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Environmental Sciences  
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**Housing Needs Assessments for Calhoun County following the Impacts of  
Hurricane Michael**

Fall 2019

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# EXECUTIVE SUMMARY

## **Introduction**

Hurricane Michael significantly impacted housing in Calhoun County. Hence the County in partnership with FEMA commissioned the University of West Florida (UWF) Department of Earth and Environmental Sciences (EES), under the auspices of the EPA College Underserved Community Partnership Program (CUPP), to undertake a housing needs assessment for Calhoun County. This assessment utilized the recommendations from the FEMA-HUD Hurricane Michael Housing Impact Assessment (DR-4399) as its scope of work.

## **Methodology**

Students worked in teams, and engaged with County staff and other housing and planning professionals as advisors, to provide input to their activities. This report details work the student teams conducted between August and December, 2019. Following are the student teams and their accomplishments:

## **Housing Affordability**

This team took on the DR-4399 recommendation of looking into the *“redevelopment and expansion of affordable housing stock.”* This team explored options for the provision of affordable housing (both rental and owned) for low to middle income households within Calhoun County, including reviewing zoning ordinances that may hinder or prohibit the provision of affordable housing in certain areas of the County. The team also assessed the current population and projected future growth. The team also paid special attention to the provision of housing for special populations such as the elderly and people with disabilities.

## **Housing Quality and Storm-Resiliency**

This team took on the DR-4399 recommendation of *“rebuilding better by improving housing quality and resiliency.”* The team also assessed the current stock of housing and projected for future need. The team assessed the quality of existing housing stock and made recommendations for the quality of future construction specifically focusing on housing materials and features that make existing and new construction more storm and/or hurricane resilient. The team also explored opportunities for changes within the building code that may facilitate this process of improved quality and storm and/or hurricane resiliency.

## **Home and Flood Insurance**

This team took on the DR-4399 recommendation of *“increasing access to insurance to improve resiliency.”* The team explored the barriers to accessing and securing home (for both

homeowners and renters) and flood insurance and suggested ways of increasing the purchase of home and flood insurance by residents of the County.

### **Employment and Connectivity to Housing**

This team took on the DR-4399 recommendation of looking into the *“replenishment of workforce housing near employment hubs.”* The team identified employment hubs (areas of existing or potential concentrated economic activity) within Calhoun County using [Enviro Atlas](#) and assessed the connectivity (via modes of transportation) of these hubs to housing. The team also explored the possibility of the provision of employer-assisted housing within Calhoun County.

### **Public Outreach**

This team took on the DR-4399 recommendation of *“executing education and outreach initiatives throughout the recovery process.”* The team also assessed existing County strategies and capacity for education and outreach and worked with the other teams to develop communication briefs or educational materials to make services and resources known to County residents. The team also explored more effective ways of communicating information to residents throughout the recovery process.

### **Capacity Building**

This team took on the DR-4399 recommendation of *“expanding local community development and housing services capacity.”* The team reviewed existing capacity development opportunities for improving housing within the County and assessed the feasibility of available options for the County at the present time.

### **Conclusion**

The recurring takeaway of the report was the organization of a community day/event where the County could provide education and resources on all aspects related to housing contained in this report to Calhoun County residents. The County could also use such a day to conduct a visioning or capacity building exercise, or garner people’s needs on their road to recovery from the housing impacts of Hurricane Michael.

# CHAPTER ONE

## HOUSING AFFORDABILITY

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### INTRODUCTION

The objective of the Affordability group was to explore options and create a plan of provisions for affordable housing in Calhoun County. Calhoun County requires housing for people from low to middle-income households because of the impact of Hurricane Michael. To come up with a plan for housing, we assessed the current population and projected population growth as indicative of a need for increased housing in Calhoun County. Our team explored potential housing solutions that can accommodate all populations including but not limited to seniors, people with disabilities, veterans, large families, and single adults. Our overall goal was to find the right housing at the right price that will benefit the greatest number of people.

### METHODOLOGY

To achieve our goals we did the following:

- Assessed current population and projected future population growth in order to ascertain current and future housing stock respectively
- Focused on key demographics in need of affordable housing such as the elderly, disabled, and low-income
- Explored interventions for affordable housing

We expand on each action a bit more in the following paragraphs:

Population Projections: In order to assess the current stock of housing as well as project future population growth, we used census data and formulae for four projection models. The projection models we employed were linear, geometric, parabolic, and gompertz projections. Linear projections are the simplest of these methods considering the projection has a constant slope and relies only on the  $y=mx+b$  equation of a line. The geometric curve projection uses a

$y=ab^x$  equation since the projection is exponential and not linear it can show compound growth much better than a linear curve, thus making it better suited for rapidly growing areas. The parabolic projection curve uses a polynomial formula  $y=a+bx+cx^2$  in its second degree form but can be expanded to a cubic or third degree equation. This type of projection grows less rapidly when compared to the geometric curve because its growth rate changes as  $x$  increases. The Gompertz method differs from the previous three methods in that this projection no longer assumes that growth or decline will continue without limit. Gompertz projection is an asymptotic growth curve that recognizes a region's growth will eventually approach an upper or lower limit. The equation for this projection is  $y=ca^bx$ . We averaged each of these projections to give a composite estimate of population growth. We also compared our census data projections with population projections from the University of Florida Bureau of Economic and Business Research (BEBR).

Analysis of Key Demographics: We also highlighted demographics for these three groups as far as affordable housing is concerned: the elderly (65 years and over), disabled, and low-income (living below the poverty level).

Exploration of Affordable Housing Interventions: We surveyed a number of interventions to facilitate the development of affordable housing within a municipality including land donation and the construction of tiny homes.

Review of zoning ordinances and land development code: Lastly, we reviewed the current (as of the time of writing) Calhoun County zoning ordinances for instances where the zoning ordinances may be restricting/limiting affordable housing. The specific documents were the Land Development Code, and the Comprehensive Plan. We then suggested improvements to the zoning ordinance in order to increase affordable housing stock.

## FINDINGS

### Population Assessment

#### *Current Population Trends (2010-2018)*

The data in Table 1 below is from U.S. Census and American Community Survey (ACS) estimates. The only years poverty and disability information was available from the ACS were 2012 and 2017. This availability explains the blank cells in Table 1.

