed how the majority of single-person households' income is less than $10,000

and the nearest majority of single-person household's income is between $10,000 and $14,999.

This different perspective makes the search for accurate data and discussion about that data all the more interesting.

In addition to demographics, spatial data provides a valuable perspective when creating a comprehensive analysis of a housing market. This type of spatial analysis is completed with Geographic Information Science (GIS) applications. Not only does this tool illustrate a unique visualization of the demographic data, but it allows for data from multiple formats and sources to be integrated into one data set. The application of GIS to housing market analysis produces more in-depth, data-driven, and visually understandable results.

3.4 GIS

The field of Geographic Information Science (GIS) emerged with the scientific revolution in the 1960s (Mark, n.d.). Its form and title were labeled as "spatial information science" or "language and spatial cognition." It was not until 1992, when Michael Goodchild gave it its final moniker of GIS. Since the official name change in 1992, GIS has made a tangible mark in the field of geography. In 1998, the application of GIS was used in housing and mortgage market research. A study completed by Ayşe Can (1998) examined the influence of neighborhoods on residential market behavior and the value of using GIS to answer empirical research questions. Can (1998) found four factors that were major market-level influences of neighborhood effects: accessibility; physical environment; social, economic, and demographic context; and public-service provision. This research strongly supported the benefits of GIS applications to market analysis, and defended that GIS offered "an ideal research environment for processing, analyzing, and modeling housing and mortgage data sets (Can, 1998, p. 61)." This study illustrates how GIS produces valuable data for housing analysis and demonstrates the prominent position GIS applications take in housing market research.

Scholarship on GIS applications with housing market analysis describe how the GIS tool is used to create inventory, reveal patterns, and project future developments (Li, 2011; Erdoğan & Memduhoğlu, 2019; Leao et al., 2018). In 2011, researchers in South Florida used spatial analysis to identify patterns in subprime loans and mortgage foreclosures (Li). The spatial distribution of these loans and foreclosures was compared with maps of land use, racial composition, and housing attributes. Researchers used descriptive statistics and hot spot analysis to discover a pattern of increased subprime loans and foreclosures in neighborhoods with minorities and lower income households (Li, 2011). The use of GIS in this study visually revealed a trend that might not have been easily seen otherwise. This is one of the great benefits to using GIS for market analysis; it creates an image that can more easily be understood and recognized than raw data. In another example, researchers in Turkey used GIS to examine the real estate sales between 2004 and 2017 (Erdoğan & Memduhoğlu, 2019). The results of this spatiotemporal analysis illustrated an obvious difference in real estate sales between regions. Researchers found the data gave insight into migration, population distribution, and urbanization, while also highlighting areas for investment planning (Erdoğan & Memduhoğlu, 2019). GIS has a history of identifying areas for potential investment and growth.

One of the ways GIS revealed an area of potential growth was in Sydney, Australia (Leao et al., 2018). A team of researchers wanted to test the usefulness of the GIS tool as a comprehensive model in urban planning. They assessed the financial achievability and housing supply for urban redevelopment of parcels in a specific region. The findings concluded that the GIS tool was extremely useful as a comprehensive model. It identified opportunities and barriers for areas of interest and estimated potential residential and commercial supply under certain scenarios, which was then compared with housing demand projections (Leao et al., 2018). GIS

applications in housing research is ideal for determining where there are opportunities in the

market, and where there are barriers. The GIS tool is not only beneficial to the development in

the mainstream housing market, but also in planning for affordable housing. In Buffalo, New

York, housing organizations were struggling to navigate the housing market and provide

residents with the vital affordable housing options they needed. A group funded by the

Undergraduate Summer Research Fellowship Program grant, with Buffalo State University,

completed a study to collect and analyze property data for the area. The results of this project

were delivered to the local community-based organizations in Buffalo to support their work with

affordable housing (Knight et al., 2018). The researchers used GIS applications to create an

easily accessible database for organizations to use when navigating the local housing market for

affordable options. In the database, they included the attributes for the property. For example,

they listed if the property was occupied, its condition, if there were any active improvements

being done, if it was for rent, how many trees there were, and what type of structure it was, to

name a few (Knight et al., 2018). This study is an excellent example of how GIS applications can

be used as a resource to the progress and success of a better community.

In McDowell County, GIS is used in several areas: 911 addressing, public works,

tax department, planning, parks and recreation, etc. The city of Marion Parks and Recreation

department describes the use of GIS in their 2016 Master Plan (City of Marion, 2016). Here, they

mention how GIS applications are available on their website to view and explore the area. There

are several interactive maps on the city's GIS page, where users can access their solid waste

collection schedule by location, the Catawba River Greenway bank stabilization project, the city

zoning map, and a downtown public parking app, along with a few others (City of Marion,

2021). The city of Marion has made every effort to make their town accessible through GIS,

showing their support for the technology, along with their dedication to community engagement. This is where a gap exists within the County. There are layers available for public access on the County's GIS site, but these are not user friendly or information practical for everyday use (McDowell County Geographic Information Systems, 2021). This is an issue that I plan to address with my research.

Conclusion

The subject of affordable housing has changed and adapted to the market, economy, and population changes over time. While many affordable housing approaches have been implemented and utilized, not all of them were successful. This leaves room for future development and creative suggestions in the public, nonprofit, and corporate spheres. Housing market analyses may offer a means to produce those suggestions based on its historical value in housing programs and community work. Given the use of GIS applications in the field, a combination of housing market analysis and data collection through a GIS tool could address some of the gaps in my review of existing documentation. Based on my review of the current literature in affordable housing, housing market analysis, and GIS applications, I have laid a foundation of scholarship and local reports from which to analyze my internship report results. I intend to use this report for a better understanding of the local housing market, its affordable rental options, and to support the local community organizations in McDowell county whose goal it is to promote the overall whole person health of their neighbors.

IV. Results

4.1 Housing Market Analysis

One goal of my internship was to complete a housing market analysis of McDowell County. I completed this analysis by collecting existing data on the county's population and housing units, home sale market, rental market, employment, and affordable housing options. I obtained this data through local newspaper articles; real estate websites (Realtor, Lake James Team, Redfin, and Zillow) County and City reports and plans; HUD; the U.S., and North Carolina Departments of Commerce; the McDowell County Chamber of Commerce; NC Housing Coalition; NC Housing Finance Agency; NC State Center for Health Statistics; Foothills Regional Commission (formerly Isothermal); and the U.S. Census Bureau.

Once data collection was complete, I analyzed the data through measures of central tendency; calculating rates of change in population and housing units, home sale market, rental market, economy, and affordable housing options; data visualization with graphs and charts, and observation of spatial distribution. In addition, I analyzed specific data for each section of the housing market analysis.

I will share the final results with the City of Marion City Council, McDowell County Government, Foothills Regional Council of Governments, members of McDowell County Housing Advisory Network, Marion community forums, Greybeard Realty, and several community organizations in McDowell county in need of substantial analysis to support their work with affordable housing.

McDowell County, North Carolina
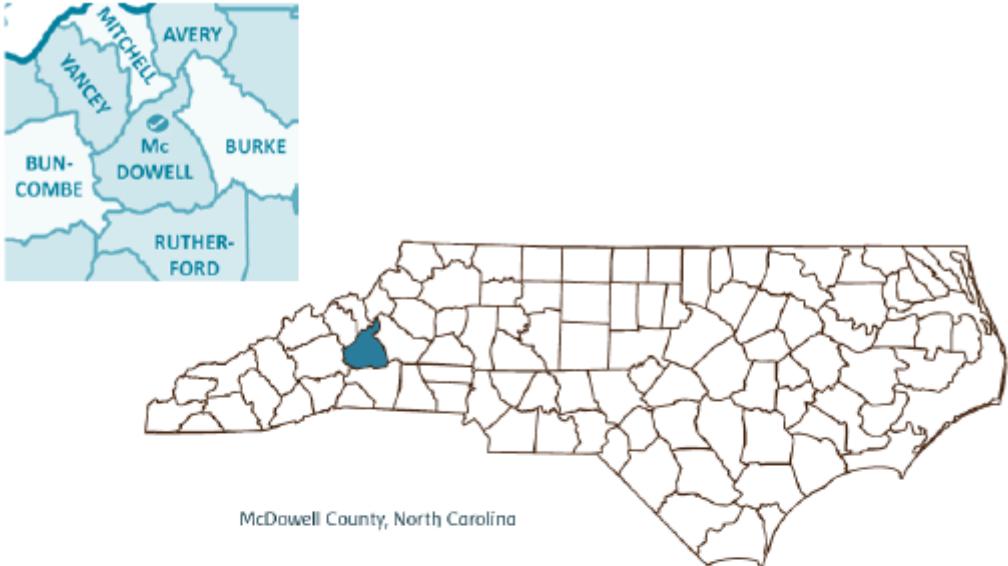
Population and Households
population growth of 1.42% between 2010 and 2019.

(U.S. Census Bureau, 2019a)

Home Sale Market
1.9% homeowner vacancy rate.

(U.S. Census Bureau, 2019b)

Rental Market
6.1 % rental vacancy rate.

(U.S. Census Bureau, 2019a)

Employment
unemployment rate came down 1.8% between 2015 and 2019.

(U.S. Census Bureau, 2019c)

Affordable Housing
35% of renter households have difficulty affording their homes.

(North Carolina Housing Coalition 2019)

Figure 1. Quick snapshot of data on McDowell County for Populations and Housing Units, Home Sale Market, Rental Market, Employment, and Affordable Housing. Sources given.

4.1.1 Populations and Housing Units

Current Population: 45,227

Population Trends
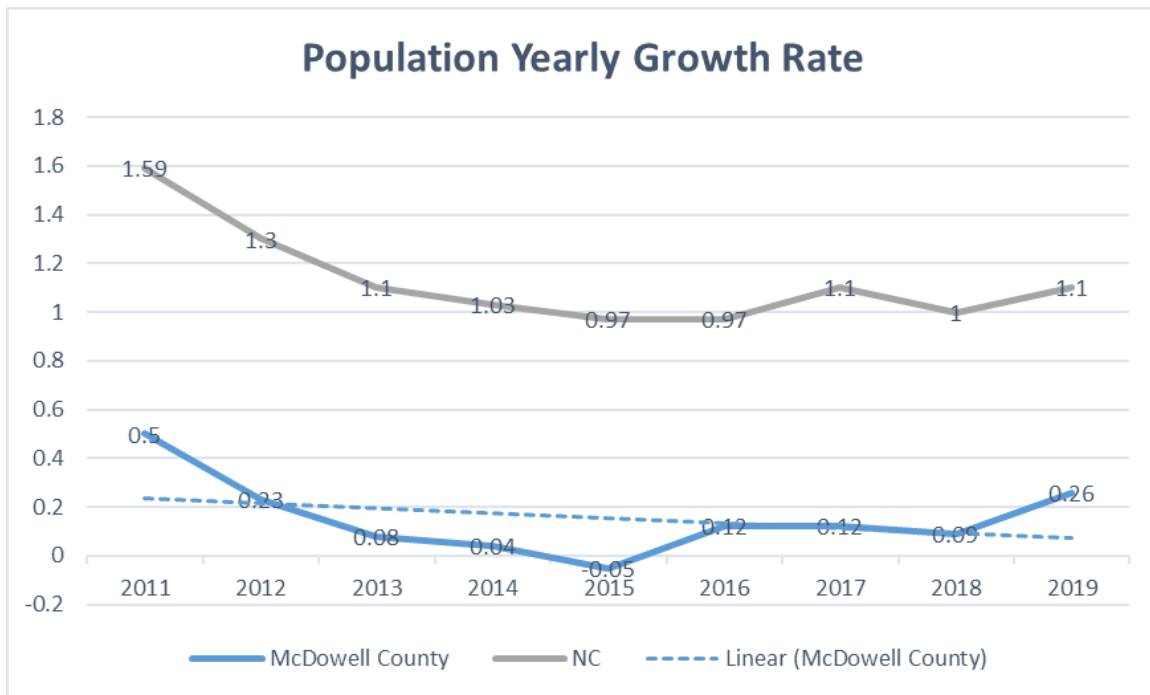

Population Yearly Growth Rate

Figure 2. Graph displaying the yearly population growth rate in McDowell County and North Carolina between 2011 and 2019. Linear trendline overlay. Source: U.S. Census Bureau, American Community Survey: ACS Demographic and Housing Estimates, 2019a.

The yearly population growth rate in McDowell County has increased to 0.26 as of January 1, 2019, compared with its average yearly rate of 0.08 since 2013 (U.S. Census Bureau, 2019a). The county had a growth rate of 0.5 in 2011, but that rate immediately began to decrease with the following year at 0.23 (U.S. Census Bureau, 2019a) Compared with the population growth rate of North Carolina at an average of 1.13 between 2011 and 2019, the county is moving at a much slower pace. A yearly breakdown of the population growth rate is represented in Figure 1. Yearly growth, however, does not reflect the change in population size over time.

The Rate of Natural Increase (RNI), or the overall change in population size over time, was negative from 2011 until 2019 (North Carolina State Center for Health Statistics, 2019). A visual representation of the RNI for McDowell County is in Figure 3. This rate is created by calculating the birth rate and death rate, then finding the difference between the quotient of the birth rate over 1000 and the death rate over 1000, and dividing that answer by 1000 (Bailey, 2019). For McDowell County, the RNI for 2019 was -2.1% (North Carolina State Center for Health Statistics, 2019). The lowest RNI the county experienced in the last ten years was in 2018 where the rate was at -3.2 %. That same year, the change in population was positive at 0.09 % (U.S. Census Bureau, 2019a). In order explain this increase in population, we need to look at migration.
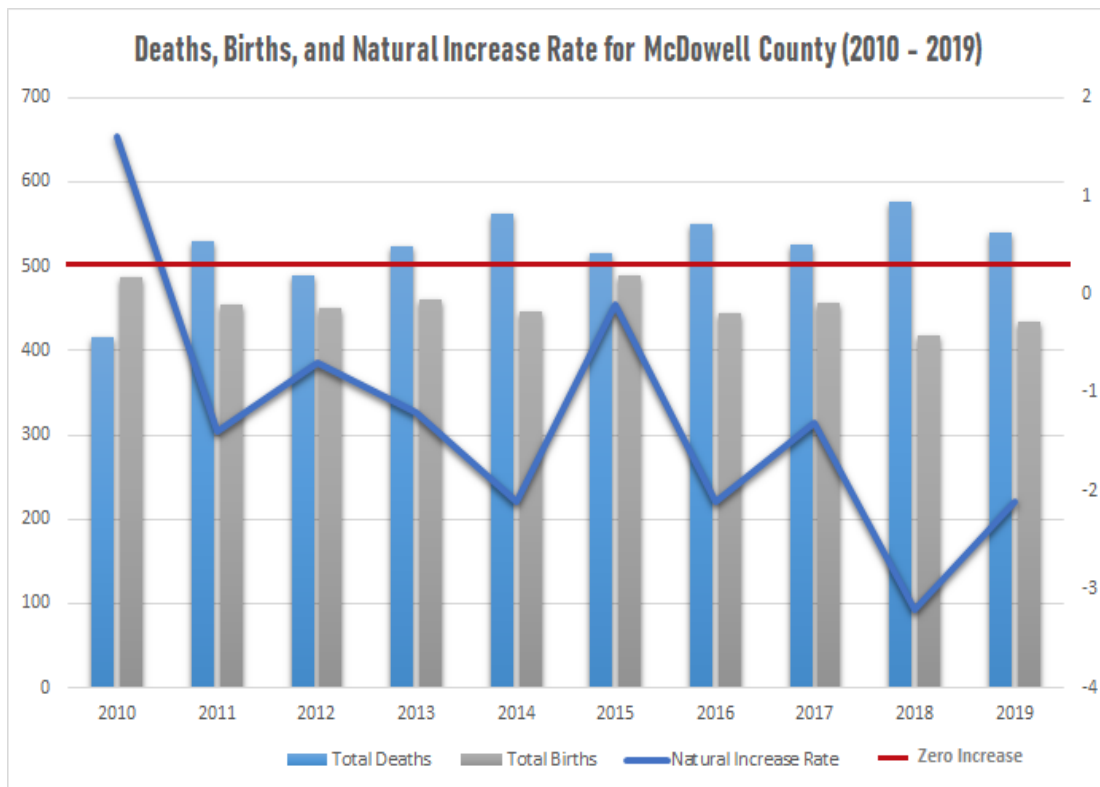

Figure 3. Bar graph showing the yearly deaths and births in McDowell County between 2010 and 2019. With the natural increase rate overlaid as a line. Red line represents a zero increase in the natural birth rate. Source: North Carolina State Center for Health Statistics, 2019.

McDowell County has seen an influx of new residents every year from outside the county (U.S. Census Bureau, 2019g). Since 2010, every year has seen a count of over 1000 individuals moving to the county from other counties- except 2016 which had 890 (Figure 4). In 2019, 468 individuals moved to McDowell from another state, 1346 moved from a different county within North Carolina, and 62 moved from a foreign country (U.S. Census Bureau, 2019g). Figure 5 shows the annual immigration count in McDowell County from 2010 to 2019. These migration numbers make up for the decline in RNI every year. This shift towards immigration and not natural increase supporting the county's population, signifies a change that stakeholders and policy makers need to be aware of while making decisions that affect housing. The influx of residents is also changing the racial and ethnic makeup of the county.
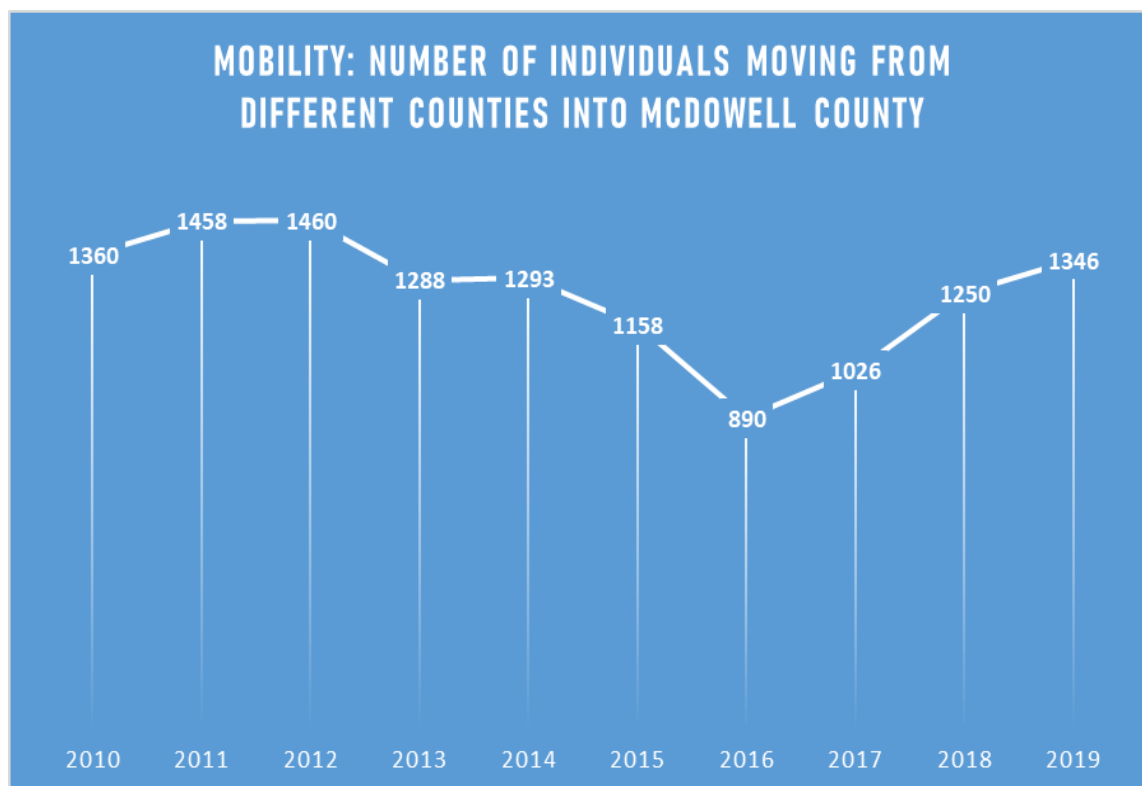

Figure 4. Line graph representing the number of individuals who moved into McDowell County from outside the county, annually from 2010 – 2019. Source U.S. Census Bureau. American Community Survey: ACS Geographical Mobility in the Past Year for Current Residence-State, County and Place Level in the United States, 2019g
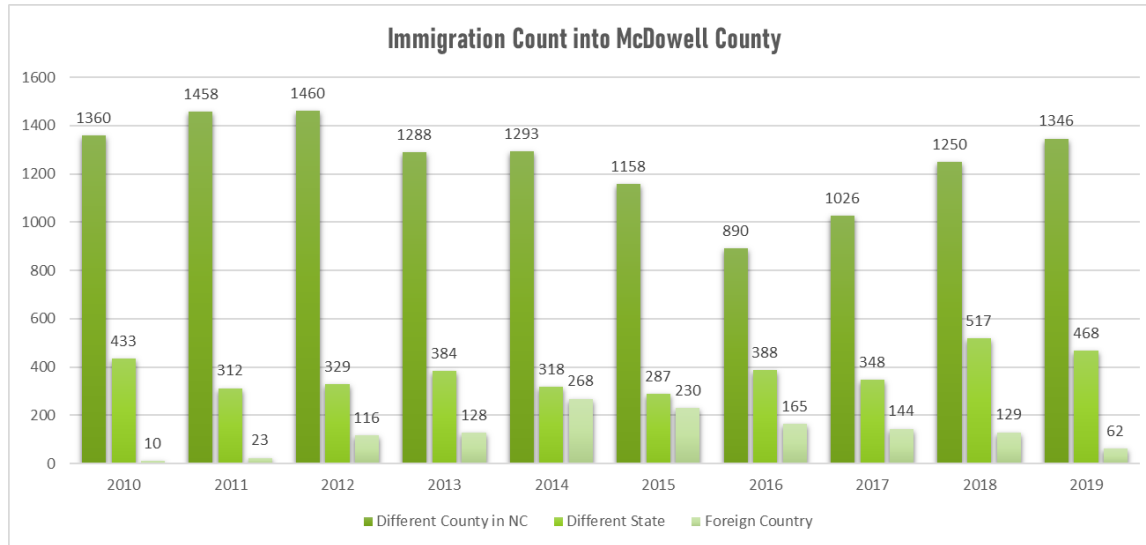
Figure 5. Bar graph displaying the yearly migration count of individuals moving into McDowell County from outside the county between 2010 and 2019. Source: U.S. Census Bureau. American Community Survey: ACS Geographical Mobility in the Past Year for Current Residence-State, County and Place Level in the United States, 2019g.