**Table 1:** Selected Population Variables for Calhoun County, FL (2010, 2012, 2017, 2018)

	Total Population	Under 18 years	18-64 years	65 years and over	Population for whom poverty status is determined	Living Below Poverty Level	Civilian Population 18 years and over	Civilian Population 18 years and over for whom poverty status is determined	Civilian Population 18 years and over for whom poverty status is determined (with any disability)
2010	14,625	3,132	9,235	2,258					
2012	14,633				12,540	3,108	11,524	9,553	401
2017	14,437				12,373	1,591	11,314	9,298	2,635
2018	14,587	2,924	9,032	2,631					

\*American Community Survey 2017 estimates (no estimates for 2018)

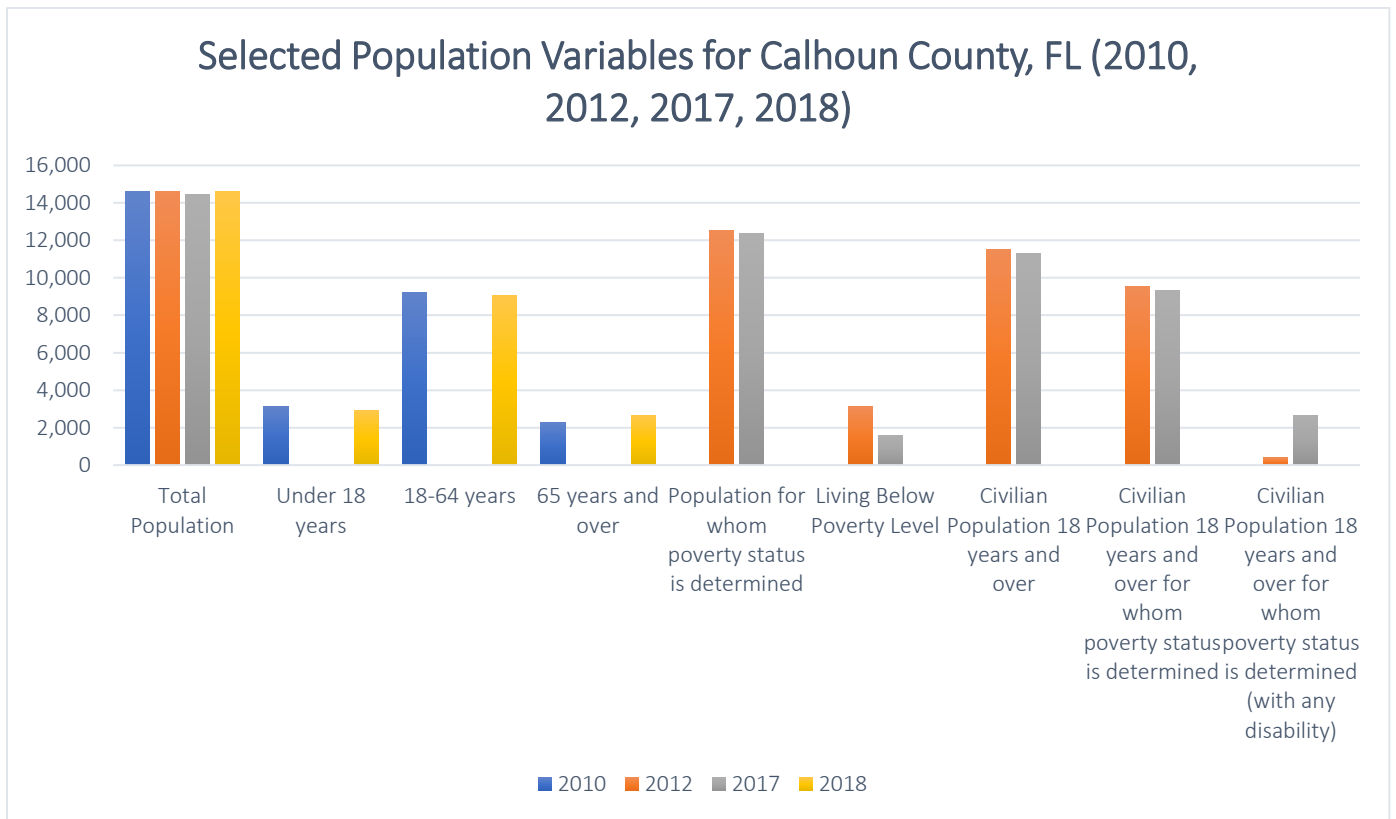
From Table 1, the population of Calhoun County fell from 14,625 in 2010 to 14,587 in 2018. This fall represents an approximately 0.3% decrease in population between 2010 and 2018. The population under 18 years also fell by 6.6% between 2010 and 2018, as did the population between 18-64 years by 2.2% between the same period. However the population aged 65 years and over increased by 16.5% between 2010 and 2018 signaling that the even though the overall population of Calhoun County has decreased between 2010 and 2018, the aged population has in fact increased.

The most significant decline in Table 1 is seen in the population living below the poverty level. That percentage reduced from 24.8% in 2012 to 12.9% in 2017 – almost by half. We



understand that County Commissioners find this reduction concerning as the poverty they encounter at the local level does not seem like the poverty rate within the County has decreased. The calculation of poverty might have changed but we could find no evidence to this effect.

Another increase we cannot explain is the increase in the Civilian Population 18 years and over for whom poverty status is determined (with any disability). This population increased from 401 people in 2012 to 2,635 people in 2017. The categorization of disabilities may have changed but we could find no evidence to this effect. The following figure visually presents the data in Table 1:



**Figure 1:** Visual representation of Table 1

**Population Projections (2020-2040)**

After running the population projection the average of all four projections by year showed an increasing trend in population. We averaged the results of linear, geometric, parabolic, and Gompertz projections.

The current population according to 2010 census data is 14,625 people, and according to the HUD housing assessment it is 14,483 people (US Department of Housing and Development, 2019). The average results of all four projections by year show a population of 16,549 people in 2020 which is an increase of 1,849 people from 2010 according to our projections based on data obtained from the US census. In 2030 the population is projected to rise to 18,439 people. Based on this information alone we can assume a need for an increase in housing capacity for the county to accommodate an increase of approximately 1500-2000 persons every ten years. However this data only shows us the general long term trend and could be inaccurate when viewing population change on a yearly basis. The most current census estimate (2018) shows a population of 14,587 persons residing in Calhoun County. The University of Florida Bureau of Economics and Business Research (BEBR) shows a current population estimate of 15,093 people as of April 1, 2018. This 2018 figure is an estimate but if accurate, already disproves the projected increase of 1,849 people from 2010-2020, and actually shows a decrease in the population since 2010 by 38 people when compared to the 2010 census data. From 2020 to 2040 the BEBR shows an increase of 1781 people which seems more accurate considering the recent stabilization in population.

Table 2 summarizes our population projections and compares our projections to the BEBR projections:

**Table 2:** Comparison of Composite Population Projections to BEBR Population Projections

<b>YEAR</b>	<b>Composite Projection</b>	<b>BEBR Projection</b>
2000	13017*	13017*
2010	14625*	14625*
2018 (2020)	16549	14914
2030	18439	15940
2040	20387	16695

\*Census data, not a projection

Our averaged projections show an increase in population of 3838 people from 2020 to 2040 while the BEBR projections show an increase in population of 1781 people within this same period. Collectively, these two projected estimates can represent upper and lower limit of population growth in Calhoun County between 2020 and 2040.

### **Considerations for Key Sub-Populations in Need of Affordable Housing**

Affordable housing may seem like a universal desire amongst all people. However, the affordability of housing is an absolute necessity for some of the population. For example, elderly, disabled, and lower-income individuals suffer the most with soaring housing market value without affordable housing. For many, especially the individuals who fall into the above listed categories, there is no option of secured living, and this lack of provision is a major problem. As these sub-populations are not mutually exclusive, we discuss their affordable housing options concurrently.