The racial and ethnic makeup of McDowell County in 2019 was predominantly white alone at 87.4% of the total population (U.S. Census Bureau, 2019a). The Hispanic or Latino (of any race) population was the second highest category at 6.1%, while Black or African American alone was at 3.6%. Within the total count for ethnicity and race, the Census includes subcategories for Hispanic or Latino alone, Asian alone, and American Indian and Alaska Native alone (For the purpose of this report and with respect to all indigenous people, I have used the term "Indigenous Tribal Grouping" from the Census website, for this category).

Between 2010 and 2019, the county experienced very little change in racial and ethnic makeup (Figure 6). Hispanic or Latino (of any race) increased by 1%, white alone decreased by 1%, Black or African American alone, Indigenous Tribal Grouping, and Asian alone all remained approximately the same. While the vast majority of McDowell County is white alone, there were 5,709 residents outside of that racial/ethnic category in 2019. These individuals represent a demographic of McDowell County that does not hold a majority on the

County Board of Commissioners or the Marion City Council. However, they live with the

policies and jurisdictions of these powerful groups. Racial and ethnic data not only gives

numerical value to each individual resident within a statistical area, but it also highlights the

groups who may not otherwise have a seat at the civic table. Housing analysis cannot be

complete without accurate representation of everyone who will live with the policies that an
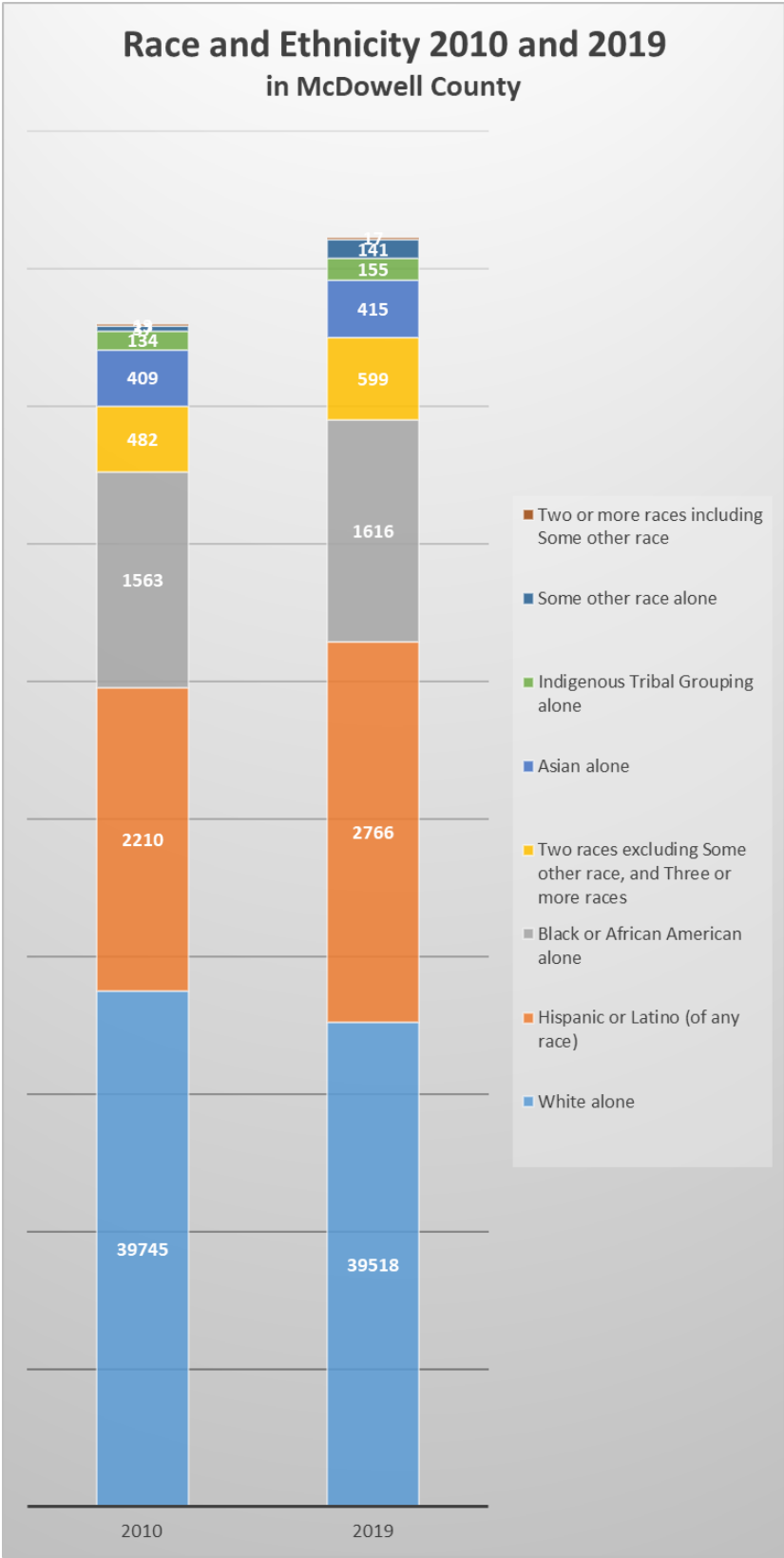
analysis has the potential to produce.

Figure 6. Stacked bar graph showing the comparison of Race and Ethnicity in McDowell County for the years of 2010 and 2019. Source: U.S. Census Bureau. American Community Survey: ACS Demographic and Housing Estimates, 2019a.

Age Cohort Trends

The majority of McDowell County residents in 2019 were ages 35-54; this was also the majority age group in North Carolina in 2019 (U.S. Census Bureau, 2019a). However, between 2010-2019, this age category decreased as did 20-34 year olds (Figure 7). At the same time, 55-64 year olds increased slightly by 1.9% while the 65 and over age range has increased significantly at a 3.9% gain from 2010 to 2019 (U.S. Census Bureau, 2019a). This creates a growing retirement population, with a stagnant working age population.
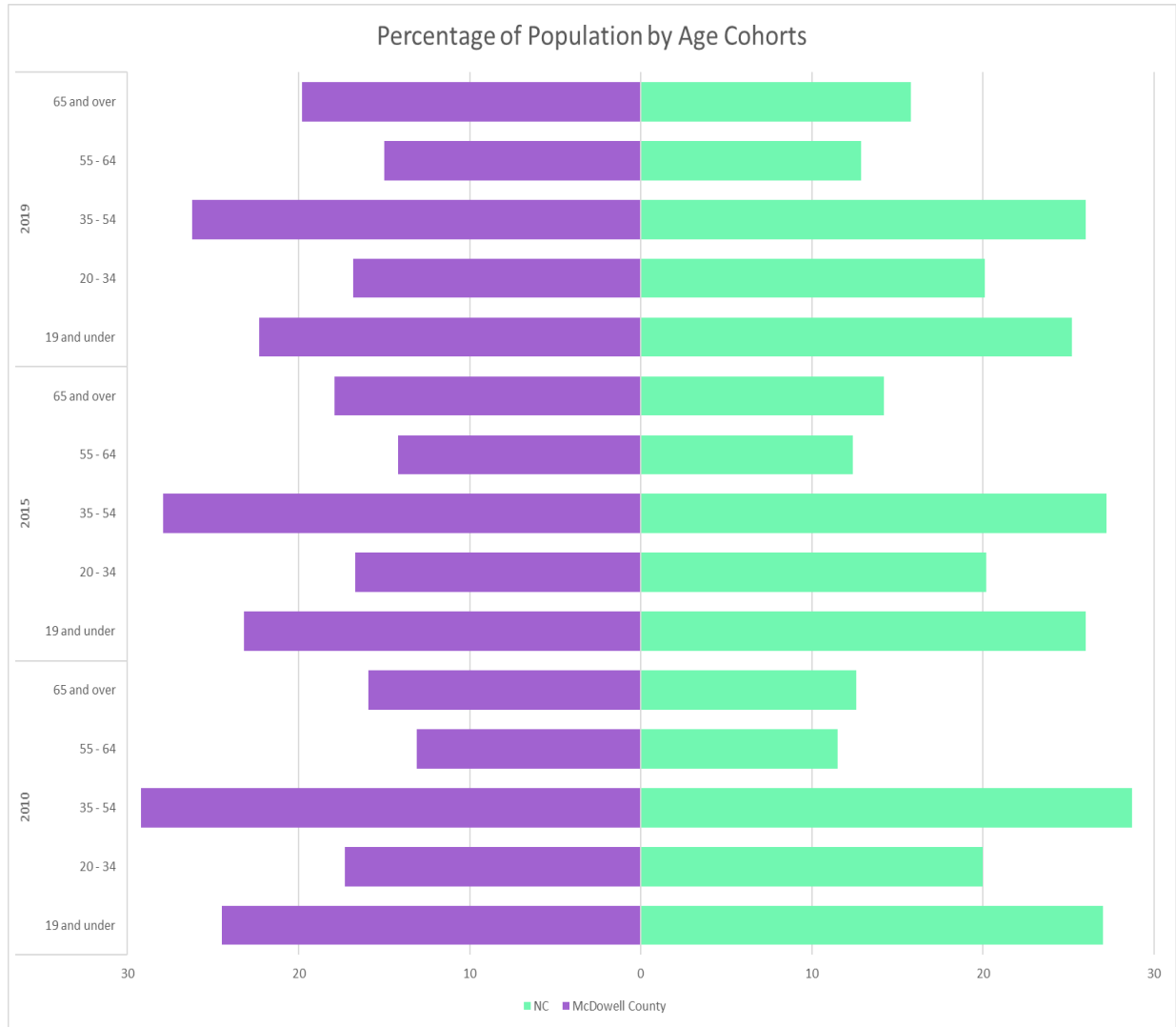
Figure 7. Population pyramid graph showing the population of McDowell County and North Carolina by age cohorts for 2010, 2015, and 2019. Source: U.S. Census Bureau. American Community Survey: ACS Demographic and Housing Estimates, 2019a.

The population in the entire state has experienced different changes in age cohorts from 2010 to 2019. North Carolina's majority age group in 2019 was also 35-54, however, every other age cohort has been different from McDowell County. For example, North Carolina has maintained a higher percentage of 19 and under, and 20-34 cohorts since 2010. They have also consistently had a lower percentage of 55-64, and 65 and older cohorts. North Carolina has a greater percentage of younger individuals (from children to age 34), while McDowell County has a greater percentage of adults over 55. This presents a demographic shift in age cohorts that is

not shifting over time, but over a spatial scale. The county is gaining more residents over 55 while the state is gaining more residents under 34. This gives McDowell County a population that is going through very different stages of life than North Carolina's population. The housing market is driven by many factors, one of which is a demographic shift where one age cohort holds majority over another. McDowell County's demographic shift is a necessary item for an accurate analysis of this housing market.

Housing Unit Trends

In McDowell county, there are 21,403 housing units (U.S. Census Bureau, 2019b). Of those units, 73% are owned and 37% are rented. Between 2010-2014, 3,503 housing units were moved into, by 2016, 2,104 more units had been moved into, and 1,369 units were moved into in 2017 or later (U.S. Census Bureau, 2019b). Total housing units make up less than half of the total population. The total population has increased overall by 2,844 between 2010-2019, while the total housing units have increased overall by 920 in the same time span. The most common housing structure type is 1-unit detached, or a single-family stick-built home. In McDowell County, 61.5% of all housing units are 1-unit detached homes (U.S. Census Bureau, 2019b). The next most common housing structure type is the mobile home.
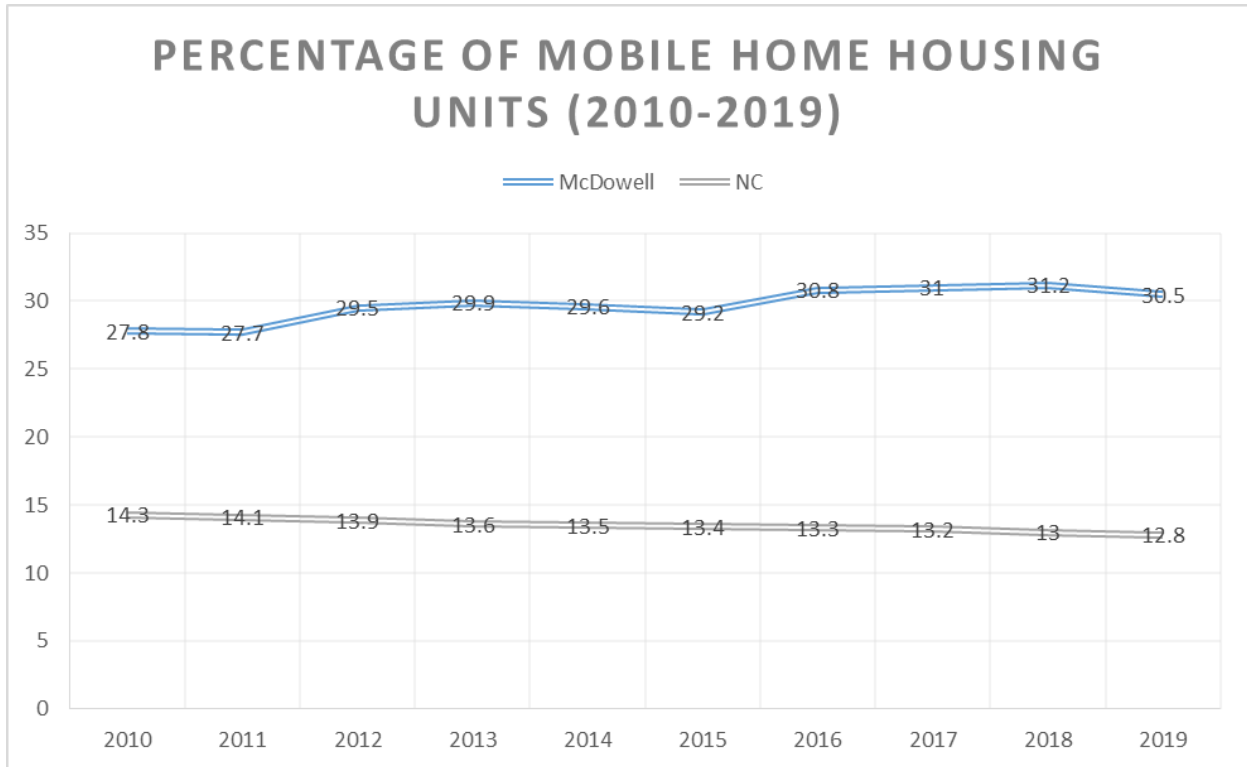
Figure 8. Line graph displaying the percentage of mobile home units in McDowell County between 2010-2019. Source: U.S. Census Bureau. American Community Survey: ACS Selected Housing Characteristics, 2019b.

In 2019, there were 6,532 occupied mobile homes; this made up 30.5% of total

housing units. Since 2010, the occupation of mobile homes has slowly increased from 27.8% in

2010 to 30.5% in 2019. When compared with the number of mobile home units for the state,

12.8% in 2019, this percentage is high (U.S. Census Bureau, 2019b). While the county has seen a

slow increase in mobile homes over time, the state has decreased in use of mobile homes, from

14.3% in 2010 to 12.8% in 2019 (U.S. Census Bureau, 2019b).

The state and the county also differ in their choices for heat fuel. While electricity is

the primary choices for both municipalities, second and third choices are unique. For North

Carolina, after electricity, utility gas is the second most used heat fuel source, and bottled, tank,

or LP gas is third. For McDowell County, the second most used heat fuel source is kerosene and

the third is wood. These top three heat fuel sources maintain their hierarchal order from 2010-

2019. In 2019, McDowell County 68.2% of occupied housing units used electricity, 11.2% used

kerosene, and 6.2% used wood. For North Carolina in that same year, 63.4% of occupied

housing units used electricity, 24.4% used utility gas, and 6.9% used bottled, tank, or LP gas

(U.S. Census Bureau, 2019b). Mobile homes that are not outfitted for central heat and air use

kerosene heat.

        When living in a mobile home, there are two options: rent or own. For McDowell

County, home ownership makes up approximately 73%, while renter housing units are at 27% of

total housing units (U.S. Census Bureau, 2019b; Figure 9). This rate of homeownership has

gradually increased since 2014, from 70.2%. Between 2010-2019, the amount of housing units

owned versus rented has fluctuated around the 70:30 ratio, with homeownership being dominant.

In 2019, the homeownership rate was the highest it had been in ten years, at 72.7.
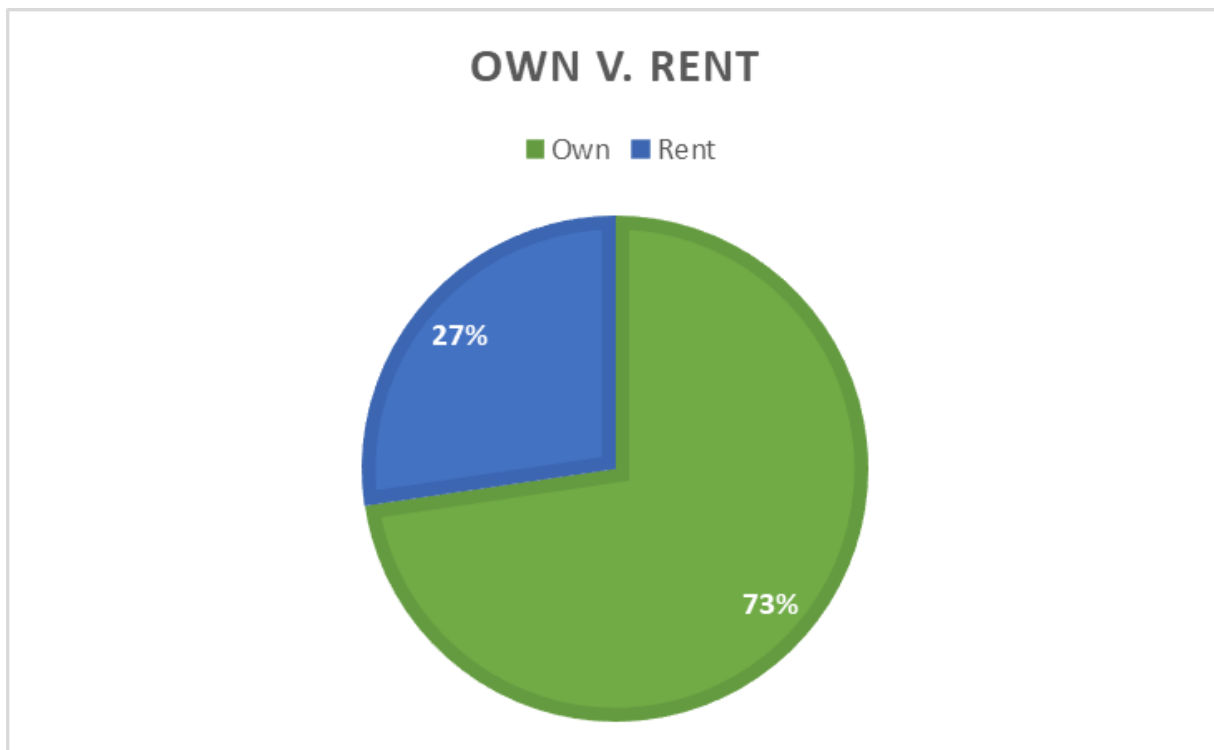

Figure 9. Pie chart showing the percentage of occupied rent versus own housing units in McDowell County in 2019.
Source: U.S. Census Bureau. American Community Survey: ACS Selected Housing Characteristics, 2019b.

Based on the findings of this report, the population of McDowell County is moving in an older and less local direction. The age cohort of 65 and over is increasing at a higher rate than any other age cohort. The natural change in population is negative, and the influx of residents from outside the county is the reason the population increased. Mobile homes are increasing in numbers at 30.5% of total housing units, while still very far behind 1-unit detached homes at 65.1%. Housing Units are not increasing at a rate that keeps up with total population growth, which creates a gap. Considering the increase over the past ten years in mobile homes, these housing units may fill that gap. Racial and ethnic percentages in the county have experienced very little change since 2010, and will most likely remain the same, unless the increased residents from outside the county change this makeup. Homeowner versus renter housing has made very little distance from the 70:30 ownership: renter ratio and may follow the same pattern in the future. However, the recent increase in homeownership from 2014-2019 may indicate that a continued increase is expected. As mentioned, this increase in homeownership would be attributed to the retirement age cohort and the new residents from outside the county.

4.1.2 Employment Trends

Major Employment Sector: Manufacturing = 27.6%
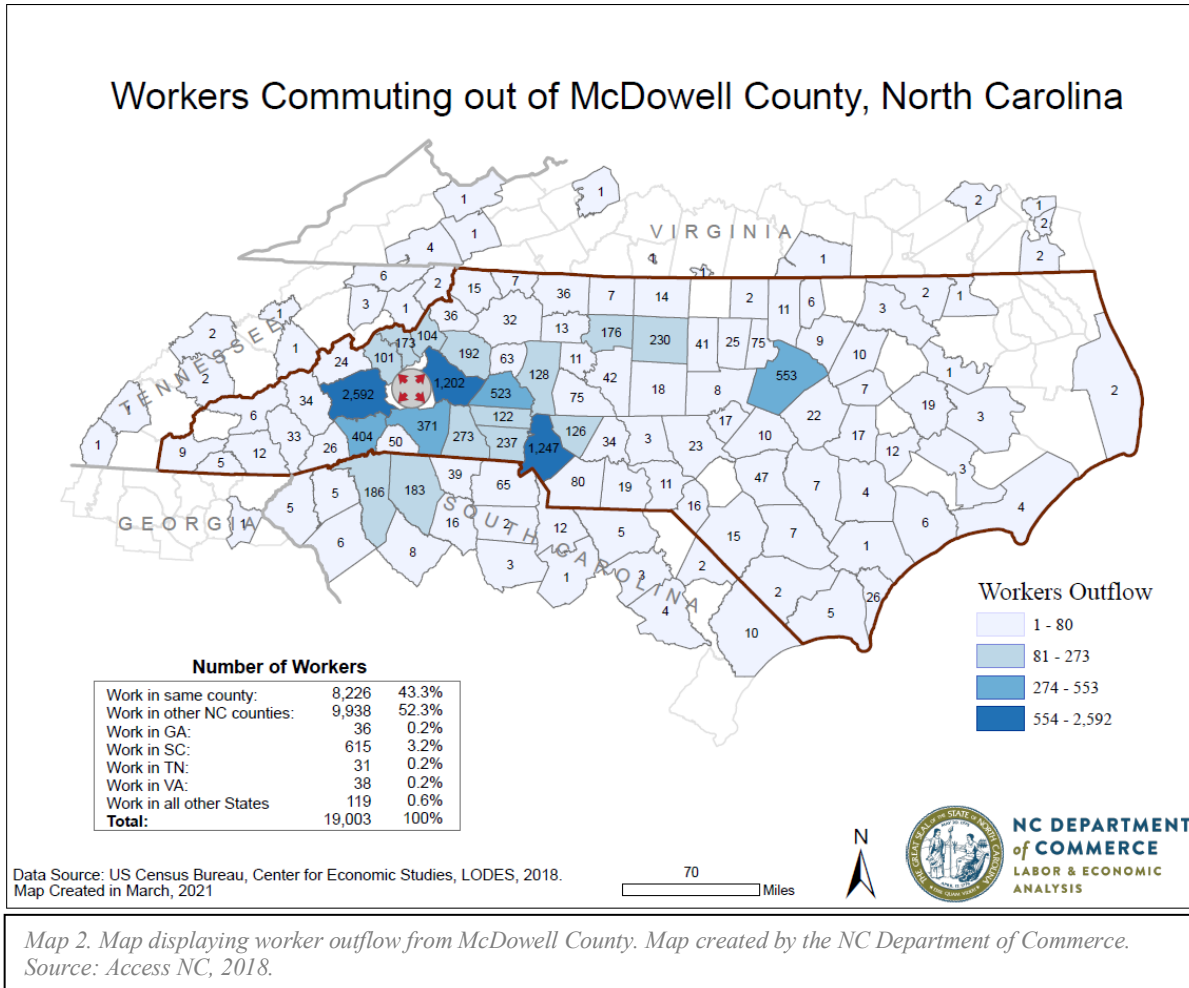
Current Conditions

In McDowell County, the labor force participation rate is 41.3% of all eligible adults aged 16 and older, while the unemployment rate is 5.7% and the employment rate is 53.5% (U.S. Census Bureau, 2019c). 26.5% of McDowell County residents work outside of the county, which is similar to the state percentage, 26.3% of individuals working outside of their county of

residence (U.S. Census Bureau, 2019h). These percentages do, however, have a stark contrast to

neighboring counties Buncombe and Burke. Buncombe, home to the city of Asheville, sees 8.3%

of its labor force working outside of the county. Burke County, on the other hand, has 35.9% of

its labor force living in the county and working in other counties.

      In McDowell County, there is a negative net flow of residents living and working in

the county. Worker inflow is workers coming into the county for work, while resident outflow is

residents leaving the county for work. The difference between the two is net flow. McDowell

County has a negative net flow of -2645 (Access NC, 2018). The largest age group that is

showing inflow and outflow movement is, of course, the working age group of 30- to 54-year-

olds. This movement, however, is producing a negative net flow of -1294. This means that the

largest working age group in McDowell County is leaving the county for work (Map 1-2). The

only area where McDowell is attracting workers from outside the county is the Manufacturing

industry with a net flow of 2139 (Access NC, 2018).

Map 1. Map displaying worker inflow to McDowell County. Map created by the NC Department of Commerce. Source: Access NC, 2018.
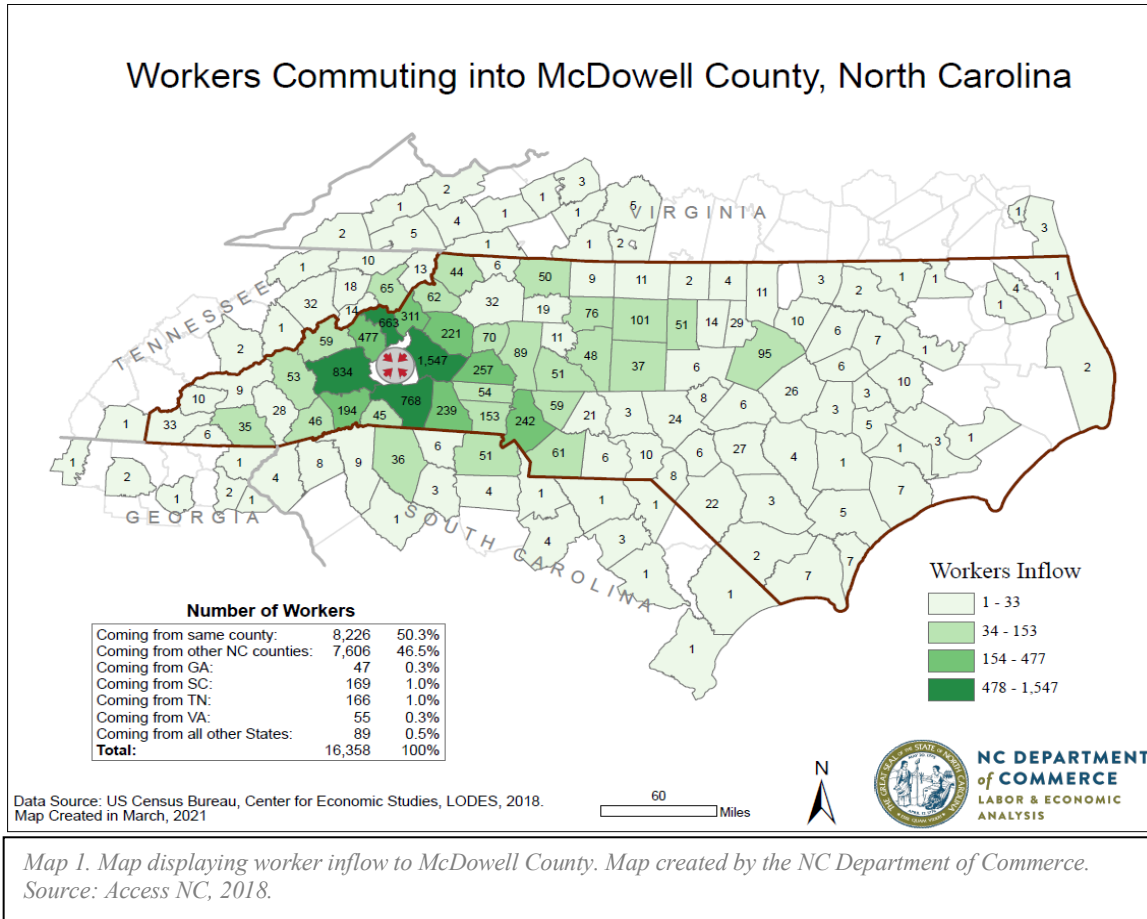
Map 2. Map displaying worker outflow from McDowell County. Map created by the NC Department of Commerce. Source: Access NC, 2018.
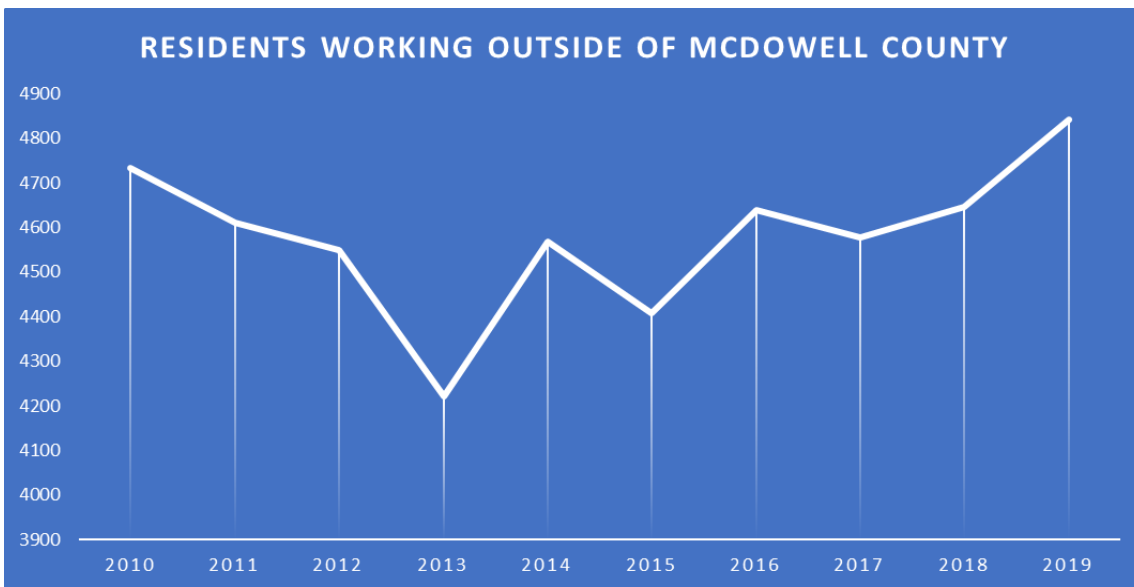

Figure 10. Line graph showing the number of McDowell County residents who work outside of the county, between 2010-2019. Source American Community Survey: ACS Selected Economic Characteristics.

The manufacturing sector employs 27.6% of the labor force in McDowell County (U.S. Census Bureau, 2019c). The second most employed sector for McDowell County is Educational Services, and Healthcare and Social Assistance at 22% (U.S. Census Bureau, 2019c).

The location quotient (LQ) for each industry is represented in Figure 11. Location Quotient is the percentage of each industry sector in total local employment compared with that same industry's percentage in the United States. The closer LQ value is to 1, the more equal that local industry is with that industry in the United States, also called employment sharing. Manufacturing's LQ is 2.73, meaning it is McDowell County's industry of specialization. Other sectors are close to employment sharing with the United States, ie. Agriculture, forestry, fishing and hunting, and mining; Construction; Wholesale trade; Retail trade; Educational services, and healthcare and social assistance; and Public Administration. Transportation and warehousing, and utilities scored a 0.7, meaning there is a relative absence of this sector in the McDowell County economy. Another low LQ sector was for Information, which only had a score of 0.3. An interesting result in the data came from the industries with higher LQ's when compared to the industries with the most employed in the county. While Manufacturing held top billing with both categories, Construction, Wholesale trade, Retail trade, and Public Administration had higher LQ's than Educational services, and healthcare and social assistance. When looking at industries with the most employees in the county, Construction, Wholesale trade, Retail trade, and Public Administration hold lower scores than Education services, and healthcare and social assistance. This imbalance suggests that the industries of Construction, Wholesale trade, Retail trade, and Public Administration are just as uncommon choices for employment in McDowell County as they are in the United States. While the industry of Education services, and healthcare and social

assistance is more employed in McDowell County than these other industries, but when

compared with the United States, it does not have as high a percentage of the labor force. Data

on industry share and major employment sectors for the county provide economic background to

interpret other topics, like income, home sales, and ultimately- affordability. If policy makers can

see where the majority of their residents' work, how much money they make, and how this

compares with the state and the United States, then they have the opportunity to make more

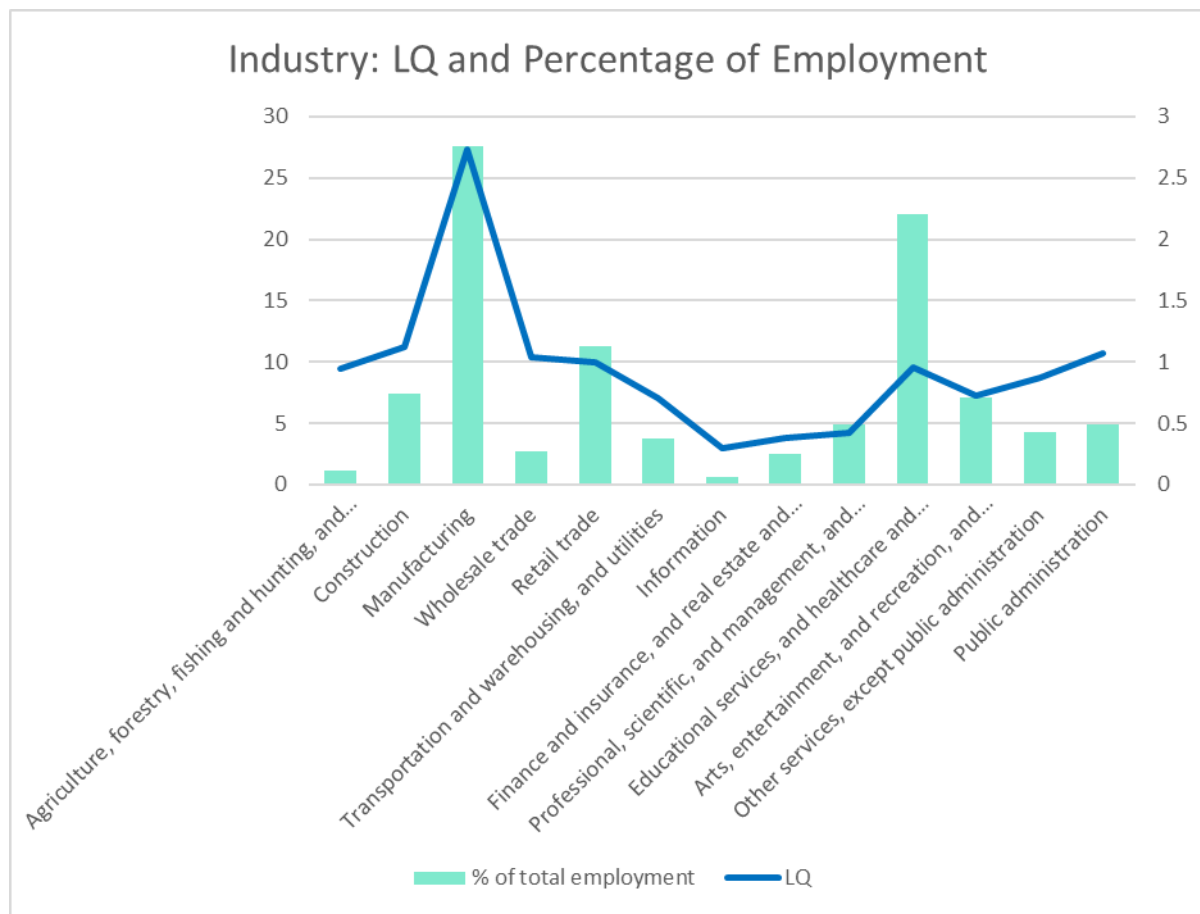informed, educated decisions for housing policy.

Figure 11. Bar graph showing the percentage of each industry in total employment with a line graph overlay of the location quotient of each industry. Source: American Community Survey: ACS Selected Economic Characteristics.

The median family income for McDowell County is $52,100[2]. Based on data from 2019, 22.8% of families receive an income between $50,000 to $74,999. However, 44.5% of families make $49,999 or less (U.S. Census Bureau, 2019c). The average weekly wage in the Manufacturing industry in McDowell County is $935 (Access NC, 2021). The second leading industry sectors for employment in McDowell County are Educational Services and Healthcare and Social Assistance, with an average weekly salary between $678 and $784 (Access NC, 2021). Considering the number of households in McDowell County that make less than HUD's established median family income at $52,100, there are quite a few workers in these industry sectors who do not make as much as the median weekly wage. This highlights a disconnect between data, like the median family income, being used to determine financial assistance, and actual incomes for households in the majority of employment sectors.

In 2018, the McDowell Economic Development Association (MEDA) and the Region C Workforce Development Board began discussions to address the need for more workers and produced the McDowell County Strategic Employment Plan Initiative (SEPI), During this time, McDowell county had an unemployment rate of 7.4% with high industry demand for workers. From this initiative, they discovered the following (p. 2):

- "7299 individuals over the age of 64 are not participating in the workforce
- 4328 (estimated) individuals ages 25-64 are not participating in the local workforce
- 1688 individuals between 25 and 64 do not work due to home responsibilities
- 1255 individuals are not in the workforce due to illness or disability
- 657 (estimated) individuals work part time but desire full-time employment
- 715 individuals between 16 and 24 are neither working nor in school
- 2895 (estimated) individuals work part time by choice
- 1825 individuals fit the definition of working poor
- 4884 (estimated) residents work outside of McDowell County"

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[2] This number is chosen by HUD from the 2014-2018 5-year American Community Survey (ACS) estimates. The 2019 5-year ACS estimates show a median family income of $54,217.

The initiative also provided recommendations to support overall worker growth within the county. The majority of these recommendations were centered around programs designed to promote McDowell County's industry, education, transportation, and whole person health. One of the major goals of this initiative was to recruit and retain loyal employees. The approaches to this goal ranged from working with the Community College and high school to the senior center and the jail (McDowell Economic Development Association, Region C Workforce Development Board, & Workforce Pipeline Committee, 2018).

While parts of the initiative were designed for long-term progress, there is present-day evidence of successful works completed. Since that initiative in 2018, some of the recommendations were taken into serious consideration. The McDowell County Transit system began operations on July 1, 2019. The Board of Commissioners for the county now meets with the DSS director once a month, and the County Manager meets with the DSS director and unit supervisors twice a month to hear concerns and enhance operations (McDowell County Organization, 2019). The 2020 budget also increased funding to McDowell County Public Schools, as well as McDowell Technical Community College, providing more opportunities to implement the recommendations made by the initiative. In my analysis, the Employment Plan Initiative was a clear example of how efficient and determined the dedicated individuals in this county can be. It was only 2018 when the initiative began, and already there are positive effects seen in the community. Changes like these in communities are designed to affect the local economy. Where economic shift happens, so too does income, unemployment, labor force, etc. What the 2021 results of this initiative really do is change the resources and data that support issues, like housing, and eventually provide a very different landscape from which housing policy is developed. Including economic factors in a housing market analysis is a significant and

telling layer which can offer supportive data to better prepare for the necessary housing policy

budget.

Image 5. Cover image of the Business Resource Guide. Source: Marion Economic Development Resources.

In 2019, the clothing manufacturer company Kitsbow brought 53 new jobs to

McDowell County (North Carolina Department of Commerce, 2019). This California based

company is investing $890,000 in a manufacturing and distribution facility in Old Fort. The

primary audience for this clothing manufacturer is cyclist enthusiasts, fitting for the cycling

community in Old Fort. The CEO of Kitsbow attributed part of the company's decision to move

to western North Carolina to the "resilience and work ethic of the workforce in Appalachia.

(North Carolina Department of Commerce, 2019, p. 3)" The One North Carolina Fund will

provide a grant of $200,000 to Kitsbow for the new facility. This is one of many funding

opportunities that McDowell County offers businesses to incentivize them to join the local

economic community. The Business Resource Guide is filled with information for businesses

and real estate development for the City of Marion and the county. This guide was developed by

a collaboration from the City of Marion, McDowell County, McDowell Chamber of Commerce,

McDowell Economic Development Association, and Marion Business Association (2021).

Through local programs and services, this guide is designed to promote economic growth in

McDowell County. These programs include Growing Entrepreneurs Marion (GEM), Marion

Façade grant, City of Marion Revolving Loan program, building inspector consultations,

"Moving Up in Marion" initiative, and VEDIC. The GEM is an 8-class seminar which covers

marketing practices, legal structures to business ownership, and financing. They also open

eligibility for business owners to apply for a $5,000 grant for rent and utility assistance for six

months, The Marion Façade grant is city funding to renovate the building façades in downtown

to qualifying buildings. The City of Marion Revolving Loan program is a $100,000 loan funded

by the N.C. Rural Center, targeted at new businesses. The "Moving Up in Marion" initiative is

designed to support the private development of upper floor residential housing in historic

downtown. VEDIC is based out of Valdese, and they provide loans for new businesses and

existing businesses looking to expand.