Nearly 10 million households with an occupant over age 65 spend more than 30 percent of their incomes on housing; for roughly five million of those households, such spending is more than 50 percent (Sitkin, 2020). An urgent need exists for more advocacy to increase funding for affordable housing coupled with supportive services now and in future years. In the meantime, though, it is very important to understand what resources are currently available and help low-income seniors access and retain those resources.

One solution to offer aide to those communities made predominately of lower-income individuals is The Low-Income Housing Tax Credit (LIHTC) program which provides tax credits to investors that invest capital in properties that serve low-income households. These properties offer reduced rents affordable to low-income households, and in many cases include other resources such as Section 8 Project-Based Rental Assistance, that make rental units affordable to those with the lowest incomes. Some affordable apartment communities funded partially with LIHTC are designated for occupancy by disabled people and seniors.

In an effort to involve homeowners in the community who may have misinformation on the false perceptions that affordable housing would cause a decline to the current market, options to incentivize their approval, and even involvement, could be a great solution. For example, programs that provide financial support for tenants renting from private owners,

which include Section 8 (tenant-based and project-based), Section 202 and Section 811, is a way that not only the lower-income individual benefits, but the landlord as well.

The Section 811 program allows persons with disabilities to live as independently as possible in the community by subsidizing rental housing opportunities which provide access to appropriate supportive services. Section 811 program is authorized to operate in two ways: 1) by providing interest-free capital advances and operating subsidies to nonprofit developers of affordable housing for persons with disabilities and 2) by providing project rental assistance to state housing agencies.

## **Interventions to Facilitate the Development of Affordable Housing**

### ***Land donations***

For Florida counties and residents there are incentives for helping decrease the homeless populations and areas of low-density housing. Working with the federal government there are monetary incentives such as additional funds to local agencies and state grants. There are no explicit incentives given to the private landowners who would donate land for usage to build low income family properties. In the 2019 Florida statutes there are explicit outlines of what the land can be used for and what qualifies those who are going to be living on that land in the future. These statutes will help the rebuilding of Calhoun County Florida through the re-housing of low-income families or rehabilitating the homeless.

The incentives for local agencies is outlined in section 420.625 of the Florida Statutes titled Grant-in-aid program. This section goes over the application process to receive the grants and funds and what these funds can then be used for. The allocation of funds is set to the amount that is applied for based off of need from the county who is asking for the funds. These funds are given if there is a strong local commitment to address the local level of homelessness through programs and transportation services. The funds are given to place families of low-income, extremely low-income, or those who are homeless into homes which are affordable to them. These grants which are given allow money to be allocated to fund rebuilding the communities. The additional funds to local communities can be put into use to create programs

for those who are either homeless or about to become homeless. The state divvies up these funds through both rural and urban areas based off need.

There are also non-monetary incentives which will benefit the community from the allocation of these funds or through the donation of these public lands for low-cost housing. These programs create a streamline of government regulations state, regional, and locally, which allow the reconstruction of this county after natural disaster to come quicker than if it were for other purposes because of these statutes. Those who donate these properties for the use of low-cost housing will be memorialized where the donated land will be located according to Florida Statutes section 420.615 Affordable Housing Land Donation Density Bonus Incentives. There is also a statement in the section on rapid rehousing, that this approach when compared to an emergency shelter or transitional housing, reduces the amount of time that a person is homeless and tends to be less cost effective than those alternatives.

The use of public and donated lands for low-income or ReHousing is cost effective and productive for the communities in which they are implemented. These programs bring in a streamline of approval and end up generating out a lower homeless rate and hope to produce a lower poverty rate on the other side by providing homes at an affordable cost to those residing within Calhoun County Florida.

### ***Tiny Homes***

The construction of 'tiny homes' has been implemented in various locations in recent times as a way to combat situations such as natural disaster, homelessness, and even rising home costs (Jackson et al. 2020). A 'tiny home' would be 8x16 feet tall, and typical lengths are 16, 18, and 20 feet. A classic tiny home would be somewhere around 128 square feet including a sleeping loft (Murphy, 2014).. With a decrease in the supply of affordable housing and more residents being cost burdened, or spending 30% or more of their income on housing, tiny homes are a popular trend not only to provide cheaper housing options, but also to offer traditional neighborhood designs that are sustainable and support minimalist living trends.

High land prices in inner urban areas of major cities has been associated with redevelopment of underutilized land, with smaller dwelling units built at higher density. These

small dwellings meet demand from mobile renters who prefer inner city living, as well as demand from middle-income households who are constrained by unaffordable homeownership (Lau & Wei, 2018).

In Calhoun county zoning ordinances and building codes, there is no specific provision for or against the building of these ‘tiny home’ structures. In the wake of the destruction from hurricane Michael, the County should consider adding provisions for the building of these tiny homes for both immediate and long term financial and residential relief. In 2005 hurricane Katrina destroyed New Orleans, and gave rise to the tiny homes movement or ‘Katrina Cottages’ that were built in response to the devastation. The affordability of building these homes allow both an immediate relief in residential needs with a low cost, and a long term solution for housing affordability for low-income individuals.

## **RECOMMENDATIONS**

### ***Modify land-use regulations to permit higher densities***

According to the density/intensity standards of Calhoun county, residential density is not to exceed 1 unit per acre (Calhoun County, 2010-2025). Due to this limitation, the implementation of ‘tiny homes’ would not be effective, as one of the greatest advantages of tiny home communities are the ability to conserve land space and build more of these homes in closer proximity than one could with regular sized single family homes. It is our recommendation that this standard in the land use plan be stipulated with the ability to reserve land rendered for ‘tiny home’ communities in a way that would be most effective for the county (i.e. higher density capabilities).

It is also our recommendation that provisions be made for ‘tiny home’ communities under ‘Policy 9.2: Mixed Use’ (Calhoun County, 2010-2025). Since the purpose is to “...to establish a mechanism for the provision of affordable housing, and to encourage the development of self-contained residential communities (i.e., residential, recreation, commercial and associated public facilities are provided within the development).” It would make the most sense to add the ability for ‘tiny homes’ communities to be developed, as they serve as catalysts for affordable housing and self-contained residential communities.

Under ‘Objective 4’ in the ‘Housing element’ section, it would be advisable to also make provision for ‘tiny homes’. The objective makes provision for land-use set aside for “mobile home parks”, and “mobile home subdivisions” as a way to provide affordable housing. However, to exclude ‘tiny home’ community development would be losing the opportunity to complete the objective of providing affordable housing, while also creating an urbanized, and attractive community that would in return create more access to growth for the county.

### **Provide Various Housing Options to Meet the Needs of Specialized Sub-Populations**

The County should focus on demographics particularly affected by the lack of affordable housing and provide these groups of people adequate housing and educate them on the local resources that will, in turn, allow these groups of people to achieve and maintain a high quality of life in Calhoun County while maintaining affordability, accessibility, and aesthetics. This goal can be accomplished by providing some of the following options:

#### ***Elderly***

Identify and support housing cooperatives, mobile home parks, neighborhood-based NORCs (Naturally Occurring Retirement Communities), SROs (Single Room Occupancies)<sup>1</sup>, shared housing, and other market-rate housing arrangements to develop needed linkages to health-related and supportive services that elderly beneficiaries would greatly benefit from.