The Gross Domestic Product (GDP) in McDowell County is ranked 52nd in the state

(Bureau of Economic Analysis, 2020). This GDP is up 3% from 2018, seen in Figure 12. The

total number of business establishments in all sectors of industry in 2018 was 757, this number

increased to 770 by 2019 (U.S. Census Bureau, 2018; 2019i). An increase in businesses is

indicative of a growing economy, and a solid relationship between the private and public sector.

The Business Resource Guide is a valuable tool in retaining that relationship through programs

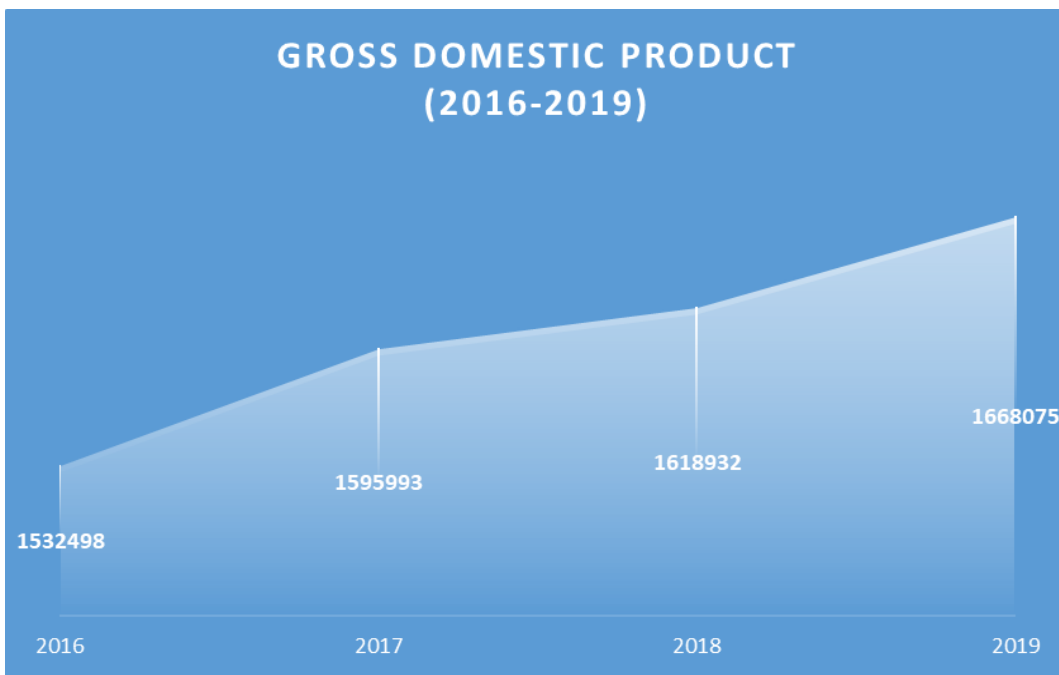and initiatives geared towards economic development.

Figure 12. Line graph displaying the Gross Domestic Product for McDowell County between 2016-2019.
Source American Community Survey: ACS Selected Economic Characteristics.

Trends

The amount of new business establishments rising in the county suggests that

businesses will continue to sprout up and grow. In addition, the GDP increased every year from

2016 to 2019 (Bureau of Economic Analysis, 2020). This indicates that McDowell County is

experiencing an era of economic progress and the economy is stable. The employment rate for

2019 was 41.4%, 3.4% higher than 2013. That same year, unemployment was at its lowest in a

decade (U.S. Census Bureau, 2019c). Given the positive direction of employment, the projection

is that it will continue to increase at this steady pace. Unfortunately, the number of residents

choosing to work outside of the county has increased by 2.3% between 2010 and 2019. This

could be what is keeping the employment rate from growing at a higher rate. The unemployment

rate has decreased over time, from 9.6% in 2010 to 5.7% in 2019. This, in combination with the

overall decrease in unemployment across the state, indicate that this rate will continue to come

down. Watching these rates is an important task when analyzing the housing market and future

directions. The need for a new housing policy is a response to current conditions where adequate

housing is lacking, especially in affordable housing. If we see unemployment going down, and

more workers in the labor force, then a housing policy needs to support that shift. Whether this is

with more workforce housing or units closer to prospective employers, policy makers need as

much data on the employment market as they can get in order to approve plans that actually
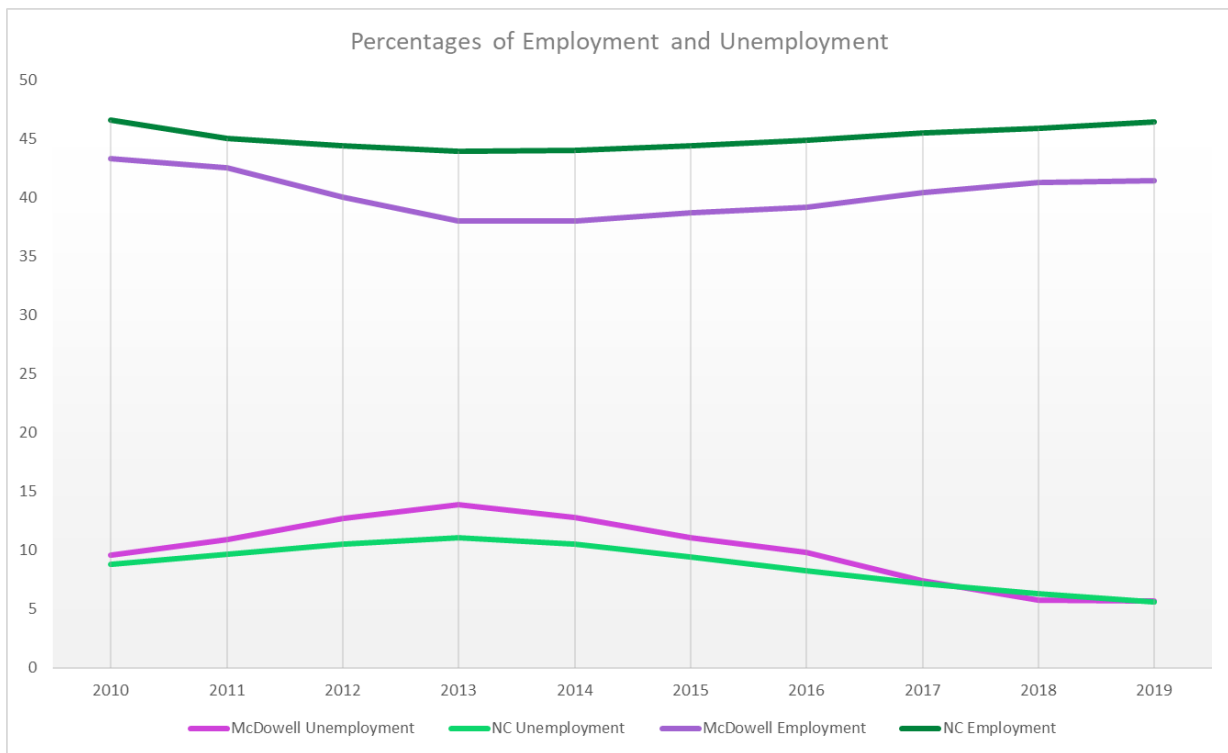
make sense.

Figure 13. Line graph showing the unemployment and employment rates for McDowell County and North Carolina. Source: U.S. Census Bureau. American Community Survey: Selected Economic Characteristics, 2019c.

4.1.3 Home Sale Market

Market Conditions: Low Supply and High Demand

Current Conditions
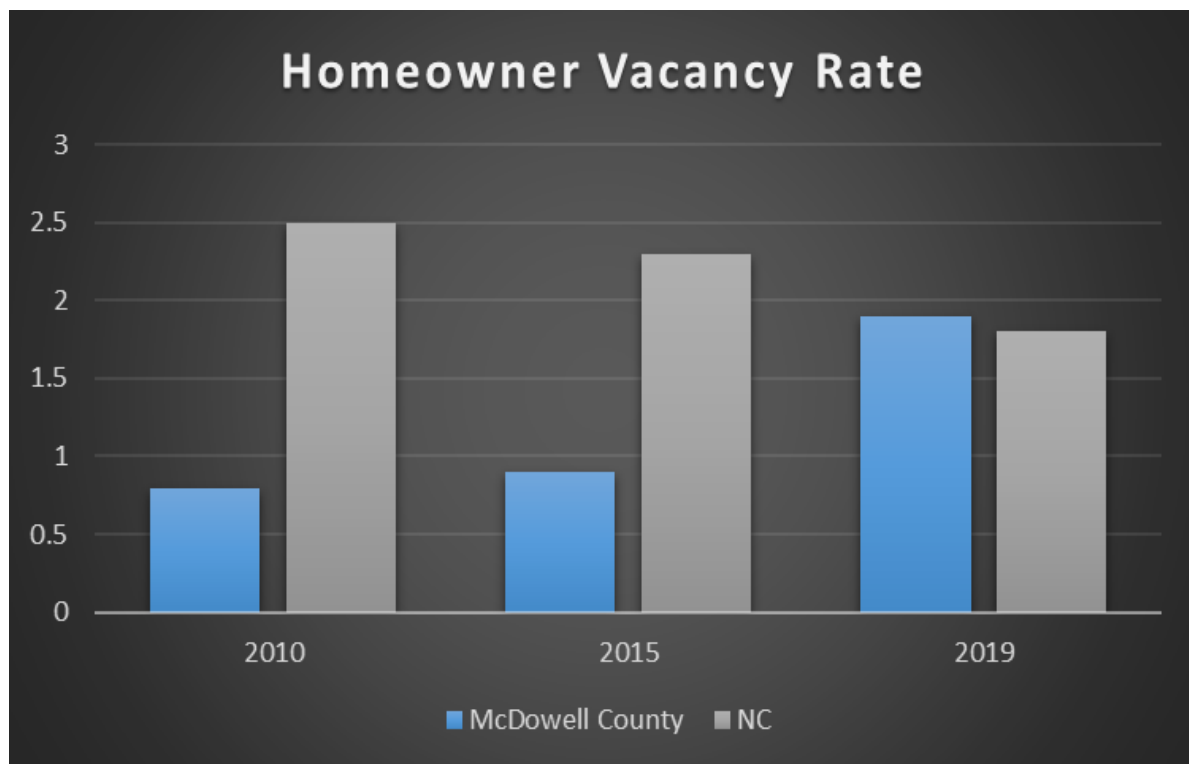
Figure 14. Double bar graph showing the homeownership vacancy rate for McDowell county and North Carolina, years 2010, 2015, and 2019. Source: U.S. Census Bureau. American Community Survey: Housing Characteristics, 2019b.

Currently, McDowell county is experiencing a tight market, where the seller is at an advantage. A tight market can be determined by a high demand, paired with a low supply of homes. To calculate supply, we can look a market's vacancy rate. This is the number of available homes compared to the total number of units in the market. McDowell county's homeownership vacancy rate is at 1.9%, seen in Figure 14 (U.S. Census Bureau, 2019b). This is an extremely

low number of homes available for purchase, giving the home sale market a very low supply. To

find demand, we look at how quickly homes are being purchased, once placed on the market.

According to Redfin (2021), the median days a house sits on the market is 49 days. This is down

from median number last year of 80 days (Redfin, 2021). With such a short amount of time a

home is available for purchase, this
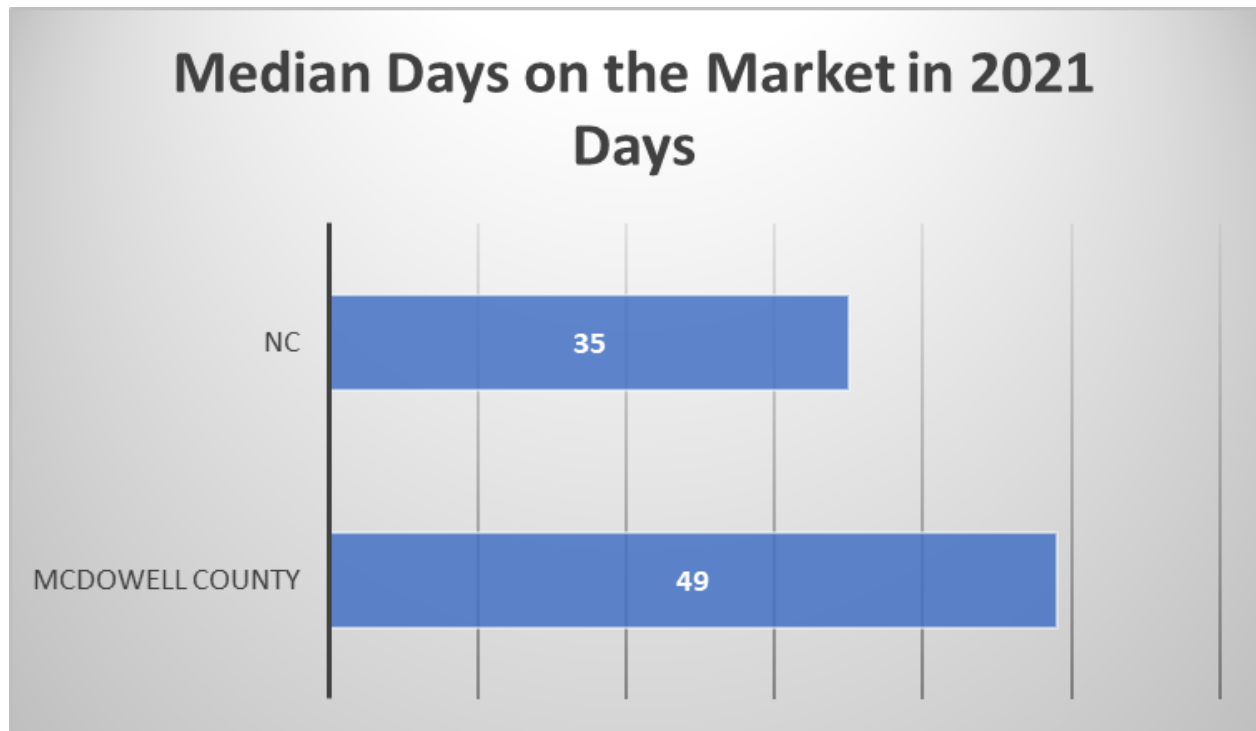
Figure 15. Bar graph displaying the median days a home is on the market in McDowell County in 2021. Source: Redfin, 2021.

supports a high demand in the market. To give some perspective, the total number of housing

units in McDowell county is 21,403 (U.S. Census Bureau, 2019b). With a vacancy rate of 1.9%,

3,230 of those homes are not occupied (U.S. Census Bureau, 2019b). Out of that number, only

87 are on the market for purchase (Redfin, 2021). This number includes single-family, multi-

family, co-operatives, condominiums, and manufactured (including mobile) homes. The prices of

these homes range from $62,000 to $2.495 million (Redfin, 2021). If a family is looking to buy a

new home, they have about a month and a half to choose one of these 87 houses, before it is snatched up by someone else.

When we look at McDowell county's market compared to the entire state of North Carolina, we see that the county is reflecting a statewide tight market. The homeownership vacancy rate for the entire state is 1.8%, exposing a low supply of homes (U.S. Census Bureau, 2019b). As seen in Figure 15, North Carolina's median days on the market is at 35 (Redfin, 2021). In addition to median days on the market, another strong indicator of a high demand market is how many homes are sold about list price. For North Carolina in 2021, 58.1% of houses sold above list price. Generally, this can mean that a home received multiple offers due to a higher demand (Redfin, 2021).

Home Sales

In a tight market, the median home sale price for McDowell county was $190,500 in July 2021 (Redfin, 2021a). At the same time, the median home sale price for the state was $325,000 (Redfin, 2021b). Over the past five years, the median home sale price between North Carolina and McDowell county both followed a gradual rise in price, with a few bounces up and down from the county. McDowell maintained a lower price than the state for the majority of those five years, except for September 2020 (Redfin, 2021a; Redfin, 2021b). During this month, McDowell county's price spiked at $302,500, with the state at $284,500, as seen in Figure 16. This peak in September is an outlier when compared to McDowell county's other monthly median home sale price values for the past five years. The average of the monthly median home sale price for McDowell county between 2016 and 2021 (excluding the outlier) is approximately $172,076. This value is $130,424 less than that peak home sale price from September 2020.

In addition to the prices of homes going up, the home loan interest rate is going through some interesting changes as well. While interest rates may be influenced by credit scores, down payment percentage, location, and the local economy, the current interest rate for a 30-year fixed mortgage in North Carolina, as of August 11, 2021, is 2.75% (Zillow, 2021a). That is an average and can change depending on the influential factors listed already. First, we look at the best-case scenario, where a household with more than enough income is looking to purchase. They have a credit rating of 740 or higher, 20% down, and the economy of North Carolina. This household's interest rate would be 2.53%. The second-best case scenario is with a household that makes just enough income, a credit rating of 680-740, 5-20% down, and the economy of North Carolina. This household's interest rate would be 2.56%. Lastly, the third best case scenario is with a household that makes less than enough income, has a credit rating of less than 680, can put down no more than 5%, and with the economy of North Carolina would have an interest rate of 2.65% (Zillow, 2021a). Another scenario might be where the borrower needs government assistance to purchase their home. In this situation, the interest rate also depends on the type of loan, and amount of down payment assistance (North Carolina Housing Finance Agency, 2021). For example, a USDA or VA loan with 5% down payment assistance will have an interest rate of 4.125%, where an FHA loan with First Home Advantage down payment assistance will have an interest rate of 3.5% (North Carolina Housing Finance Agency, 2021). Whether at the national, state, or local level, these interest rates change with each individual case, due to so many factors contributing to their calculation. For McDowell county, a scenario might be that a household can afford to purchase a home for $150,000, putting 5% down, with a credit rating of 680-699. This interest rate would be 3.5% for a 30-year fixed loan, and 2.635% for a 15-year fixed loan

(Zillow, 2021a). This data can be interpreted and accepted only for the date it was gathered, as

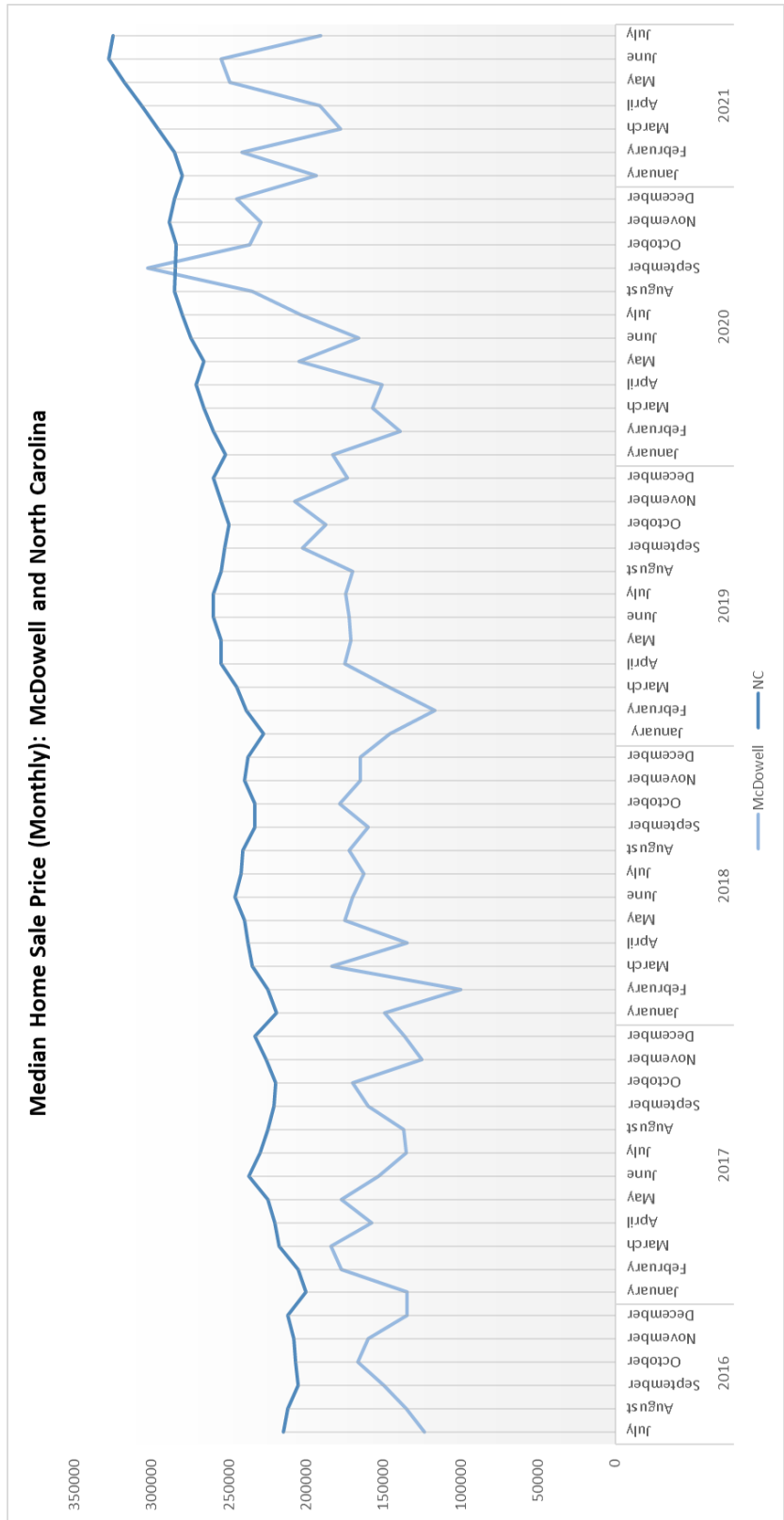interested rates are susceptible to change each day with each case.