#### ***Disabled***

Use section 881 to allow persons with disabilities to live as independently as possible in the community by subsidizing rental housing opportunities which provide access to appropriate supportive services. Also, aim to provide interest-free capital advances and encourage the county to offer subsidies to nonprofit developers of affordable housing for persons with disabilities and provide project rental assistance to state housing agencies in accordance with Section 881.

#### ***Low-Income families***

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<sup>1</sup> Single room occupancy (more commonly abbreviated to SRO) is a form of housing that is typically aimed at residents with low or minimal incomes who rent small, furnished single rooms with a bed, chair, and sometimes a small desk.

Propose the expansion of the school and public transit bus routes to cater to families without private modes of transportation that would otherwise allow them to travel to and from work and school.

### **Address Community Opposition to Affordable Housing**

Opposition to affordable housing is often motivated by home-owners' fear that their property values will decline. However, recent research suggests that affordable housing does not definitively have a positive or a negative impact on nearby property values. In fact, evidence would suggest that the impact of building affordable housing to a community is not economical, as much as it is mental and social (Dawson et al. 2017). The stigmas that are built around affordable housing projects are simply not as real as some would like to think.

In a study conducted in 2011 in Jackson County, Missouri, the findings show that housing investments by the Centers for Disease Control (CDC) actually substantially increased the appreciation of homes nearby. On average, homes within 500 feet of the development projects appreciated at an 11.8 percent greater rate than homes further away from the projects between the first and second sales of the homes (Edmiston, 2012). The analysis further shows that these effects dissipate beyond 500 feet.

The construction of 'tiny home' community developments for affordable housing not only comes with the benefit of affordability for both residents and local municipalities, but as , literature would also suggest, there is little to no risk for a decline in the nearby current housing market either. It would seem that making provisions for 'tiny homes' could be considered a 'win-win' scenario for all involved.

### **CONCLUSION**

Calhoun County's housing needs arise from many complicated issues. People of all backgrounds, ages, and dispositions find themselves in vulnerable positions every day due to the rising home market costs. Solutions take both creativity and willingness from stakeholders, public officials, home-owners, and everyone in between. This document was written to not only



highlight some potential threats and holes that could be present within the county that may be hindering progress, but to also offer information, resources, and creative solutions.

Affordable housing is not only a desire for most, but an absolute necessity for some. Through the recommended provision changes within the counties building codes and land use codes, it is possible to make affordable housing communities both easily achievable, and attractive such as options like 'tiny homes'. These 'tiny homes' would be a way to make affordable housing options available with the least amount of space and financial resources needed. Other options such as government assistance programs like section 811, the low-income housing tax credit, and section 8 project-based rental assistance are all encouraged, as the literature within this document reveals that the association of government assisted home rentals and dips in the housing market prices have been widely misinterpreted, and misconstrued. Both the present and the future of Calhoun County is important as the goal of this document is to discuss and protect both of those things. It is our conviction that through continuing to educate the public, updating the use and non-use of current laws or codes that could hinder progress within the county, being open to creative outlets of solutions, and making decisions that protect people, both now and in the future, Calhoun county will be well on its way to continued success and growth.

In conclusion, we believe that helping the citizens of Calhoun County start a new life in a new living situation will be one of the biggest benefits to provide people who have endured the devastation of Hurricane Michael.

# CHAPTER TWO

## HOUSING QUALITY AND STORM-RESILIENCY WITHIN CALHOUN COUNTY

*Authors: Alease Folts, Anthony Vilar, and Wade Woolford*

### INTRODUCTION

After Hurricane Michael occurred in 2018 many panhandle communities were left to deal with the extensive damage that this category five hurricane left. Calhoun County is currently looking into improving and repairing their current housing, as well as adding new housing. To properly assess the quality and housing needs the current housing stock will be examined as well as projected to best fit the needs of the community. Improvement recommendations will be made that will help benefit the quality and resiliency of the current and future housing stock while also taking into consideration the county's current comprehensive plan as well as its local building codes.

### PROJECTION OF CURRENT HOUSING STOCK

Our group conducted a housing projection to get a better idea of what the current housing stock of Calhoun County is and what the future housing stock should look like. Using the book "Planning Support Methods: Urban and Regional Analysis and Projection" (Klosterman et al, 2018) a worksheet of trend projections was used to project the housing stock of Calhoun County (Klosterman, 2018). Using housing units' numbers from the U.S. Census Bureau website (Population and Housing Unit Estimate) for the years 2000, 2010 and 2018 in place of 2020, from (Klosterman et al, 2018); the trend worksheet was able to project the expected housing stock for Calhoun County for the years of 2030, 2040 and 2050; linear projection values are shown in table 1 because linear values show best and simplest mathematical relationship between two data points, in this case number of household sizes and future years. The linear projected values were rounded either up or down according to how high or low the decimal places were, so a nice clean number is shown.

Using these values listed in table 3 and data from population from the Bureau of Economic and Business Research (BEBR) Population Studies Program (Population Studies Program) 'Projections of Florida Population by County, 2020-2045, with Estimates for 2018.' (Rayer and Wang, 2019) we were also able to project the average household size for Calhoun County. Additionally, according to BEBR 'Revised Estimates of Households and Average Household Size for Florida and Its Counties, 2000–2016, with Estimates for 2017' (Rayer et al, 2017) average household size can be calculated by dividing the population by the total household number. BEBR 'Households and Average Household Size in Florida: April 1, 2018' (Rayer et al, 2018) provided us with average household size for the years 2000, 2010 and 2018 used in place of 2020. Using this data, the population data from (Rayer and Wang, 2019), the total household's numbers from (Housing Unit Estimate and Klosterman et al, 2018 & Population) and the projected household values in table 1 we were able to project the average household size for the years 2030 and 2040. Three separate projections were done based off the high, medium and low population projections from (Rayer and Wang, 2019). Tables 2, 3 and 4 shows the projected average household size using the low, medium and high BEBR population's projections, respectively. Tables 3, 4 and 5 also show the changes in average household size as a numerical value and as a percent, both of which were calculated in (Rayer et al, 2018) and are thus calculated for all the years' measurements.

One thing to note is that the calculation for average household size uses population in households for its population total which is different from the total population of a county because it doesn't include people in group quarters like people in jail and or prison, as an example (Rayer et al, 2017). People in group quarters only made up 2.25% of the total population in 2010 for Florida (Rayer et al, 2017) so we used the total population of Calhoun County for our average household size estimates since the population in group quarters shouldn't widely impact our average household size estimates.