Figure 16. Line graph showing the monthly median home sales for McDowell County and North Carolina between 2016-2019. Source: Redfin, 2021.

New Construction

According to the building inspections office at McDowell County, the number of new construction residential building permits in 2019 was 95. That same year, the average price to build one of those units was $195,369.79 (Bumgardner, 2021). Represented in Figure 39, the number of residential building permits decreased from 117 in 2017 to 95 in 2019. The average price to build each unit declined as well. When compared with North Carolina, McDowell County has almost one third the rate of new construction units versus total housing units. The rate of new construction units for McDowell County in 2019 is 0.44%, while North Carolina has a rate of 1.54%. These rates were determined by dividing the number of new construction units by the number of total housing units and multiplying that value by 100.

New Construction Ratio 2019			
	New Construction Units	Total Households	Rate of New Construction
McDowell	95	21403	0.44386301
NC	71307	4627089	1.541076906

Table 1. Table with number of new construction units, total housing units, and rate of new construction for McDowell County and North Carolina in 2019. Sources: ACS Demographic and Housing Estimates; U.S. Census Bureau: Permits by State; Bumgarner, 2021.
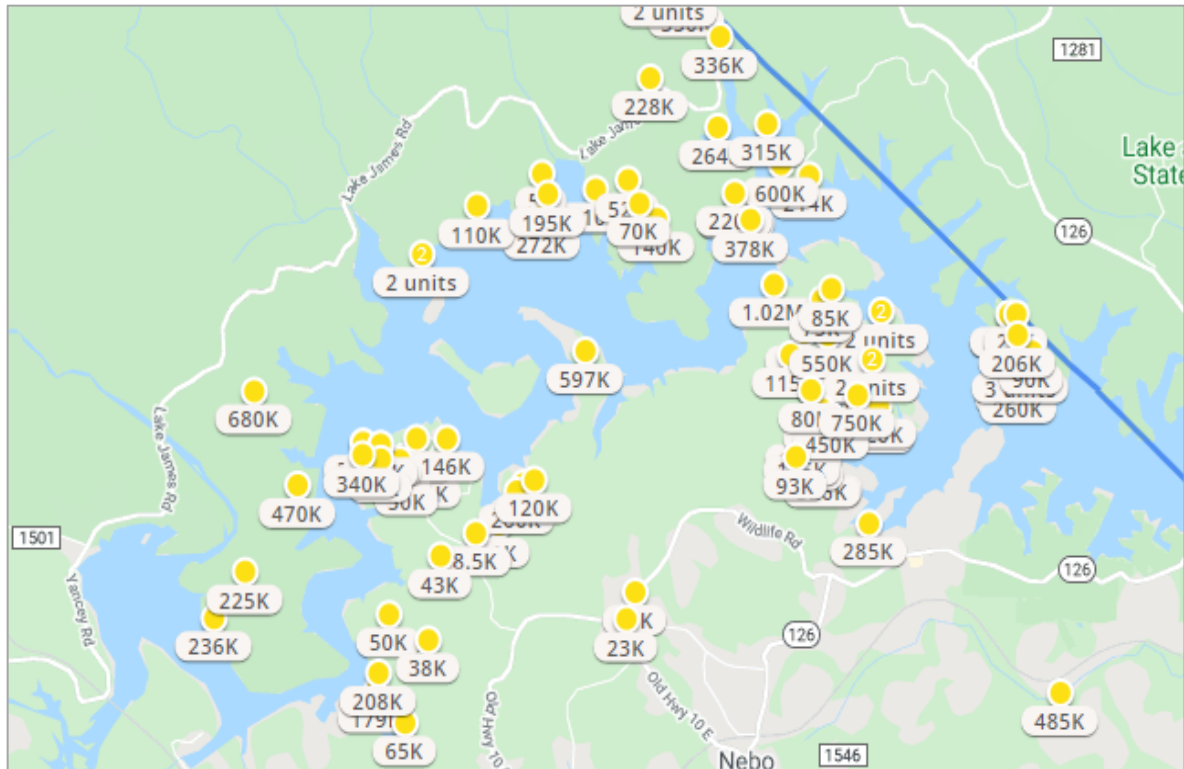
Map 3. Cluster of land sold in 2021 around Lake James. Source: Zillow, 2021.

As of August 2021, however, the number of residential building permits was already

at 117 with an average price to build of $280,681.41 per unit. This number is expected to

increase due to the number of land sales in 2021. Between March 3 and August 27, 140

properties of land were sold (Realtor, 2021). Almost half of these properties were clustered

around Lake James and its developments (Zillow, 20121b). This may explain why the average

price per new unit increased by 44% between 2019 and 2021. The 2021 price to build is not the

highest average price per unit that McDowell County has experienced in the past five years. In

2017, the average price per unit was $470,786.60. In 2018, the average price per unit was

$335,961.19 (Bumgarner, 2021).
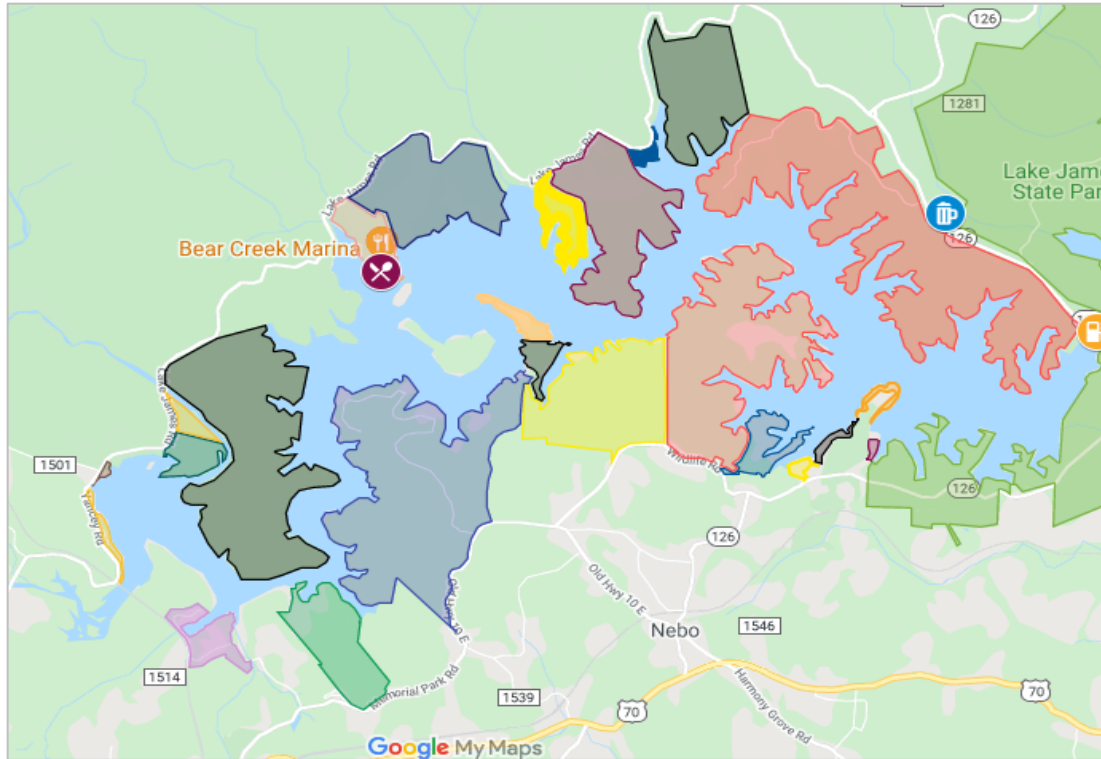
Map 4. Lake James Developments. Source: Lake James Team, 2021.

In 2006 the City Council for Marion adopted a Residential Development

Participation Policy with the goal of increasing the number of housing developments within the

city limits. For those eligible, the City would pay 40% of actual costs for infrastructure

development (City of Marion, 2006). This portion would be reimbursed to the developer after

paying all the development costs initially. With exact specifics aside, the incentive was that the

City would reimburse developers for building more housing units within the city limits.
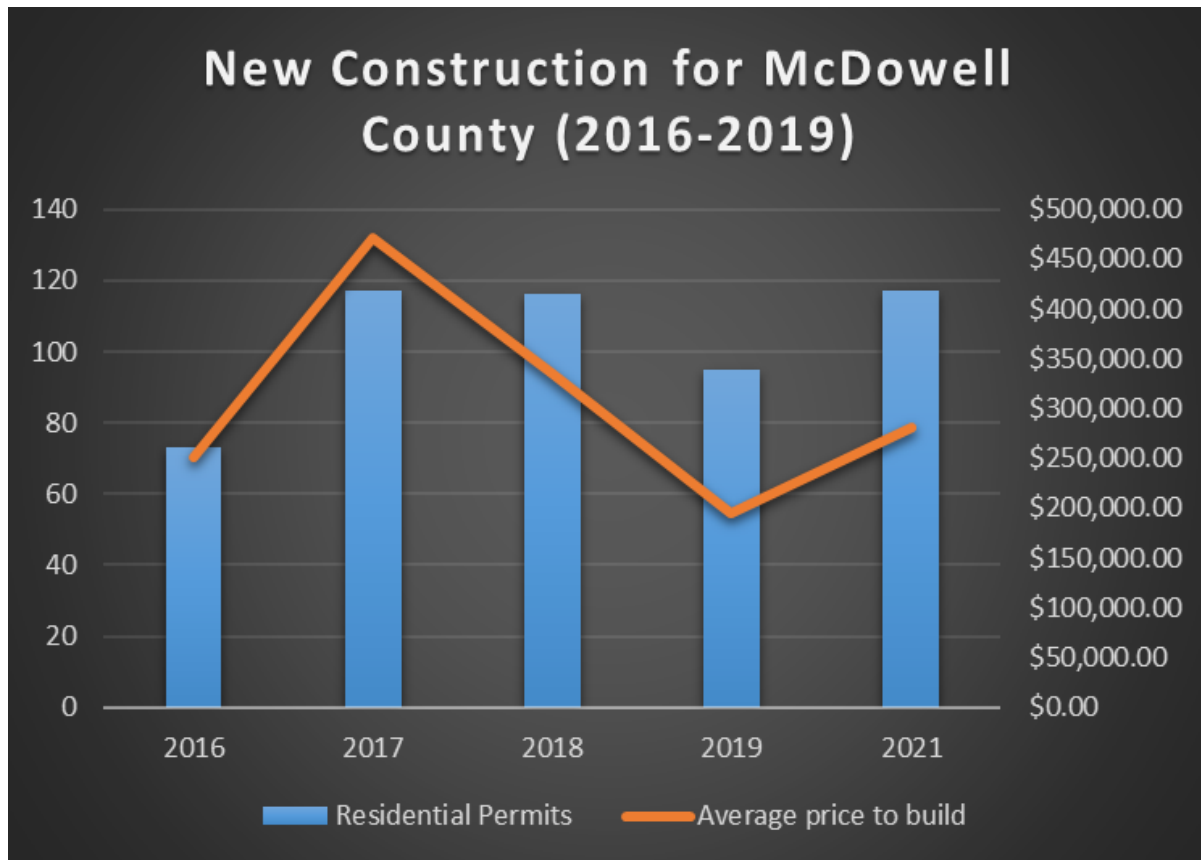
Figure 17. Bar graph showing the number of new construction units in McDowell County between 2016-2019, with 2021 data added. A line graph is laid over the bar graph to show the average price per unit during those same years. Source: Bumgarner, 2021.

The hopeful objective was to gain at least one percent growth per year in housing for the City.

Figure 35 represents the number of housing units from 2010-2019, and the rate of growth for

each year. Only one year in this range had a growth rate of one percent or more. This occurred in

2017, the same year as the highest price per unit for new construction.
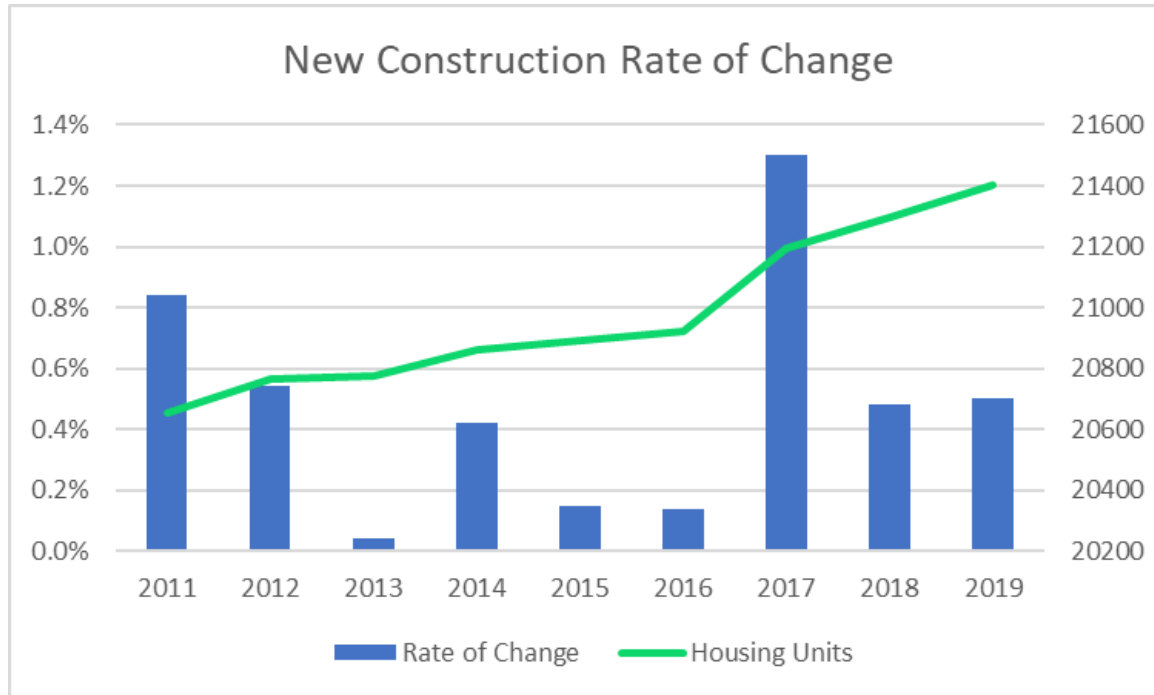
Figure 18. Line graph showing the number of housing units in McDowell County between 2010-2019. Bar graph on second axis to show the rate of change for housing units for those years. The red line represents 1% rate of change. Source: U.S. Census Bureau. American Community Survey: ACS Demographic and Housing Estimates, 2019a.

The Construction-Pricing Cycle

The new construction units are moving in a positive direction between 2019 and 2021. If this trend continues, there will be more new construction units in the future. This leads to an increase in new homes for sale, which may lead to a higher supply on the market. With higher supply, there is an opportunity for less demand and market that is not as tight as it is currently. Also, the price of new construction per unit has gone up between 2019 and 2021. This increase in building costs may deter some developers from starting projects, which could decrease new construction units. This pattern is seen between 2016 and 2019. The price of construction was at $250,344.23 per unit, and there were only 73 new units. This price rose dramatically to $470,786.60 with 117 units in 2017. The following two years saw a drop in price to $195,369.78 and 95 new construction units in 2019. This could indicate that an increase in

construction costs causes a decrease in number of units in the following years. As the price

comes down, more units are built, which can lead to increased pricing, and so on. To get a better

idea of true projections, more data covering a longer span of time is needed.

4.1.4 Rental Market

Market Conditions: Vacancy Rate of 6.1%

Current Conditions
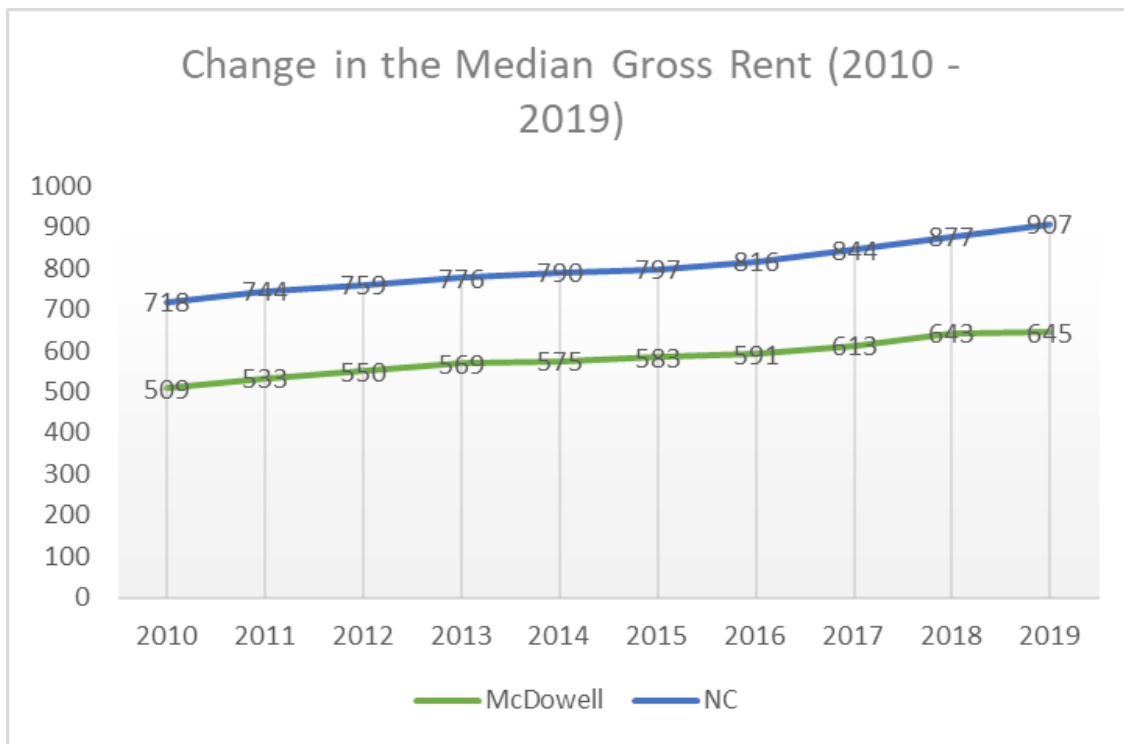
Figure 19. Line graph representing the change in median gross rent for McDowell County and North Carolina between 2010-2019. Source: U.S. Census Bureau. American Community Survey: ACS Demographic and Housing Estimates, 2019a.

Current rental market conditions (structures including apartments, houses, duplexes,

mobile homes, hotels/motels, and other options) are slightly tight. This is determined by a

slightly higher demand than supply on the rental market. The 2019 vacancy rate for McDowell

County was 6.1%, while the median gross rent increased steadily from $509 in 2010, to $645 in

2019 (U.S. Census Bureau, 2019b). In Figure 20, the vacancy rate and median monthly rent are

depicted in a line graph, explaining the slightly tight market as vacancy rate is declining and

gross monthly rent increases every year. According to the U.S. Census Bureau (2019b), of the

occupied housing units in McDowell County, 4,967 are renter-occupied.
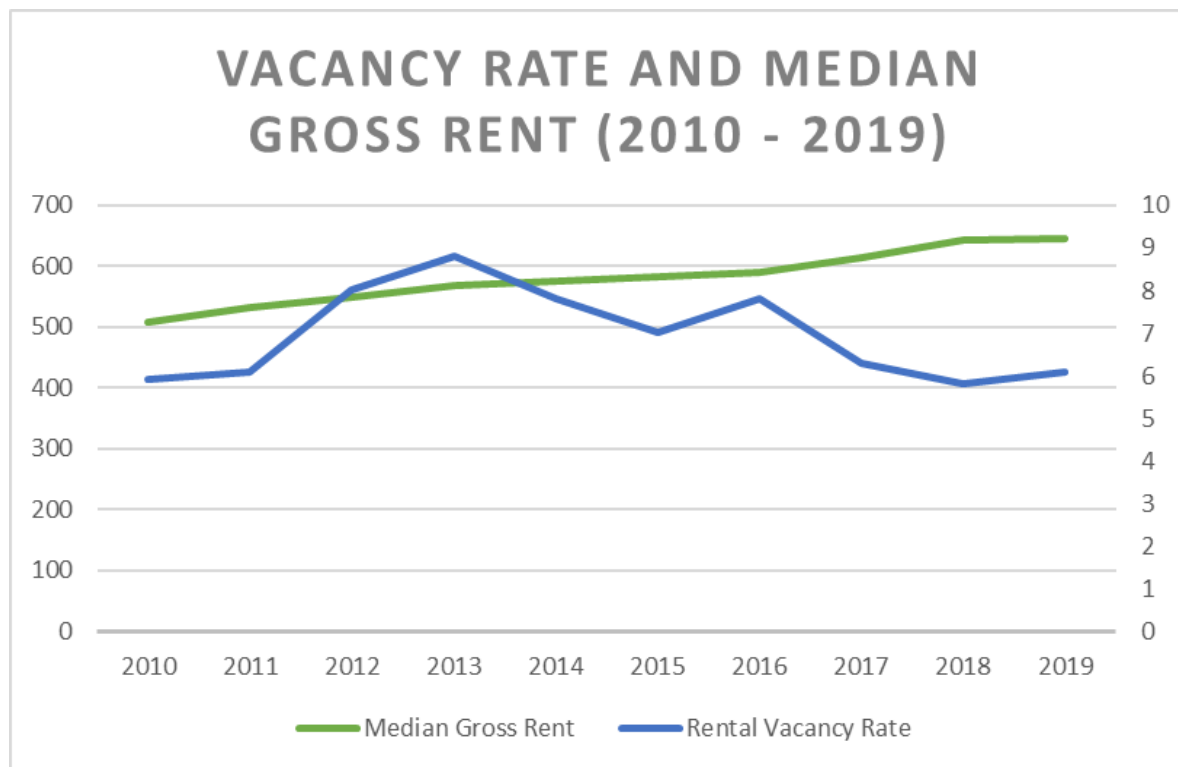
Figure 20. Line graph displaying the rent vacancy rate and median gross rent in McDowell County between 2010-2019. Source: U.S. Census Bureau. American Community Survey: ACS Demographic and Housing Estimates, 2019a.