**Table 3: Housing Stock Projection for Calhoun County**

Year	Total Household Number
2000	4,468
2010	5,061
2018 (2020)	5,323
2030	5,806
2040	6,233
2050	6,601

**Table 4: Average Household Size using Low BEBR Populations Projections**

Year	2000	2010	2018 (2020)	2030	2040
Household Size	2.53	2.52	2.48	2.45	2.23
Changes	NA	-0.01	-0.04	-0.03	-0.22
Change in %	NA	-0.40	-1.59	-1.38	-8.83

**Table 5: Average Household Size using Medium BEBR Populations Projections**

Year	2000	2010	2018 (2020)	2030	2040
Household Size	2.53	2.52	2.48	2.74	2.68
Changes	NA	-0.01	-0.04	0.26	-0.06
Change in %	NA	-0.40	-1.59	10.43	-2.17

**Table 6: Average Household Size using High BEBR Populations Projections**

Year	2000	2010	2018 (2020)	2030	2040
Household Size	2.53	2.52	2.48	3.08	3.21
Changes	NA	-0.01	-0.04	0.60	0.13
Change in %	NA	-0.40	-1.59	24.32	4.07

As you can see from table 1, Calhoun County is projected to need more housing units to meet future housing demand while tables 2, 3 and 4 show that the average household size in Calhoun County is also expected to increase in most cases. Therefore, Calhoun County should take appropriate steps and measures to make sure that the existing and future housing is more storm-resilient and a higher housing quality than the pre-hurricane Michael housing. Additionally, average household size increases as the projection of population increase so the average household size for Calhoun County can be anywhere between tables 2-4, just depending on the actual population numbers for said future years.

These housing projections are necessary to understand the current and future state of Calhoun County's housing, especially in regard to the next decade of 2020-2030 so that Calhoun County can know how much housing to expect and what steps to take to ensure that these housing units have an improved quality and storm-resiliency. The Florida Housing Finance Corporation (FHFC) 'State Hurricane Housing Recovery Program for Hurricane Impacted Counties Proposed County Allocations' (State Hurricane Housing Recovery Program for Hurricane Impacted Counties Proposed County Allocations) and the US Department of Housing and Urban Development & Federal Emergency Management Agency (FEMA) 'HURRICANE MICHAEL Housing Impact Assessment DR-4399' (HURRICANE MICHAEL Housing Impact Assessment DR-4399) were both analyzed to gain an understanding of the main types and status of housing in Calhoun County.

The current Housing Stock in Calhoun County shows that there is over 83% homeownership rate in the county with over 30% of housing units being mobile homes or trailers pre-hurricane Michael (HURRICANE MICHAEL Housing Impact Assessment DR-4399). Post-hurricane Michael housing stock shows that over 43% of Calhoun County housing units were damaged, about 2,469 housing units in total (State Hurricane Housing Recovery Program for Hurricane Impacted Counties Proposed County Allocations). The FEMA report recommends that any severely damaged or destroyed housing units should be properly deconstructed and disposed to improve housing quality and storm-resiliency (HURRICANE MICHAEL Housing Impact Assessment DR-4399). The FEMA report says this removal is an important step to

improve the housing quality and storm resiliency of the current and future housing stock (HURRICANE MICHAEL Housing Impact Assessment DR-4399). For further information on how to improve the housing quality and storm resiliency of the current and future Calhoun County housing stock see section improvements

## **THE COMPREHENSIVE PLAN**

Along with analyzing the current housing stock and doing a future housing projection, this group has read and reviewed the Calhoun County Comprehensive Plan to ensure that any possible recommendations made to improve housing quality and storm-resiliency are within the plan's guidelines. This group's clarity and understanding of the Comprehensive Plan is necessary so that any recommendations can be properly analyzed and implemented. Of the Calhoun County Comprehensive Plan, pages 24-26 are of special interest (2012-2025 Calhoun Comprehensive Plan). These pages pertain to Housing, and are titled "Housing Element", under "Housing Element" the policies of 1.2, 1.3, 1.4, 1.5, and 1.8, under objective 1, are the policies of which any recommendations are likely to be under (2012-2025 Calhoun Comprehensive Plan). Objective 3 and policy 4.2 under objective 4 also fall under policies of which any recommendations are likely to be under (2012-2025 Calhoun Comprehensive Plan).

Policy 1.2 states "Provide effective and equitable building code enforcement by continuing County building permit administration and enforcement." (2012-2025 Calhoun Comprehensive Plan). This policy relates heavily to any recommendation we make in regards to the building code because this policy states to "provide effective and equitable" (2012-2025 Calhoun Comprehensive Plan) building codes so any recommendation we make to the building code has to make the building code more effective and equitable so that housing has improved quality and storm-resiliency.

Policy 1.3 states "Building permits shall specify standards which are in conformance with the State Building Code through implementation of the County Development Code." (2012-2025 Calhoun Comprehensive Plan). This policy relates to our work because any recommendation to the building code will have to be a part of the County's Development code

and any future housing that is built will have to abide to the County Development Code because this new and improved code will improve housing quality and storm-resiliently.

Policy 1.4 states “Calhoun County shall continue to implement the County Development Code, and the SHIP, CDBG and Weatherization programs, to assist the private sector in the delivery of adequate and affordable housing for all existing and future residents.” (2012-2025 Calhoun Comprehensive Plan). Any recommendation we make to improve housing quality and storm-resiliency apply to all types of housing in Calhoun County including affordable housing and this policy ensures this improvement happens so even people who need affordable housing can have housing that is storm-resilient just like the rest of their community.

Policy 1.5 states “The County shall continue to implement standards addressing the quality of housing, stabilization of neighborhoods and identification of and improvements of historically significant housing by undertaking the following activities: (A) Enforce housing codes to maintain building safety, (B) enforce the County Development Code and Subdivision regulations to protect existing residential areas from adjacent, conflicting land use consistent with the provision of this Plan, (C) coordinate with the state of Florida, Altha, Blountstown and other interested parties to identify and protect historical resources, and (D) designate CDBG Housing target areas to improve deteriorated housing in established neighborhoods comprised of low income families.” (2012-2025 Calhoun Comprehensive Plan). This section relates to what our project has done for a couple of reasons. First, the recommendations we make to the building code is to improve safety and this policy ensures that these codes are enforced to improve and maintain safety. Second, enforcement of the County Development Code applies to new housing and most importantly existing housing to ensure existing housing is being updated to satisfy the updated County Development Code. Lastly, improving deteriorated housing is also something that we aim to improve the housing quality and storm-resiliency because all types of housing within Calhoun County are housing that can use new codes to improve their quality and storm-resiliency.

Policy 1.8 states “The County shall continue to update and enforce the County Development Code in order to provide safe housing structures and to continually improve the

process.” (2012-2025 Calhoun Comprehensive Plan). This policy is highly relevant to our project because the recommendations we offer are updates to the County’s Development Code which this policy says is needed and shall continue to happen so that housing quality and storm-resiliency will continue to be improved.

Objective 3 states “The Calhoun County Land Development Code development criteria shall be implemented, ensuring that adequate sites are available in residential areas for group homes, foster homes and other special housing types.” (2012-2025 Calhoun Comprehensive Plan). This policy relates to our project because mobile homes are a major type of housing prevalent in Calhoun County and this objective states that the recommendations we make are for the County’s Land Development Code, as well as the County Development code.

Policy 4.2 states “The future land use categories provided in this plan which provides for residential use shall permit the placement of mobile homes in accordance with the allowed residential densities provided they are anchored or attached to permanent foundations, meet safety codes, and all other requirements of the County’s adopted Land Development Code. (2012-2025 Calhoun Comprehensive Plan). This policy is relevant to our project because we did a housing projection for Calhoun County which shows more housing will be needed to fit a growing future population and this policy states that any future residential land use needs to meet the County’s Land Development Code which is what our recommendations are aimed towards.

## **BUILDING CODES**

Any recommendations this group makes to improve housing quality and storm-resiliency will either have to adhere to the current county building code or have the building code updated to facilitate this process of improving housing quality and storm-resiliency. All Florida counties building codes are made, enforced, and updated by the Florida Building Commission and this commission is a sector of the Florida Department of Business & Professional Regulation (Florida Building Commission). The first statewide building code was made in 2002 and is updated every three years (Florida Building Commission; Florida Housing



Finance Corporation). Local governments are allowed to amend requirements within the code to make it more restrictive than the statewide code (Florida Housing Finance Corporation).

A prime example of a local government making their building code more restrictive than the statewide code is presented in the FEMA Report 'HURRICANE MICHAEL Housing Impact Assessment DR-4399' (HURRICANE MICHAEL Housing Impact Assessment DR-4399). This example is outlined where Miami-Dade County requires new structures to be able to withstand hurricane wind speeds up to 175 miles per hour (mph) (Viglucchi et al, 2018). This wind-resistance requirement is much stricter than the statewide limit, including the Panhandle limit that can reach as low as 120 mph (Viglucchi et al, 2018). Calhoun County, in this case, has its standard only at 130 mph (Viglucchi et al, 2018). Hurricane Michael had sustained winds of 155 mph, so once this storm came into contact with Calhoun County's homes and residences it devastated the area (Viglucchi et al, 2018). This wind-resistance requirement affects the construction of roofs, doors, windows, and wind-resilient shutters (Viglucchi et al, 2018). To make housing more storm-resilient, the Calhoun County Building Code needs to amend the hurricane wind-resistance standard of 130 mph. This requirement should be amended from the 130 mph code to at least **156 mph** in an attempt to make buildings more resilient to hurricane wind speeds that a category 4 hurricane could be capable of (NOAA). Ideally, though, the code could be stricter. To ensure that buildings are kept intact in the event of a category 5 hurricane, the code should be any mph above **160** (NOAA). Updating this requirement of wind resistance from **130 mph to at least 156 mph** will make housing in Calhoun County more storm-resilient and improve housing quality. If a hurricane as large as Michael ever comes through the area again this amendment could save many people's lives and homes within the County.

## **HOUSING IMPROVEMENTS**

In an attempt to prevent the severe damage that previously occurred to the housing within Calhoun County, options for housing improvements have been researched and compiled here. These improvements are in the interest of increasing storm resiliency to the housing within Calhoun in case a storm even such as Michael occurs again. One such improvement is looking into elevated housing to increase resilience to flooding According to the FEMA flood

hazard map, most of Calhoun County is at risk of flooding (FEMA, 2019). This risk is especially true for Blountstown, where most of the area is in a high-risk zone. To best combat the possible damage that flooding can create to houses, it is possible to alter homes and elevate them to a height that can prevent damage to the home. Houses that are framed, masonry veneer, or masonry can be raised on hydraulic jacks as a new foundation is created to then elevate the home. The height needed to elevate can be determined by the FPE (Flood Plain Elevation), if an FPE is equal to BFE (Base Flood Elevation) a house must rise so that the lowest floor is at or equal the BFE (FEMA 2014).

While elevating houses can be beneficial to the general safety of a home, they can at times be considered aesthetically unpleasing. Depending on the height the home must be elevated to, there are a few ways to make elevated housing look more pleasing. If you are elevating the home less than 4ft, it is easy to hide the new foundation with landscaping, any higher than that it is advised to elevate the house an entire story so that the space can be used for parking or storage (FEMA 2014). These options can help improve the overall looks and aesthetics of elevated housing.

This project focuses not only on retrofitting existing homes to be storm resilient but also will show an emphasis on how to construct new homes with sustainable and storm resilient materials. Storm resilient building should be a very important factor in the process of Calhoun County's rebuilding and improvement of housing stock. Outlined thus far in this group's process of exploring hurricane resilient home construction options are structural insulated panel (SIP) walls, insulated concrete form (ICF) walls, and cast-in-place (CIP) concrete walls. Using these types of materials and construction methods lowers the risk of storm damage to new homes and ensures the safety of the homeowner or resident. SIP, ICF, and CIP concrete walls are all undoubtedly storm resilient and can be, surprisingly, somewhat cost-efficient. While these building materials have shown to be very storm resilient, they also tend to be sustainable and bring benefits to the homeowner or resident. These materials can reduce energy costs due to their strong insulation capabilities, they can suppress exterior noises, are somewhat fire-resistant, durable, and can actually improve indoor air quality (Knowles, 2009c, 2009b, 2009a).

Insulated concrete form walls are similar to cast in place concrete walls, but the poured concrete wall is sandwiched between two pieces of insulation material (“Insulating Concrete Forms (ICFs),” 2018). ICF walls can come in many different sizes and configurations. The cast in place concrete between the exterior and interior sheathing can be reinforced with different materials as well. Three common types of reinforcement styles include “flat,” “grid,” and “post and beam” (Knowles, 2009b), with each type of reinforcement providing its own personal strengths and/or weaknesses. The average cost of ICF wall construction is \$5.72 compared to typical wood/stick construction at \$2.25 per square foot (NAHB Research Center, 2001). The cost of ICF walls is the least expensive of the three wall options recommended.

Structural insulated panel walls tend to be a simpler wall system design compared to ICF or CIP concrete walls. SIP walls consist of a foam core center, sandwiched with an exterior and interior sheathing (Knowles, 2009c). In an attempt to greatly improve the storm resiliency of a structure, one could go as far as using a steel moment frame and steel studs in place of wood to increase termite resistance (Alliance, 2015). SIP walls tend to be the second most cost efficient of the three wall types listed. The average cost of SIP walls are approximately \$6.20 per square foot (Meis, 2015), while average wood/stick construction walls cost approximately \$2.25 per square foot (NAHB Research Center, 2001).

Cast-in-place, or precast, concrete walls are fairly straightforward. These walls are simply just walls constructed of precast concrete, reinforced with rebar material. These walls offer the highest level of protection in the event of a hurricane (Knowles, 2009a), but are the most expensive of the three wall types listed. The average cost per square foot of CIP concrete wall construction is approximately \$8.33 (Sivapriya, Senthamilkumar, & Professor, 2007). Overall, the use of CIP concrete walls would be the most hurricane resilient building practice but would also be the most expensive type of construction.

The applications for these types of building methods and materials are very practical, especially in a county that faces the threat of future storm damage. SIP, ICF, and CIP concrete building can be used in other applications besides walls. These building practices can be applied to roofs and flooring as well. SIP, ICF, and CIP concrete construction can all be used in combinations or conjunctions with one another, such as SIP roofing and ICF or CIP concrete

walls (NAHB Research Center, 2008). Practical building methods using these outlined can increase the storm resiliency of dwellings or building dramatically whilst still maintaining sustainable construction practices.