With a renter vacancy rate of 6.1%, this means that there are 322 housing units available for rent

in the county. This value, however, is not a true indicator for available rental units to those

wishing to establish permanent residency in the county. The Census "Definitions and

Explanations" provides a formula for how the rental vacancy rate is calculated. From the

formula, one of the values used in the numerator and denominator is "Vacant year-round units

for rent." In the Census definition for year-round vacant units, they include any year-round

vacant mobile home, and rental units that are intended for year-round occupancy even if they are

not occupied the entire year. They also include housing units that are temporarily occupied by

people with usual residence elsewhere (U.S. Census Bureau, 2021). This means that vacation

rental homes, AirBnB's, vacation campgrounds, abandoned mobile homes, and other temporary

homes were included in this rental vacancy rate.

These units would not be available to households looking to establish permanent

residency in a rental unit. A more accurate definition for vacant rental units, when looking for

availability on the permanent rental market, would be units that are vacant and waiting for

occupancy meant for living use. This excludes vacation housing and abandoned units.

Housing Projects in McDowell County

In light of the low vacancy rate for rental housing units, there is an opportunity for

McDowell to focus on this need and increase the amount of rental supply. One of the most

recently completed housing developments in McDowell County is Phillips Ridge Apartments. It

was completed in 2020 and has a total of 60 rental units. The amenities for this apartment

complex include washer/dryer hookups or laundry on site, central air and heat with heat pump,

cable access, dishwasher, freezer, refrigerator, stove, playground, property manager on site, yard

maintenance, handicap accessible, and trash service.

Phillips Ridge Apartments (image 6 and 7) is conveniently close to West McDowell

middle school and McDowell high school, and within walking distance of several gas stations, a

Dollar General, a First Citizens Bank, a Bojangles, and an auto shop. They work as a tenant-

based and project-based rental assistance facility by offering rent based on income (project-

based) and accepting Housing Choice Vouchers (tenant-based) (Housing and Urban

Development, 2007; 2021d). This complex is just one piece of the community's efforts to

combat a lack of all housing in the county. Out of those 60 rental units, there were only 2

available as of July 2021.

Image 6. Phillips Ridge Apartment Complex in Marion, North Carolina.

Another effort being made to address all housing needs is the McDowell County

Planning Department's "Abandoned Mobile Home Park" ordinance, which has been in effect

since 2007. This allows for the removal of any mobile home that has not been connected to either

water or electrical utilities for more than 120 days (McDowell Planning Department, 2007).

Through this abatement, abandoned mobile homes will no longer be calculated with the Census

defined total number of vacant rental units, which affects the rental vacancy rate. While this

ordinance was adopted in 2007, it does not have a great presence in the public's every-day life.

This is an area where public awareness would be a benefit. With more accurate data describing

the housing conditions in the county, community organizations and municipalities can develop

more practical and efficient strategies to address the lack of housing. Not only will these

strategies be tailored to the actual rental market as it exists, but this data can support more federal

and state assistance for housing. When organizations apply for grants like the NC Neighborhood

Revitalization Program, accurate vacancy rates can mean more funding towards the housing

needs of the community (North Carolina Department of Commerce, 2021). If McDowell County

appears to have a higher vacancy rate, they may qualify for less financial assistance.

          While the Abandoned Mobile Home ordinance and Phillips Ridge Apartments are

existing initiatives to address the lack of housing in McDowell County, there are several local

organizations with teams working on the conceptual and planning phases of other housing

strategies. One such organization is the Dogwood Health Trust. This organization is providing

funds for grants, pre-development costs, loan guarantees, letters of credit, and equity

contributions to a new workforce housing development beside McDowell Technical Community

Image 7. Community playground at Phillips Ridge Apartment Complex in Marion, North Carolina.

College in Marion (Community Bulletin, 2020). This project is a collaboration involving

McDowell Technical Community College, the City of Marion, McDowell County, Gateway

Wellness Foundation, Housing Assistance Corporation, and the McDowell Economic

Development Association. According to the Community Bulletin from Mountain Xpress in

Asheville (2020), the complex will have 168 units available to households whose incomes are

80-120% of the Area Median Income[3], which is $52,100 in McDowell County (Housing and

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[3] Area Median Income is also known as Median Family Income, according to Housing and Urban Development (2021d).

Urban Development, 2021a). This creates an income eligibility range of $41,680 - 62,520 for the new complex. Some of the goals for this housing project are to provide more housing options, generate economic activity, and incorporate local businesses in the building and maintenance processes (Community Bulletin, 2020). In a slightly tight rental market, another 168 vacant and affordable rental units would be a welcomed contribution.

Future of the Rental Market

The gross rent was moving at a gradual pace in 2019. If this pattern continues, then the gross rent will only rise, especially with slightly tight rental market conditions. As far as rental housing supply, this category may experience some fluctuations. This behavior is clear in the graph (Figure 20) for the vacancy rate, where the data did not show a trend positive or negative over the past ten years. However, there are development plans in the pre-construction phases that will provide a much-needed increase in rental housing supply. This boost in supply has the potential to drop, however, soon after the units are filled up. Any increase in this supply would be beneficial to balancing the rental market, and providing more options for potential renters.

4.1.5 Affordable Housing

Current Conditions

The 2019 North Carolina Housing Coalition county profile for McDowell found that 21% of all households and 35% of renter households in McDowell County are spending more than 30% of their income on housing costs. The data gathered for this report is meant to address availability, specifically, and also affordability. The U.S. Census Bureau (2019b) took the affordability percentage of 30% one step further. Their data collection found renter households

that were spending more than 35% of their income on housing costs (Figure 21).
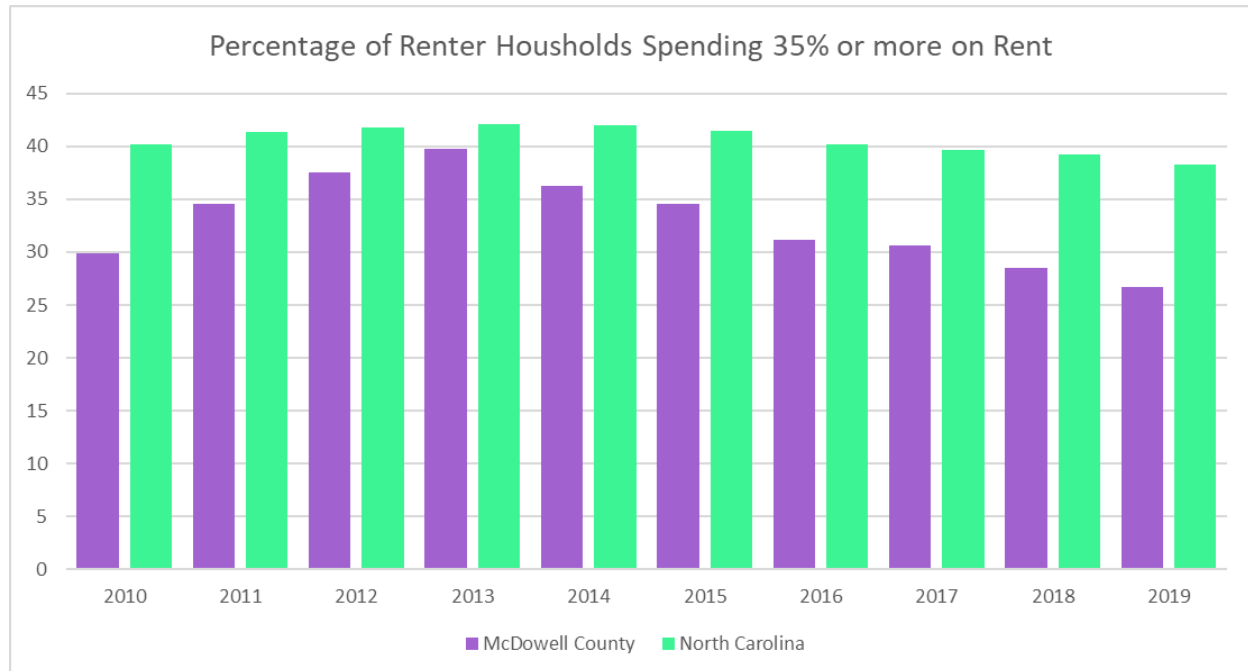
Figure 21. Bar graph showing the percentage of renter households spending 35% or more on rent. Source: U.S. Census Bureau. American Community Survey: ACS Demographic and Housing Estimates, 2019a

For North Carolina the number of renter households spending more than 35% of their income on housing costs in 2019 was 38.3%. The highest percentage of households is seen in 2013 at 42.1%. The county and state display a trend over the past ten years, where they both increased to their peaks in 2013, and gradually decreased until 2019. North Carolina, however, has consistently had a higher percentage of households spending more than 35%, only dropping below 40% in 2017. McDowell County did not breach the 40% ceiling, but came close in 2013, where their highest percent was 39.8%. North Carolina has also changed at a slower average rate of 0.63% each year, while McDowell County has changed at a rate of 2.6% each year.
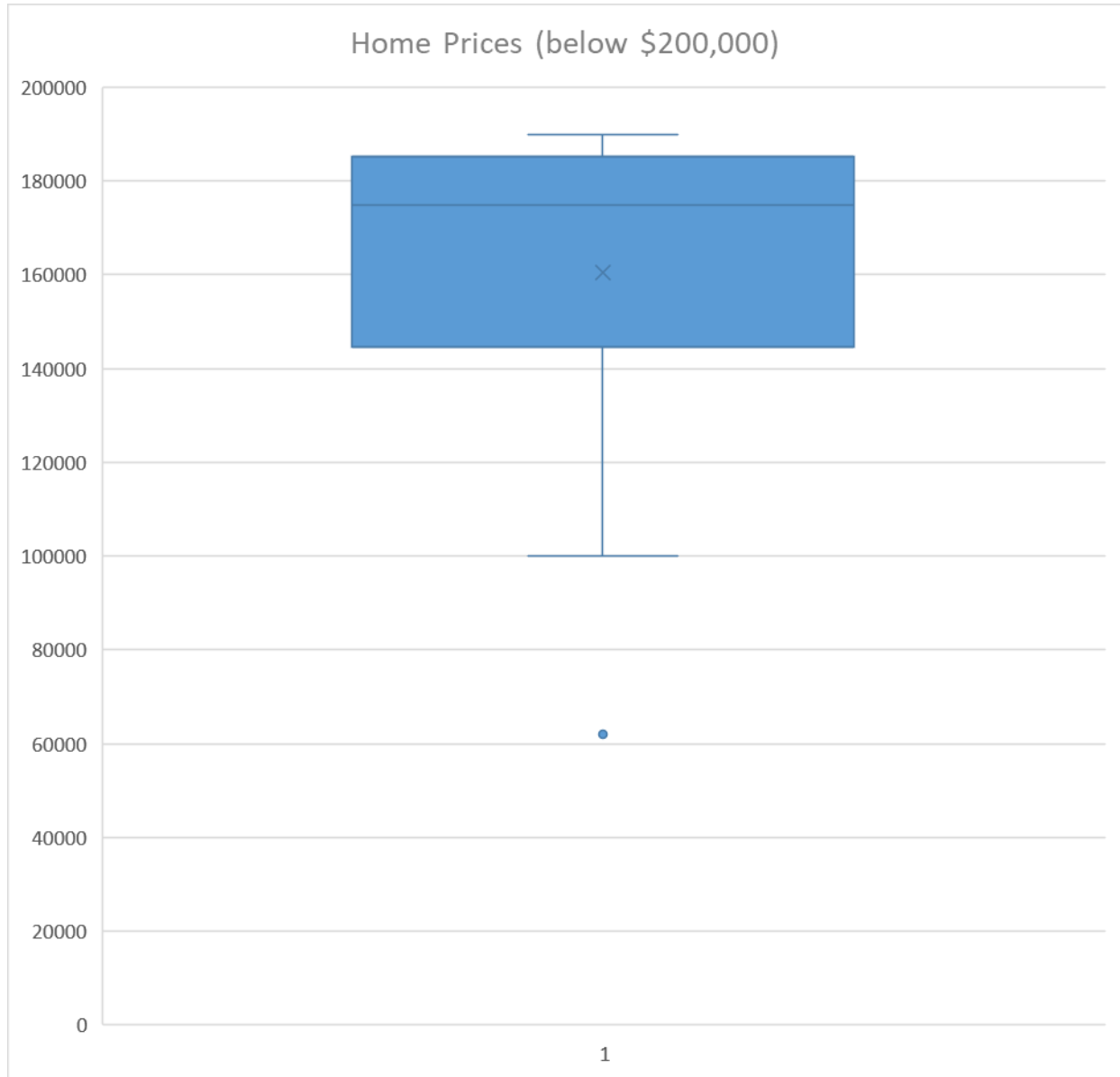
Figure 22. Box and Whisker plot showing the prices of homes (below $200,000) on the market in McDowell County in August 2021. Source: Redfin.

Households spending more than 30% on housing costs are cost-burdened (North Carolina Housing Coalition, 2019). Not to mention, 13.6% of McDowell County residents earn income below the poverty level (Access NC, 2021). This suggests that for those households that are already living in permanent homes, they are cost-burdened and not bringing in enough money to afford the homes they already have. With consideration for those looking for a home,

the affordability does not get better. For a single family searching for a home on the market in McDowell County, as of August 2021, there were 75 houses on the market, and available for purchase (Realtor, 2021). For this example, multi-family, condominiums, barns, mobile homes, land, and townhomes are excluded. This also excludes homes that are contingent or pending. For households that cannot afford to pay a mortgage over $200,000, there are 17 houses for sale (Realtor, 2021). Figure 22 provides a visual for this range of options, according to price. The interquartile range for these home sale values is between $144,500 and $185,250. This reveals what the majority of homes for sale are being priced. Considering The availability for affordable home ownership is limited.

According to Housing and Urban Development, the Fair Market Rent for McDowell County in 2020 is $569 for efficiency, $572 for one-bedroom, $671 for two-bedroom, $836 for three-bedroom, and $1095 for four-bedroom (2021b). As discussed in the Rental and Home Sale Market sections, McDowell County is experiencing a slightly tight market for homes. This market incentivizes a higher list price and monthly rent, putting pressure on already cost-burdened households while they either maintain their current residence or search for a new home.

There are options in the area for financial assistance to those who qualify. For renters, there are several apartment complexes that accept Housing Choice Vouchers or have income-based rent. Some mobile home parks also accept Housing Choice Vouchers. For properties that use income-based assistance, they require a criminal background check, a one-year lease, and most of them require two forms of identification. These restrictions exclude felons, short-term workers, individuals without a license, individuals without documentation, and the majority of the homeless population. For those who cannot meet the requirements and cannot

afford to live in a house for rent, there are other options. Temporary solutions are to stay in hotels/motels which do not offer assistance but have fewer (if any) restrictions. These rates are provided weekly and can accommodate a renter with less money for a deposit, a lack of identification, or lack of rental history to support a 1-year lease agreement.

For those properties that use income-based rent and deposits, they are following a HUD guideline on income limits. Foothills Regional Commission, McDowell County's PHA, uses the chart on income limits in Table 3. For McDowell County, the program directed to assisting low-income (80% of median family income) families is capped at $61,900 for an eight-person household. Another tool that properties use measure their own financial structure and its fairness with the national standard is the Fair Market Rent (FMR) in Table 4. A brief explanation of how FMR works is when a household pays their rent, they will pay a value equal to 30% of their income and the federal government will send a subsidy to cover the difference between that value and the FMR matched with the household, depending on the number of bedrooms. For example, for a household with a monthly income of $2,000 living in a two-bedroom apartment, they will receive a subsidy of $93 to cover the difference between $693 (2020 FMR for two-bedroom) and $600 (30% of that income).

According to HUD (2019), 25.6% of occupied rental housing units receive some type of housing assistance from the Public Housing Authority. Reports like the 2019 Housing Need in McDowell County by the North Carolina Housing Coalition describe how cost-burdened the county is, suggesting that there is a clear disconnect between the expected process of FMR and what is placing a cost-burden on families.

FY 2021 Income Limit Area	Median Family Income Click for More Detail	FY 2021 Income Limit Category	Persons in Family							
			1	2	3	4	5	6	7	8
McDowell County, NC	$52,100	Very Low (50%) Income Limits ($) Click for More Detail	20,500	23,400	26,350	**29,250**	31,600	33,950	36,300	38,650
		Extremely Low Income Limits ($)* Click for More Detail	12,880	17,420	21,960	**26,500**	31,040	33,950*	36,300*	38,650*
		Low (80%) Income Limits ($) Click for More Detail	32,800	37,450	42,150	**46,800**	50,550	54,300	58,050	61,800

Table 2. Table showing the income limits on HUD website. Source: Housing and Urban Development, 2021b.

Final FY 2021 & Final FY 2020 FMRs By Unit Bedrooms					
Year	Efficiency	One-Bedroom	Two-Bedroom	Three-Bedroom	Four-Bedroom
FY 2021 FMR	$584	$588	$693	$862	$1,122
FY 2020 FMR	$569	$572	$671	$836	$1,095

Table 3. Table showing the Fair Market Rent on HUD website. Source: Housing and Urban Development, 2021b.

Plans and Projections

The percentage of McDowell County households spending more than 35% of their income on gross rent has seen very little change over the past ten years, with a net change of only -3.2%. Even as the net change for households spending more than 35% of their income on gross rent moves in a negative direction, it is such a small change between 2010 and 2019 that it can be inferred this percentage of households will not experience a great change in the near future. If this pattern continues with the current direction and rate, the next year will see a decrease between 0.5-1.0% at the most. According to this data, these cost-burdened households are not going to see any relief for their housing costs any time soon. This is where the plans and hard work of local organizations can be utilized for the benefit of the entire community.

According to the North Carolina Consolidated Plan 2016-2020, the goal to improve housing in North Carolina can be met through providing suitable, safe and affordable housing, and expanding economic opportunities (North Carolina Housing Finance Agency, 2016). This affordable housing need is echoed throughout the entire state, and especially in its western rural gateway communities. In March of 2021, Foothills Regional Commission (formerly Isothermal Regional Commission) produced a report from their housing task force efforts. Foothills held six meetings in 2020 for the task force to discuss issues such as relocation rates, mortgage rates, construction/labor/supplies pricing, rehab and repair housing programs, housing counseling and credit repair, weatherization and energy efficiency, low-income housing tax credits, and present and future community partnerships. In order to access the appropriate resources to address the lack of affordable housing in McDowell County, there needs to be a comprehensive plan to educate everyone on the opportunities available. There are several agencies and programs available for residents to use for their housing needs. One of these is the North Carolina Housing Finance Agency, which manages the federal tax credit, the federal HOME program, the North Carolina Housing Trust Fund, and provides down-payment assistance and low-cost mortgages to first-time home buyers. They also provide financial assistance to local governments, nonprofit organizations, and private owners for affordable housing projects, rehabilitation of housing, and HUD Section 8 assistance (Isothermal Regional Housing Task Force, 2020). Another program Foothills Regional can provide education on is the North Carolina Department of Commerce Community Development Block Grant. This grant is designed to increase housing and economic opportunities to local communities. Another state-funded aid is the Key Program which offers assistance to people with disabilities on Supplemental Security Income to make rent more affordable. These programs and more are available to the public. Organizations like Foothills

Regional Commission are dedicated to serving their community through the education and promotion of these programs.

Along with Foothills Regional Commission, there are several organizations, churches, and government agencies in McDowell County working to address the lack of affordable housing. One of these groups is the McDowell County Housing Advisory Network (M-CHAN). This group is in the stages of organizing and is making a big impact. With leaders from the East Marion Community Forum, the Community Engagement Project, Freedom Life Ministries, Centro Unido Latino Americano, the YMCA, the Women's Shelter, the Men's Shelter, Code Purple, City of Marion, McDowell County, Rural Forward NC, Foothills Regional Commission, and concerned residents, M-CHAN is able to give a unique perspective and approach to housing in McDowell County. Their goal is to work in collaboration with multiple partners including the local residents through community listening sessions, to identify housing needs, data, and networking, and create a comprehensive action plan that will result in a county-wide, cohesive housing strategy to address the many issues of housing that McDowell is currently facing. These issues include populations in homelessness, re-entry, work force, seniors, rent, own, refurbish, build, congregate living, and multi-family, to list a few. They also plan to develop a housing database for recommendations and progress tracking. The next step for M-CHAN is to host a McDowell County Housing Summit where they mean to encourage stakeholders to discuss roles, responsibilities, and to build the McDowell County Housing Strategy (Wilson, 2021). The approach of this strategy is long-term. In order to create a new policy that is meant to address the behemoth that is affordable housing, it will take a group of people like the ones in M-CHAN, and it will take a lot of time.

4.2 Pilot Study: Affordable Rental Options in McDowell County

From all the community organization meetings I participated in at the beginning of my project, it was clear that affordable housing was a concern. The M-CHAN group sharpened that concern to an even finer point when they emphasized the data they were lacking on the affordable rental market. M-CHAN, and other community groups, were unable to assist residents looking for affordable rental options because they could not find any. This is where M-CHAN asked me to provide any support that I could to determine what was happening in the affordable rental market. In order to analyze this topic, I needed to create the data. This meant I needed a means of gathering data directly from rental properties as I canvased the county for options whose details were not available online, and productively combining that data in a usable format for public use. I chose to use ArcGIS® Field Maps, a mobile app, for that reason. The use of ArcGIS® Field Maps allowed me to collect data points in the field and submit those points from my phone, in real time, onto a layer, visible on ArcGIS® Online.

From this pilot study, I discovered a sample of rental properties that reveal how difficult it can be for potential renters to locate affordable rental options. This study produced a vacancy rate of 1.8%, 75% of properties do not offer any rental assistance, and 65% require a criminal background check. These and other results create a sample of how the rental market can exclude potential renters with lower incomes and those lacking identification. The existing housing policies and limited supply of affordable rental options are not able to offer shelter to everyone who needs it. Pilot studies like this do not attempt to solve the housing issue. They do, however, provide examples of how this issue is affecting people, and might be the catalyst to making a change for housing policies in the future. In order to produce results that would make an impact, these are the following steps that I used to complete this data collection.

Data Collection Steps

1. Create an inventory of rental options: I initially started purposefully sampling rentals by cold-calling apartment complexes and real estate agencies in the county. Then, I reached out to mobile home parks I knew rented out trailers. I called all the hotels/motels in the county, and asked about the options to stay weekly, bi-weekly, monthly, etc. I also utilized snowball sampling, and contacted friends who rented out houses. Each of these calls usually led to another contact, which led to another contact, and so on. I only included units that were strictly rentals. This excluded owned condominiums, owned mobile homes (with rented lots), owned mobile homes (with owned lots), shared housing, and vacation units. If I find any campers to include in the future, these will be units that are rented for long-term living, instead of vacationing. This list is not absolute and continues to change as the market changes. From the list I made, I asked the contacts the following questions:

- What is the deposit?
- What is the monthly rent?
- Are utilities included?
- Do you offer any rental assistance?
- How is the unit heated and cooled?
- Is yard maintenance included?
- Is there a washer/dryer hookup, provided machines in the unit, or laundry on-site?
- Are pets allowed? Is there a pet deposit?
- Is smoking allowed?
- Is there a lease term required?
- Are there any criminal background or credit checks required?
- Is there an application fee?
- What amount of money is due at move-in? First month's rent plus deposit?
- Is there any form of identification required?
- What is the renter responsible for? What is the landlord responsible for? Financially or otherwise.
- Are there any current units available for rent?

For this step, I kept these notes and details on paper. I also took down manager names and contact information. The majority of this step was completed over the phone, but I

also traveled to sites to meet with managers, drove to mobile home parks to ask residents about

their rent, and stopped plenty of times on the side of the road to speak with a former tenant while

helping them load their U-Haul. Once I felt I had exhausted all resources and found as many

rentals as I was going to find, I completed the inventory and began the next step.

2. Narrow the results: I needed rental options that were affordable to fill the gap in

existing data. To determine what affordable rent was, I used HUD's Fair Market Rent (Table 4)

as a guide. According to HUD, the Fair Market Rent (FMR) for McDowell County is categorized

based on the number of bedrooms in a rental unit (2021b).

Final FY 2021 & Final FY 2020 FMRs By Unit Bedrooms					
Year	**Efficiency**	**One-Bedroom**	**Two-Bedroom**	**Three-Bedroom**	**Four-Bedroom**
FY 2021 FMR	$584	$588	$693	$862	$1,122
FY 2020 FMR	$569	$572	$671	$836	$1,095

Table 4. Fair Market Rent in McDowell County. Source: Housing and Urban Development, 2021b.

Based on North Carolina Housing Coalition, households spending 30% or more of

their income on housing costs are cost-burdened (2019). With this in mind, the median family

income for McDowell County is $52,100 (U.S Census Bureau, 2019c). To determine at what rent

price a family would be considered cost-burdened, I calculated 30% of $52,100, which is

$1302.5 and the maximum monthly rent for a median-income household to pay before becoming

cost-burdened. Considering this number is over twice the county's median gross rent of $645, I

did not consider this affordable. Therefore, I chose to limit my search to units renting at $1,000

or less, regardless of bedroom number. This was based on HUD's Fair Market Rent table where

the maximum amount is $1,095 in 2020, seen in Image 5. While this rent amount is still not

affordable and is much higher than the median gross rent for the region, this decision was an

effort to collect information on as many units as possible. I made an exception for units that were

available at weekly rates. For these exceptions, I chose a maximum monthly rate of $1500.

While these units may have higher monthly rates, they are used more temporarily and may not

see one tenant stay an entire month. They are also an option for those who cannot afford to pay a

deposit and first month's rent.

      3. Create a spreadsheet: I created this spreadsheet based on the responses to the

questions I asked all rental option contacts. These responses became my column headers (Table

5).

Name	Rental Type	Rent	Deposit	Rental Assistance	Amenities	Vacancy
Table 5. Table of column headers for my database, made from responses.						

      I filled in this spreadsheet with information gathered from speaking with all the

rental contacts, then I reached back out to these contacts if there was any missing data or if I had

any questions for clarification. The column *Name* worked well with apartment complexes,

hotels/motels, and most mobile home parks, but was unnecessary for rented houses. The *Rental*

Type helped me organize by keeping options sequential based on type. For example, if someone

is using this database to look for an apartment for rent, it can easily be seen because of the

apartment complexes are grouped next to one another. I input *Rent* as a rate with monthly or

weekly listed. The *Rental Assistance* and *Amenities* columns both had features and details listed,

or "N/A" where none was available. Lastly, *Vacancy* either received a "yes" or "no." I kept a

tally for the number of units that were vacant, where applicable. After completing this

spreadsheet, I began the steps necessary to utilize ArcGIS® Field Maps.

      4. Create ArcGIS® Online map: In order to use ArcGIS® Field Maps, I needed to

have a map prepared on ArcGIS® Online, where I could add points to my Affordable Rental

Options layer. To create this map, I needed a base layer to define my geographic area. I

accomplished this by adding a township layer containing all the townships in McDowell County.

Not only did this provide a basemap that showed the county boundary, but it offered an easily

understood and recognizable frame of reference for my Pilot Study Rental Options layer. With

the map saved online, I was able to open the ArcGIS® Field Maps app on my phone and select

the map I made.

        5. Create a feature layer and Smart Form on ArcGIS® Online: A feature layer

gave me a place to add my points, and a starting point to input the information I gathered from

the rental options contacts. I created this feature layer through ArcGIS® Online.

        Once I created the feature layer, I needed to make the fields for my Smart Form.

These fields were labeled the same as the columns in the Excel spreadsheet. Once all the fields

were added, I was able to make a Smart Form to submit the information I collected for each

location. This Smart Form was the document used in the field through the ArcGIS® Field Maps

app. Image 8 is a view of those fields for the Smart Form on ArcGIS® Online.

Image 8. Screenshot of ArcGIS® Online. View of my fields in the Smart Form I used for Field Maps. Source: ArcGIS® Online.

        After I had all the fields created, I needed to confirm that the properties for each

field made sense for the responses I would be inputting. For example, I needed some fields to be

text responses and others to be numerical responses. Image 9 is an example of the responses I used for *Rental Type*, which required codes for each response because I made these responses into a drop-down menu with types listed.

Label	Code		
Hotel/Motel	1	🗑	(2)
Duplex/Multiplex	2	🗑	(3)
Mobile Home Park	4	🗑	(5)
Single-Family House	6	🗑	(20)
Apartments	7	🗑	(10)
Other Purpose	8	🗑	(0)

+ Add

Image 9. Screenshot of ArcGIS® Online. View of me editing my attributes for my Field Maps App. Source: ArcGIS® Online.

6. Add points and data into Smart Form with ArcGIS® Field Maps app: This is the step where I finally had the chance to use the ArcGIS® Field Maps app in the field. It was extremely simple to use, starting with downloading the app onto my phone. Next, I went to the location of each rental property, and opened the app. Then, I selected the map I created on ArcGIS® Online. This pulled up a map of where I was standing in McDowell County. The app was set to be accurate within 30 feet, so it took only a moment to verify my location. I then selected the blue "+" icon on the bottom right of the screen, which prompted me to select what type of rental property this point was, seen in Image 10.
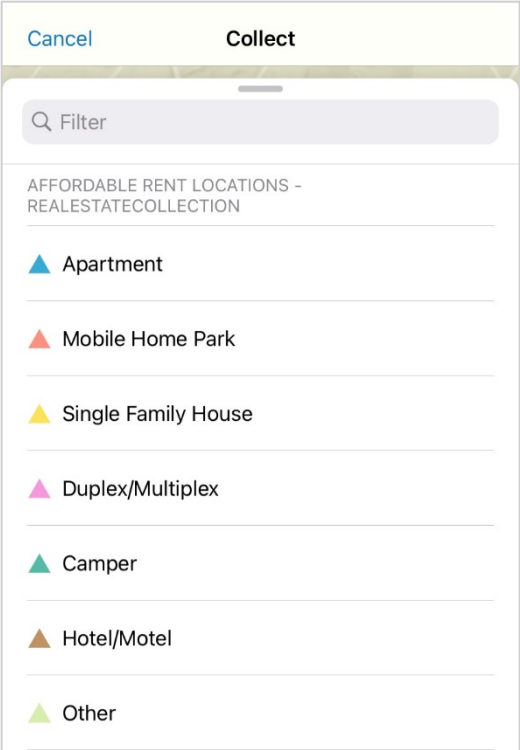
Image 10. Screenshot of Rental Type selection screen on the app. Source: ArcGIS® Field Maps.

Once a rental type was selected, the app opened a Smart Form for that point (Image 11). This was the step where I filled in the Smart Form with all the responses to my questions from rental options contacts. The app also had icons "Take Photo" and "Attach", seen in Image 11, where I could either take a picture from the app, or add an image saved from my phone.

Image 11. Screenshot of Smart Form in app. Source: ArcGIS® Field Maps.

Image 12. Screenshot of ArcGIS® Online. View of me editing my data after being collected in the field. Source: ArcGIS® Online.

7. Complete missing and modified data on ArcGIS® Online: After all the points were plotted with ArcGIS® Field Maps, I went into my Smart Form on ArcGIS® Online to complete anything missing in my field data (Image 12). I used this step to add information I learned after the point was plotted, input data I did not have time to finish in the field, correct any errors, and confirm that all my data was organized and following the same format with each entry. I also verified that images were clear and not distorted, and that contact information was up to date. This gave me a chance to see how well the ArcGIS® Field Map app worked and look for any parts where I made mistakes or parts I could have done differently.

Pilot Study: Results

Of the 5,289 rental units determined by the U.S. Census Bureau (2019b) in the county (occupied or vacant), I was able to locate and collect data on 13.5% of these rentals. This amounted to a total of 40 properties with 712 units. These include the following rental types: hotel/motel, duplex/multiplex, mobile home park, single family house, and apartments (Figure 22). At the start of the project, I expected to also find campers and other units, such as tiny homes or cabins, but did not find any units in those categories at the time of this research.
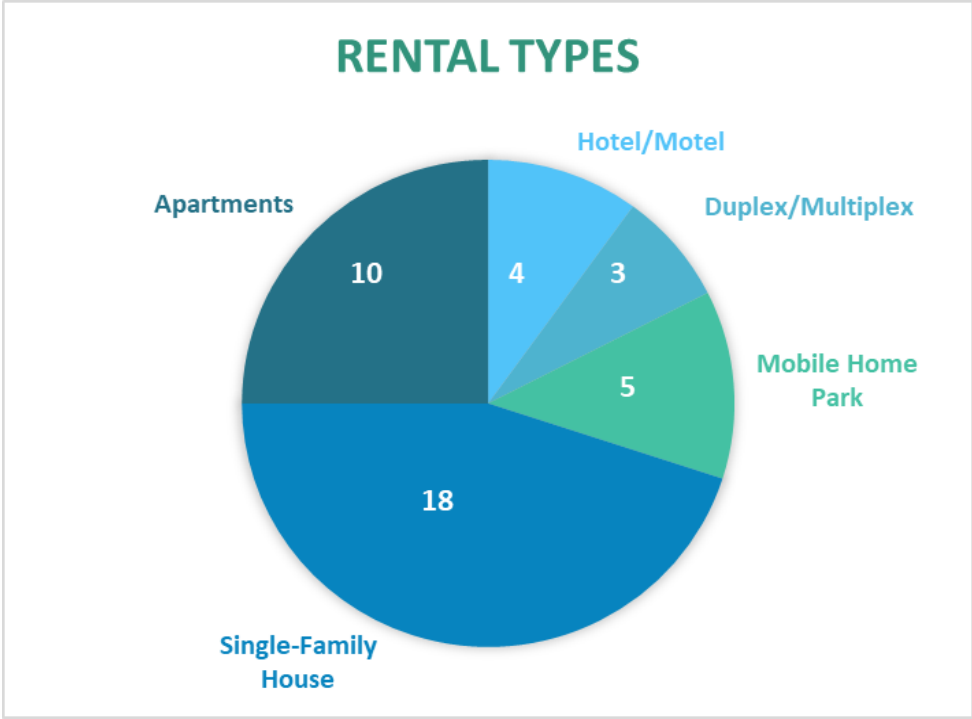
Figure 23. Pie chart showing the types of rental units from pilot study in McDowell County (n=40).
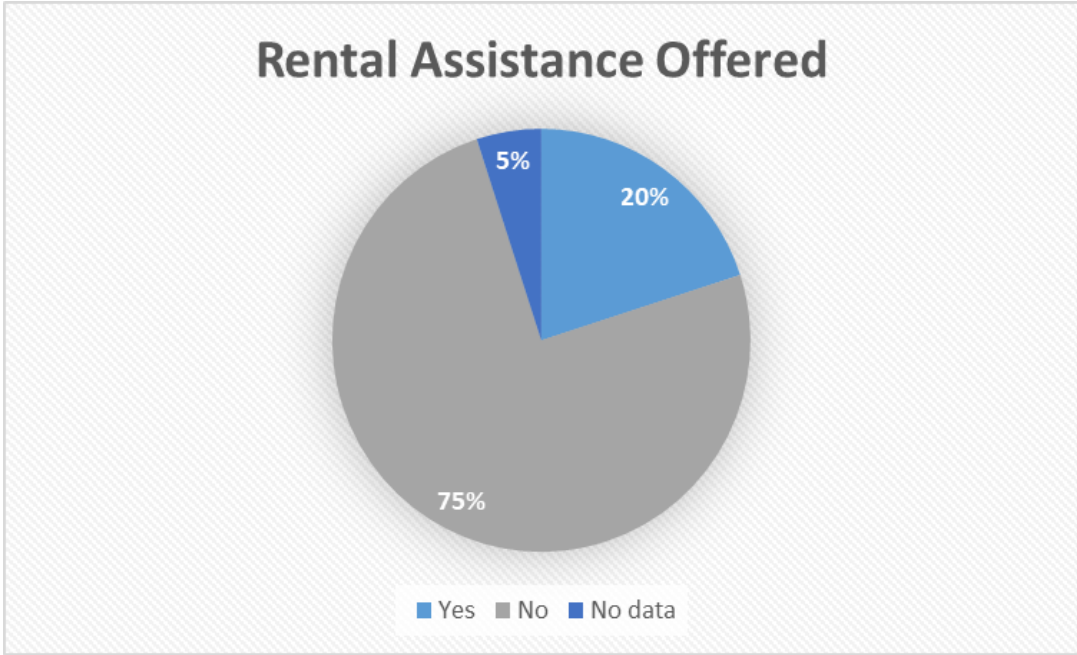
Figure 24. Pie chart representing the percentage of affordable rental units in McDowell County that offer rental assistance from pilot study.
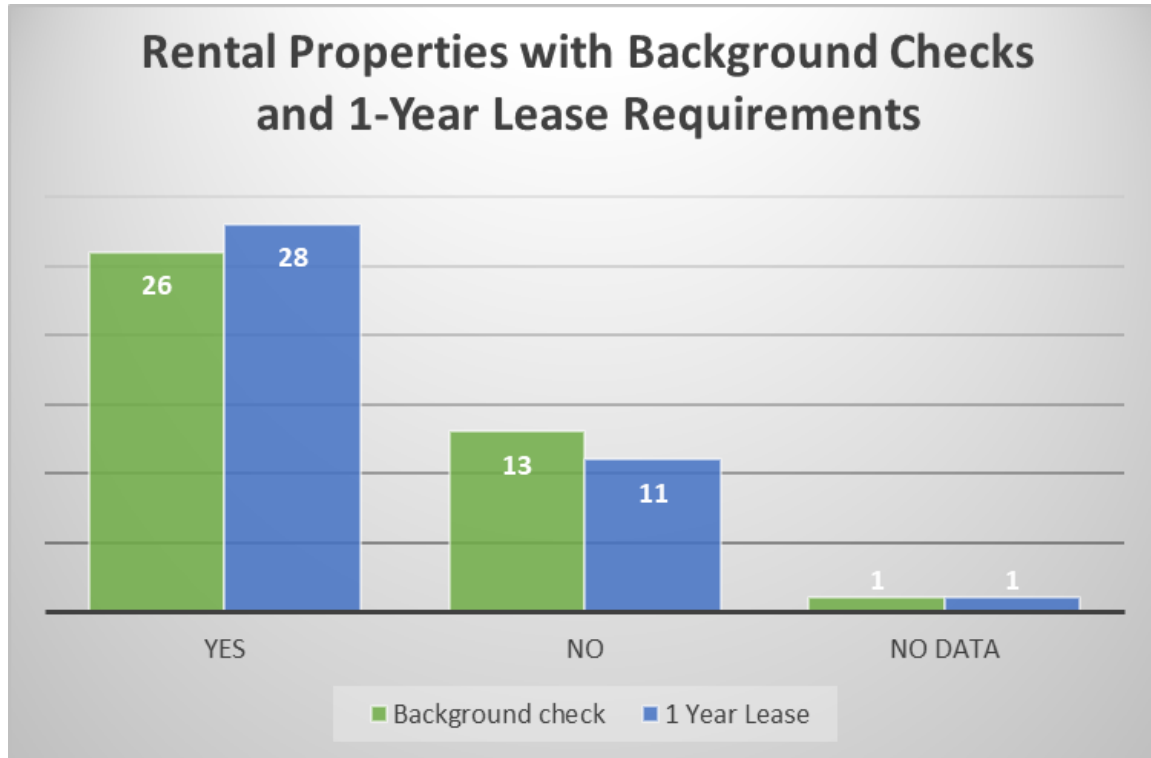
Figure 25. Bar graph displaying the number of affordable rental properties with required background checks and 1-year leases from pilot study (n=40).
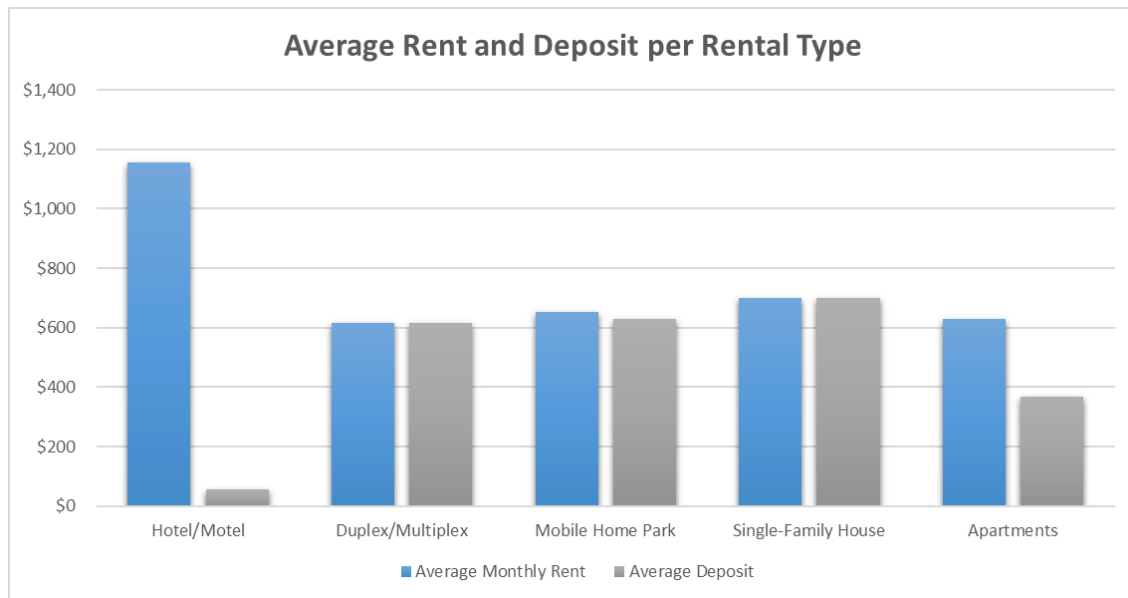
Figure 26. Bar graph displaying the number of affordable rental properties with required background checks and 1-year leases for pilot study (n=40).