## **CONCLUSION**

Through much research and collaboration, this group has put sustainability at the forefront for Calhoun County. This group has planned for the long term future of Calhoun County, with an emphasis on improving building codes, assessing the county's future housing needs, retrofitting existing homes to be more hurricane resilient, and taking advantage of sustainable building methods. Planning for the future is essential for Calhoun County when attempting to make their housing more quality and hurricane resilient. By improving the housing within the county, the future health, safety, and welfare of citizens will subsequently be improved. Key threats to the county, like hurricanes, must be planned for appropriately, especially after Hurricane Michael's devastating effects on the area's housing.

# CHAPTER THREE

## HOME AND FLOOD INSURANCE

*Authors: Tim Roberts, Niyiah Roney, and Kelcie Walsingham*

### INTRODUCTION

The period during and after Hurricane Michael's landfall in Northwest Florida was marked by high damages from flooding, wind and debris. Property damage was extreme in many areas, and the aftermath of these damages was perhaps more burdensome in rural communities due to low rates of flood insurance for homeowners in these areas. In the Southern United States, there is a trend that shows that rural homeowners have lower rates of flood insurance coverage due to traditional policy that de-incentivizes the recognition of risk by local communities (McGuire 2015, Ren & Wang, 2016, Cutter, Ash & Emrich, 2016). In North-Central Florida this trend holds true, but the issue is highlighted in the wake of this disaster (Michel-Kerjan & Kousky, 2010). Oftentimes, the lack of flood insurance stretches federal relief efforts and limits the ability of entities such as FEMA to assist these communities. The combination of low flood insurance rates and intense damage led to an ongoing difficult recovery period in isolated rural communities such as Calhoun County, and raises the need to establish an infrastructure to ensure sustainable resilience to future storms.

The insurance research team seeks to provide preliminary information on flood insurance rates within Calhoun County, local and state insurance options for citizens and potential plans for increasing flood insurance rates and thus increasing resilience to future storms on an individual level. Additionally, one auxiliary goal is to provide a potential resource center online for local residents to explore their options regarding affordable insurance options from reputable sources.

## **METHODOLOGY**

The HUD housing assessment provided our team with information necessary to evaluate the insurance needs in the county. The HUD housing assessment projected that 51% of homeowners in the county had homeowners insurance and 3% of homeowners had flood insurance (refer to Table 4a in the DR-4399). For renters, the HUD assessment projected that 2% of renters had renters insurance and 1% of renters had flood insurance (refer to Table 4b in the DR-4399). After careful consideration, we discussed ways to further help the residents of Calhoun County with regard to home and flood insurance. To help evaluate the county's needs, we decided to distribute a survey to determine if residents have home or flood insurance, or both. The survey not only was designed to see how many homeowners or renters have insurance, but also understand their stance on insurance. Our team wants to understand why people feel they need or do not need insurance. However, if a resident does have home or flood insurance, we want to know if it has been effective during this setback due to Hurricane Michael. Assessing these needs helped our team produce an organized plan to approach ways to get residents to become more aware of different insurance options.

The overall goal of our research is to encourage Calhoun County residents to invest in home and flood insurance. From our surveys, we expected to get the best results and most honest opinions. Through extensive research and survey collection, our team wants to provide residents with as much information as we can to help educate them on the benefits of home and flood insurance to make sure they are prepared in the event of another natural disaster.

The survey we created consisted of nine questions revolving around home and flood insurance (see Appendix I). To limit who is able to take the survey, we required that the resident must be 18 years or older to participate. The first question asked how long the resident has lived in Calhoun County. The purpose of this question was to analyze the responses to understand the demographic of Calhoun County residents. The next few questions were formulated to determine the amount of residents who have home or flood insurance. Although the HUD housing assessment provided us with information on the number of residents who do and do not have home or flood insurance, we still wanted to include the information in our survey since we later ask about Hurricane Michael and its damages. For both

home and flood insurance we asked the residents if they felt having this kind of insurance was a reasonable investment. We knew the results from this question would produce different responses and we wanted to know how residents feel about their insurance policies. It is important to know this information to help us better understand what the county can do going forward. Gauging the opinions of residents, can help the county discover whether residents have reserves about insurance, or are unable to afford insurance. The next question we asked was if the residents would recommend this insurance to others. This question goes hand-in-hand with asking if insurance is a reasonable investment because the line of questioning allows the residents to show if they believe others should have the insurance as well. The next two questions asked if the residents had ever experienced flooding before and during Hurricane Michael. These questions provided us the opportunity to see if any residents lived in flood prone areas or lived in a non-flood prone area, but still experienced flooding. The last question of the survey asked how many people lived in the respondent's household. The survey overall gave us the opportunity to see how residents felt about home and flood insurance.

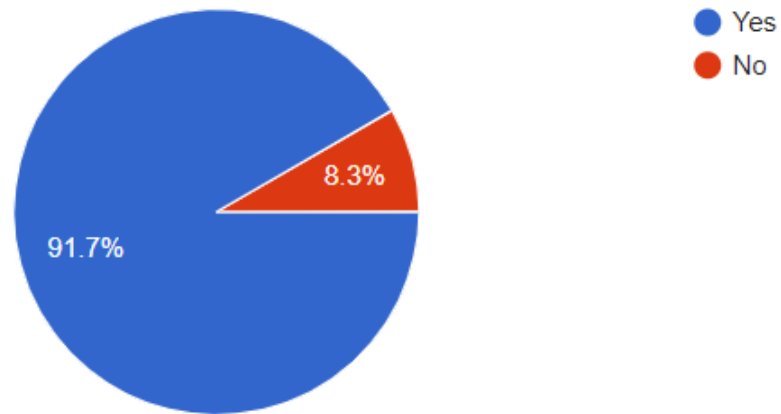
## **SURVEY RESULTS**

A total of 12 online surveys were filled out by residents of Calhoun County. It was relatively difficult to find avenues to distribute the survey due to the lack of centrality, but several online forums and groups were helpful. Of the 12 that responded, 2 have lived in Calhoun County less than 10 years, 4 have lived in Calhoun County between 10 and 20 years, and 6 have lived there for over 30 years. All of these 12 were homeowners.

Of those surveyed, 92% had home insurance and 8% did not (see Figure 2). Out of those that did have home insurance, all but one said that they believed home insurance was a solid investment, with majority saying home insurance allowed them to repair their homes after Hurricane Michael or at least alleviate the damage. The responder that did not believe home insurance was a good investment asserted that it would be better for them to have the decade's-worth of money they paid in insurance rather than the lesser recompense they received after Hurricane Michael.