In this pilot study, four out of five rental types have average rent and deposits within $200 of each other, while Hotel/Motels have an over $900 difference. Hotel/Motels are also the only option where every unit did not offer rental assistance. Overall, 75% of the rental units collected do not provide rental assistance of any kind (Figure 23). Lastly, for those who need rental assistance, only 20% of properties offer any type of assistance. Rental assistance includes Housing Choices Vouchers (tenant and project-based) and assistance with utilities. However, properties that offer rental assistance also require a criminal background check and a minimum 1-year lease. 65% of properties require a criminal background check and 70% require a 1-year lease (Figure 25).

In addition, most rental properties require a deposit that is equal to one month's rent. Yet, the requirement for a security deposit paid upfront when the lease is signed, can be cost prohibitive to low-income renters without adequate savings or extra cash. However, Hotel/Motels only require a deposit that ranges between 2.5-3.6% of the monthly rent or between $25 and $100. Even though the Hotel/Motels have the highest monthly rental rate, ranging between $750-1,422, they are the most frugal option for someone who only needs a temporary place to stay and has very little money. If you only need a place for a week, you can spend as little as $275. At the same time, these Hotel/Motels do not require a criminal background check or a government-issued ID. My study found that 65% of properties require a criminal background check and a government-issued ID, and none of these were Hotel/Motels. Given the low cost of a security deposit required by Hotel/Motels, and the lack of a criminal background check or government-issued ID, they provide a temporary solution for those without other means.
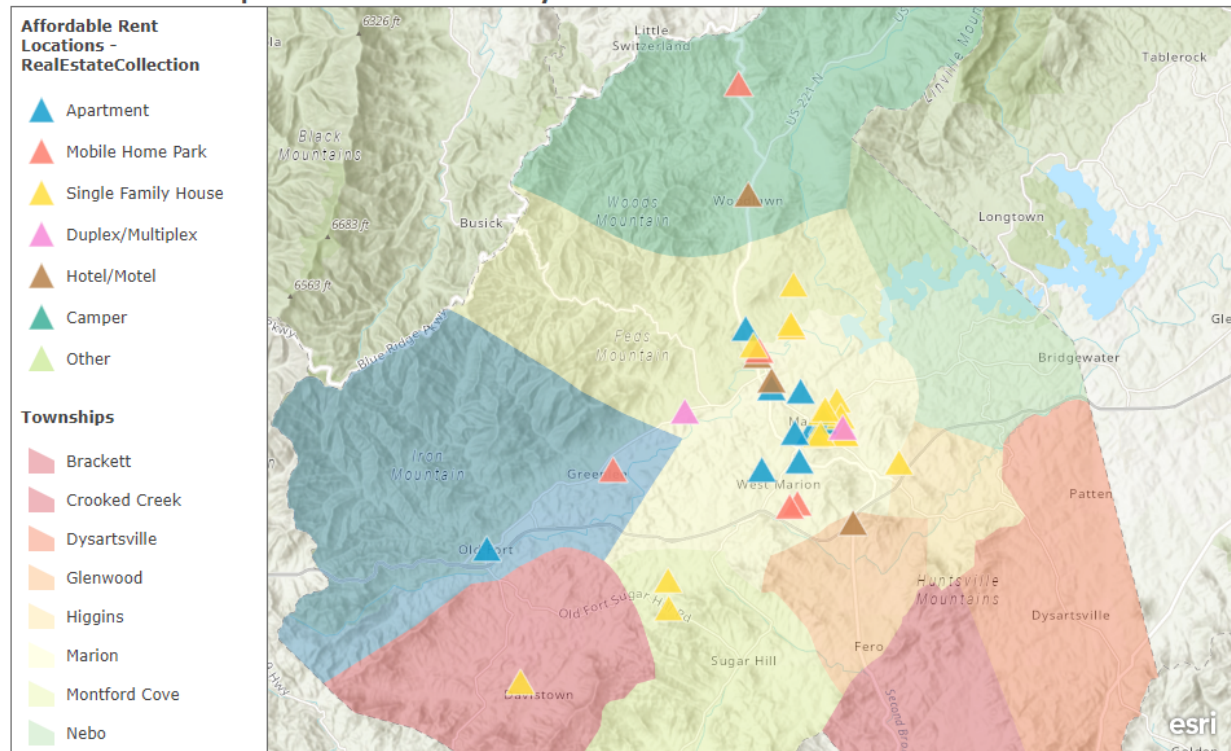
Esri, NASA, NGA, USGS | State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

Map 5. Map of pilot study rental options in McDowell County in 2021.

Map 5 shows all locations produced from my research that are rental options in

McDowell County, with rental amounts above and below McDowell County's median gross rent.

Once selected, a user can view the attributes for each property, including rent amount, deposit,

rental assistance (if available), amenities, and vacancies- along with addresses and contact

information. The map serves as a reference for users to easily identify which rental properties are

closer to their work, school, family, etc., in addition to providing valuable rental information that

can assist a user in their rental selection process.

After gathering this data on affordable housing in McDowell County and analyzing

the results, I found several obstacles to obtaining affordable rental housing for McDowell

County. First, of the 712 units that I found to be at or below the maximum rent threshold that I

established in my methods ($1,000), only 13 were vacant at the time of my research. Thus, the

vacancy rate for my pilot study was 1.8%.

Maximum Rent	$1,000
Median Rent	$600
Minimum Rent	$325

Table 6. Maximum, median, and minimum rent from pilot study

If we look at the rental options that provide monthly rates, the median rent is $600.

Comparing this median rent from my research to the median rent identified for the county, these

are much more affordable rates than 30% of the Median Family Income at $1,302.5 per month.

This prompted me to take a closer look at the units from my study with rents below the median

rent of $600. After filtering the 712 units based on that cap of $600 in monthly rent, I was left

with 357 units. From these affordable rental units, I found 5 vacancies. Considering there were

1,273 rental housing units receiving some type of financial housing assistance in 2019, there are

much more affordable rental units available in the county. However affordable these units are,

they are not vacant and available for the potential renter.

The results of this pilot study, at 712 units, only represent 13.5% of the entire rental

market in McDowell County. While results on such a small scale cannot predict future directions

or reflect the actual affordability status of the rental market, they can be used as a database from

which to build this type of information. As more data is added to the map and database, there

will be more opportunities for it to offer valuable rental information to community organizations

as they work with McDowell County residents looking to rent. This map is current as of July

2021. Rental property availability changes rapidly, so this map will continue to change. Through

developed connections with managers, property owners, and landlords, I will be able to update

this data periodically, and submit additional discovery data. The goal is to accumulate rental data

until all 5,289 rental units (occupied and vacant) are included, so that anyone looking to rent will

have access to necessary details about the rental properties in McDowell County.

V. Discussion & Conclusion

The goal of this project was to gather as much data as possible on the market in McDowell County and make that data available to the concerned organizations and residents of this community. By using methods in GIS and a housing market analysis, I reached my goal and developed a database that will continue to support this community and its efforts to address the lack of housing.

While working on this report, I learned about aspects of the county I had not known before. For example, I learned about gateway communities and how unique their experience is with amenity migration, the economy, housing, and the work force. A gateway community, like McDowell County, can experience a range of economic and social changes. Their populations become much more influenced by outside counties, demographics and labor force may change, and the real estate market will see different prices and availability than before (Stoker et al., 2021). McDowell County is a gateway community that can attest to that. Populations over 55, especially over 65, have increased from 2010 to 2019 (U.S. Census Bureau, 2019a). Within that same time, younger populations and net growth have decreased. The only reason the population has increased since 2010 is because of immigration from outside the county. This indicates that the gateway community of McDowell County is growing in the number of retirees but not in working-aged adults. So, while McDowell County has attracted individuals and families to move here for its natural amenities and local charm, it has not been able to attract the labor force with them. These changes in the county's demographics and work force have a great influence on the housing market. Retirees are very different than other types of home buyers, like working adults with young children or single individuals. This may explain why there was a cluster of homes are for sale by Lake James (Map 3). The homes on Lake James gated communities are marketed to

individuals who have plenty of flexible income, personal transportation, and no need to be close

to town or employment. The housing market is also influenced by the economy. The economy in

McDowell County is growing, which is attractive to residents of other counties who are looking

for somewhere with potential. This increases the demand on the housing market, raising prices.

All of these factors contribute to the lack of housing, especially affordable, in McDowell County.

      As previously discussed, the home sale market is lacking in supply and affordability. With

a homeownership vacancy rate of 1.9 %, and a median of 49 days on the market, finding a home

is extremely difficult (U.S. Census Bureau, 2019b; Redfin, 2021). The new building permits in

2021 may not be available for purchase or may take at least a year to complete (Bumgarner,

2021). The lack of supply has not stopped the homeownership rate from consistently increasing

since 2014. The median price of a home on the market in July 2021 was $190,500 (Redfin,

2021). For households that need down payment assistance, a mortgage with this median price

would be approximately $1000, depending on the interest rate and if the buyer used any other

assistance. This mortgage is very close to 30% of the Median Family Income for McDowell, and

should be representative of what households can afford in this area. While this data indicates a

level of affordability for the home sale market, the county is still experiencing a shortage in

housing supply and a cost-burdened rate of 21% of all households (North Carolina Housing

Coalition, 2019).

      Assistance is available to those who qualify, and the community leaders in McDowell

County are ready and willing to work with households who need to navigate the housing

assistance system. M-CHAN is one of those leaders and is working on the process to provide

more education, gather more data, and incorporate more change in housing policy to support a

stronger and happier county of residents looking for shelter and autonomy. This process starts with projects like mine in collaboration with M-CHAN.

My pilot study for rental options showed the value of GIS applications to housing analyses, especially the benefits of using a mobile app in the field. This database and map create a starting point for data collection of rental options in McDowell County and will continue to grow as more data points are discovered. Once complete, potential renters will be able to see all available rental units and decide where to start based on the data that is available. They will also have access to contact names and numbers, required documentation, rates, and vacancy status. This database will be a tool for individuals and households as they navigate the rental market and its limited supply.

The median gross rent is $645 and median home sale price is $190,500. Compare these values to the Median Family Income of $52,100 and the market of established households appears balanced. The market for those looking to establish a household, is driven by what is available; what the supply looks like. The issue of supply for McDowell County is evident by the vacancy rates of both the home sale and rental markets, not to mention the vacancy rate of 1.8% from my pilot study. This may explain why community organizations in the county were struggling to help residents in the first place. As mentioned, these organizations claimed they could not find any rental options for those looking to establish permanent residency. This remains an issue of affordable housing, not because the options are too expensive but because the options are too few.

Limitations

One of the limitations to my study was the scope of rental options I collected. This was a pilot study, and while it provided valuable information for the use of ArcGIS Field Maps and an

example of a portion of the available rental options in McDowell County; it was not sufficient as

a representative sample and a larger collection of rental units would have been more accurate.

Another limitation to this study was the date range. I chose to research data from 2010-2019

because the bulk of my data was from the Census. The 2020 Census did not become available

until August 2021, after my research was complete. Some of my results show that I used data

from 2020 and 2021- but these were special circumstances and not where the majority of my data

came from. When speaking in generalities and data change over time, I used Census data that

reached 2019. Also, this date range restricted my research from discussing COVID-19. I did not

have enough data from 2020 or 2021 to accurately analyze trends or connections between

different types of data because I did not have any Census data from 2020 to use. Another

limitation was my location choice. McDowell County has a rural population, and the amount of

data available on housing is limited. For New Construction data, counties are not listed on the

Census website for new building permits. The data I included in New Construction came directly

from the McDowell County Building Inspections office, and their records.

Future Directions

One of the unique issues with affordable housing in gateway communities is the balance

of its local charm with the needed increase in housing supply. While these communities

understand that they have an affordable housing issue as their population increases, they want to

retain their "small town feel", "community character", "access to open space", and "quiet

neighborhoods. (Stoker et al., 2021)" In order to increase affordable housing supply, and

preserve the beauties of a rural way of life, communities need to start proactive planning.

These plans can start with considering what the barriers are to supply. In the literature

review, I mentioned some of these barriers are stigma against affordable housing developments,

and developers favoring the private market for profits (Goetz, 2008; Nguyen, 2005). Gateway

communities have developed some creative approaches to overcoming these barriers. In order to

address stigma towards these developments, some planners have promoted alliances with local

community and political leaders. They also encourage planners to be proactive and introduce the

developments to the public in the early stages, through effective use of the media and framing

these developments as promoting opportunity (Tighe, 2018). Another suggestion for planners

facing stigma was to include natural amenity advocates in the housing development process, to

support local activism and to ensure that developments would not be viewed as damaging the

natural charm of gateway communities (Sodja, 2021). The other barrier to increasing housing

supply is encouraging developers to choose these projects over the guaranteed profit of the

private sector.

Developers have a history of working with the federal government on affordable housing

projects. These relationships, however, have been weak and some developers share concerns that

housing policies do not offer enough incentives to support their costs (Bratt, 2018). This is where

gateway communities can contribute more planning and work into tax incentives, applying for

grants, or other means to incentivize developers to join affordable housing projects. One

suggestion that might work well with McDowell is encouraging faith-based partnerships. These

groups can benefit from the Faith-Based Development Initiative, where companies partner with

local faith-based groups and houses of worship to preserve and develop affordable homes and

facilities (PD & R Edge, 2021). In addition, there are affordable housing approaches that have

yielded higher returns than others, one of these is mixed-income housing (Lucio et al., 2014).

This is a type of affordable housing that could accommodate that affordability-profit balance that

developers are looking for. It may be beneficial for McDowell County leaders to consider

multiple approaches listed in this report, especially considering the limited amount of affordable

housing options currently being utilized in the county. These approaches might include

affordable housing co-operatives, community land trusts, shared equity homeownership, or any

of the housing development ideas suggested in the housing report by T.R. Brown (2019).

      Lastly, increasing tax incentives can be simple and effective. In gateway communities,

like McDowell County, there are plenty of opportunities for investors to purchase large parcels

of land with the hopes of developing a camp ground, RV park, tiny home community, or other

multi-family development. Depending on how the community chooses to design the tax

incentives, developers could get a higher percentage for more units, or an increase incentive for

better quality, more single-units, or whatever the community determines its greatest needs are.

This is a way for McDowell to identify its needs, and create the plan that works best. Proactive

planning starts with community collaboration. This is a skill where McDowell is an expert. We

have some of the most diligent and compassionate community workers in this county. These

groups and individuals have continued to show their dedication to the people they serve and the

causes they fight. I have no doubt that the future direction of housing in McDowell will be

successful and devoted to promoting the whole person health of every member.

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VI. Appendix

Affordable Rental Options in McDowell County

Name	Rental Type	Rent	Deposit	Rental Assistance	Amenities	Current Vacancy
Budget Inn	Hotel/Motel	$355/week	$50	N/A	microwave and television; one king bed	yes
Sportsman Inn	Hotel/Motel	$250/week	$25	N/A	microwave and television; king or full bed	no
Americas Best Value Inn	Hotel/Motel	$350/week (for construction workers)	$50	N/A	microwave; fridge; television; king bed	yes
Woodlawn Motel	Hotel/Motel	$750 - 850/month	$100	N/A	($750) kitchenette and microwave; cable access; queen bed ($850) full kitchen; cable access; queen bed	yes
House	Duplex/Multiplex	$900/month	$900	N/A	3 Bedroom house; utilities and lawn maintenance not included; W/D hookups	no
Baldwin Apartments	Duplex/Multiplex	#1 $325/month #2 $325/month #3 $540/month #4 $540/month #5 $350/month #6 $325/month	same as month's rent	N/A	Units #3 and #4 include utilities in rent; A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Duplex/Multiplex	#11 $600/month #21 $500/month	same as month's rent	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
Lamplighter Village MHP	Mobile Home Park			N/A		no
Twin Lakes MHP	Mobile Home Park			N/A		
Hankins Village MHP	Mobile Home Park	2 Bd $585-600/month 3 Bd $650/month	same as month's rent	accept Section 8	2 Bd/1 Bt and 3 Bd/2Bt; yard maintenance not included; W/D hookups; no vicious or large dogs, additional $50/m for pet; some window AC units, others are heat pumps; first month's rent due at move-in; $35 application fee completed online; 1 year lease, then monthly	no

Shady Lane Estates MHP	Mobile Home Park	2 Bd $700-725/month 3 Bd $750-800/month	at least $150 more than rent	N/A	2 Bd/1-2Bt and 3 Bd/2Bt; utilities not included; yard maintenance included; W/D hookups; well water; A/C and heat with heat pumps; no pets; no smoking; application fee $50; background, criminal, credit, eviction check; 2 months paystubs for income verification; interview questions; 1 year lease; lots available for resident owned trailer - small pet allowed; first month's rent due at move-in	no
Triple J MHP	Mobile Home Park	$600-720/month	$400	N/A	lawn maintenance, owner pays up to $70 power, fridge, stove, W/D hookup, furnished, trash not included	no
House	Single-family House	$850/month	$850	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$850/month	$850	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$850/month	$850	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$525/month	$525	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no

House	Single-family House	$550/month	$550	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$500/month	$500	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$425/month	$425	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$425/month	$425	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$475/month	$475	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$850/month	$850	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets;	no

					first month's rent due at move-in	
House	Single-family House	$600/month	$600	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$900/month	$900	N/A	4 Bedroom house; utilities and lawn maintenance not included; W/D hookups	no
House	Single-family House	$700/month	$700	N/A	2 Bedroom house; utilities and lawn maintenance not included; W/D hookups	no
House	Single-family House	$900/month	$900	N/A	2 Bedroom 1.5 Bath house; stove; microwave; fridge; W/D hookup; central HVAC; storage shed; yard maintenance and utilities not included; no smoking; pet considered with pet deposit and monthly pet fee	no
House	Single-family House	$1000/month	$1,000	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$850/month	$850	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
House	Single-family House	$800/month	$800	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no

House	Single-family House	$525/month	$525	N/A	A/C and heat with heat pump; 1 year lease; for one applicant $50 application fee, for two applicants $90 application fee; credit, criminal, eviction background check; yard maintenance not included; some include W/D; no smoking; some allow pets; first month's rent due at move-in	no
Heritage Hill Apartments	Apartments	$489-740/month	$489	income based; 1 person income range: $20,500 - 38,250; 2 person income range: $23,400 - $42,950; rental assistance available	application fee $20; central air; utilities not included; lawn maintenance included; no pets; washer/dryer hookup; credit and criminal background check; 1 year lease; 1st month's rent due at move in	yes
Phillips Ridge Apartments	Apartments	$481-667/month	$250	accept section 8; income based; income rate sheet provided	W/D hookup; laundry on site; A/C and heat with heat pump; cable access; DW; freezer; fridge; stove; playground; property manager on site; maintenance on site; application fee $25; credit, criminal background check; income verification at second step; no pets; 1 year lease; yard maintenance included; handi-cap accessible; utilities not included; trash included; first month's rent due at move in	yes
Mountain Cove Village Apartments	Apartments	2 Bd $850/month 3 Bd $950/month	same as month's rent	N/A	central air; washer/dryer machines provided; law maintenance included; utilities not included; small pets allowed with non-refundable pet deposit $200 and $30 monthly fee; 1 year lease; $50 background check per adult; 1st month's rent due at move-in	no
Riverview Apartments	Apartments	$575-625/month	same as month's rent	N/A	2 Bd/1.5 Bt; utilities not included; yard maintenance included; garbage pickup included; W/D hookup; A/C and heat from heat pump; 1 year lease; no pets; no application fee; check references	no
Capitol Hill Apartments	Apartments	based on income	$250	income based; 1 person income range: $20,500 - 38,250; 2 person income range: $23,400 - $42,950; rental assistance available	application fee $20; central air; utilities not included; lawn maintenance included; no smoking; pets allowed; credit and criminal background check required; 1 year lease; coin laundry on-site; 1st month pro-rated	yes

Blue Ridge Terrace Apartments	Apartments	based on income	based on income	accept Section 8; income based sheet available; assistance also available for 62 and older, and handicap/mobility impairment	1 Bedroom; W/D on site; wall unit AC; lawn maintenance included; no smoking; small pet allowed with pet deposit $200 ($50 down, $10/month)	yes
Spaulding Woods Apartments	Apartments	based on income	based on income	Application; verify income; driver's license and SS card/adult; birth certificate/child; background check with application $21/adult; Section 8 voucher; resident income MAX $37,380; waiting list	W/D hookup; fridge; stove; full-time maintenance worker (if resident does not have a W/D, there is laundry on site)	no
Winningham Village Apartments	Apartments	based on income	$200	Application; verify income; 2 forms of ID; background check with application $25 in check or money order; waiting list; rent is based on less than 30% of adjusted gross income	W/D hookup; stove; fridge; part-time maintenance worker- lawn maintenance included; utilities not included; central air; small pets allowed with $100 deposit; 1 year lease; no smoking	no
Woodwind Apartments	Apartments					
Harrison Terrace Apartments	Apartments	1 Bd $466 (50%) or $580 (60%)/month 2 Bd $550 (50%) or $685 (60%)/month 3Bd $645 (50%) or $790 (60%)/month	$250	income restricted; 50% rent responsibility: 1 person MAX income = $21,800, 2 people MAX income = $29,000; 60% rent responsibility: 1 person MIN income = $21,801, 2 people MIN income = $29,001	W/D hookup; yard maintenance included; 2 computers at business center; workout room; community center; picnic shelter; water/sewer/trash included; utilities not included; A/C and heat with heat pump; 1 year lease; application fee $25; credit, criminal background check; waiting list; no pets; no smoking; proof of Duke Energy power; 2 IDs and SS/adult; children's birth certificates and SS; first month's rent due at move in	yes

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