## Do you have Home Insurance?

12 responses



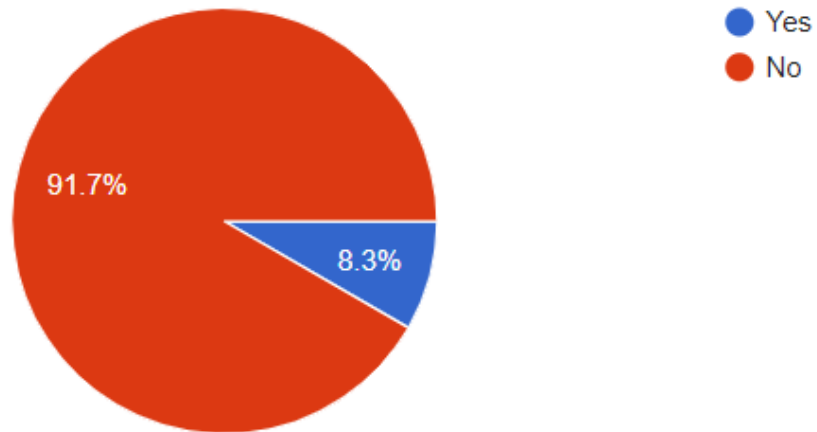
**Figure 2:** Percentage of Respondents With and Without Home Insurance

Out of the 12 surveyed, 92% did not have flood insurance, and 8% did (see Figure 3). There were two main reasons given for the lack of flood insurance coverage; many said that they did previously have it, but flood insurance did not cover anything and they felt they were sinking money into a bad investment, while others said that elevations surveys gave them the impression that they had a low flood risk and so the high premiums were not worth it. However, the majority of those surveyed did recommend flood insurance to anyone within a flood zone or anyone who could afford it. Only one person said they would not recommend it, claiming that insurance companies will “find a reason to not pay.”



## Do you have Flood Insurance?

12 responses

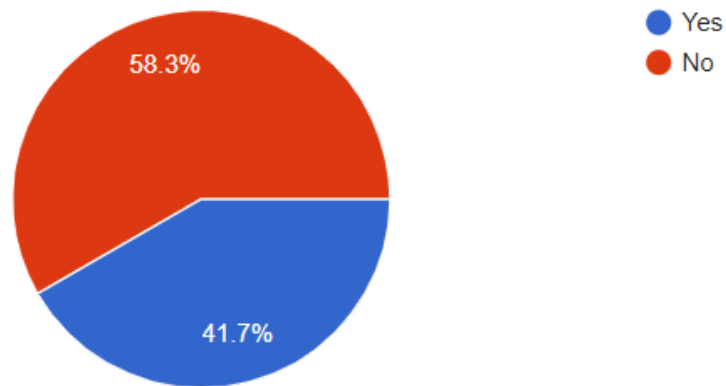


**Figure 3:** Percentage of Respondents With and Without Flood Insurance

Out of those surveyed, 58% experienced flooding before Hurricane Michael and 42% did not (see Figure 4), while 75% experienced flooding during Hurricane Michael and 25% did not (see Figure 5). Additionally, a majority of the participants lived in households with four members (58%) while the minority of participants lived in a household of two (8.3%), three (8.3%), or five (8.3%).

## Have you experience flooding before Hurricane Michael?

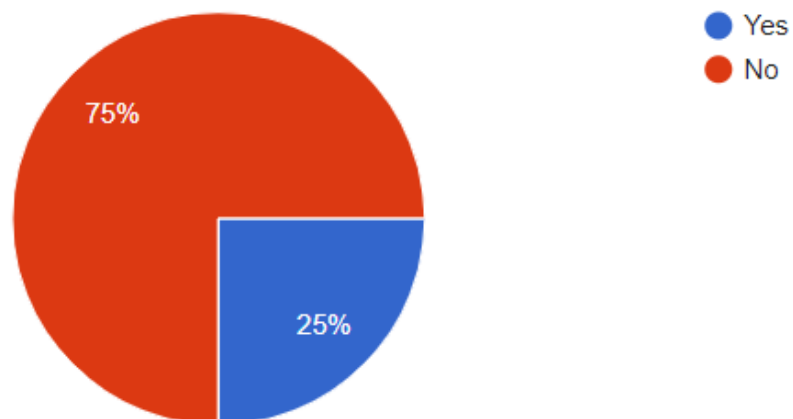
12 responses



**Figure 4:** Percentage of Respondents who Experienced Flooding Before Hurricane Michael

## Did you experience flooding during Hurricane Michael?

12 responses



**Figure 5:** Percentage of Respondents who Experienced Flooding During Hurricane Michael

The results indicate that while most participants did not have flood insurance prior to Hurricane Michael due to their perceived low flood risk, a similar majority still experienced flooding. However, most are still insistent on refraining from purchasing flood insurance. If the

current environmental trend towards stronger, more frequent hurricanes then a solution is needed to increase flood insurance coverage across the county.

## **RECOMMENDATIONS**

Organizing a Community Day was one option our team discussed to help bring awareness to Calhoun County residents. Aside from boosting moral, hosting a Community Day would allow the participation of different insurance vendors to help show the residents the different options they have regarding home or flood insurance. Another idea we discussed was possibly setting up an information hotline (such as a 311 hotline) for the county if they did not have one already. Information hotlines can be very useful for people to call and get information about where the nearest hospital is, how to use the county website, or even a number for a tow truck. Although it may be more convenient for a resident to look up information on the internet, it is important to have that information reachable by telephone in case a resident does not have internet access. We also recommend that the county look into community-based flood insurance which is a cheaper option than an individual having a premium. Providing some form of tax break or discount to residents who do have flood insurance can also help increase the purchase of flood insurance.

## **CONCLUSION**

The intense damage from Hurricane Michael combined with low flood insurance rates have made it difficult for Calhoun County to adequately recover. The lack of insurance within the county calls for initiatives to ensure future resiliency from future storms. In order to increase low flood and home insurance rates, the residents of Calhoun County need to be informed of different policies through the implementation of a Community Day or an information hotline. To help us understand the perspectives and opinions of Calhoun County residents, our team conducted an online survey to assess why residents do or do not invest in home and flood insurance. Out of the 12 online surveys completed over 90% of respondents have home insurance while 8% does not. However, over 90% of respondents do not have flood insurance while 8.3% do. A few of the reasons stated why the respondents did not have flood

insurance was due to their home being in a low risk flood zone. When asked if the respondent would recommend Flood Insurance to others, many of the responses were “Yes”. However, the respondents also said that they would recommend this insurance to those who are in flood zone areas. From the survey responses our team concluded that many homeowners had Home Insurance but not Flood Insurance because they were not in a high risk flood one and they previously had the insurance but it did not cover the damages they had it for. The overall goal of our survey was to act as a model for future outreach efforts for the county in finding reasons for residents’ lack of purchase of home and flood insurance so that the County can incentivize ways to get residents to have more home and flood insurance. With our goal in mind, our team came up with recommendations for the county such as organizing a Community Day for county residents, setting up an information hotline for residents to use, and the possibility of having community-based flood insurance. With future teams in mind, our research will allow them to go further in helping the county implement our recommendations if desired.

# CHAPTER FOUR

## EMPLOYMENT AND CONNECTIVITY TO HOUSING

*Authors: Reema Eqab, Savannah McGraw, and Jack Watson*

### INTRODUCTION

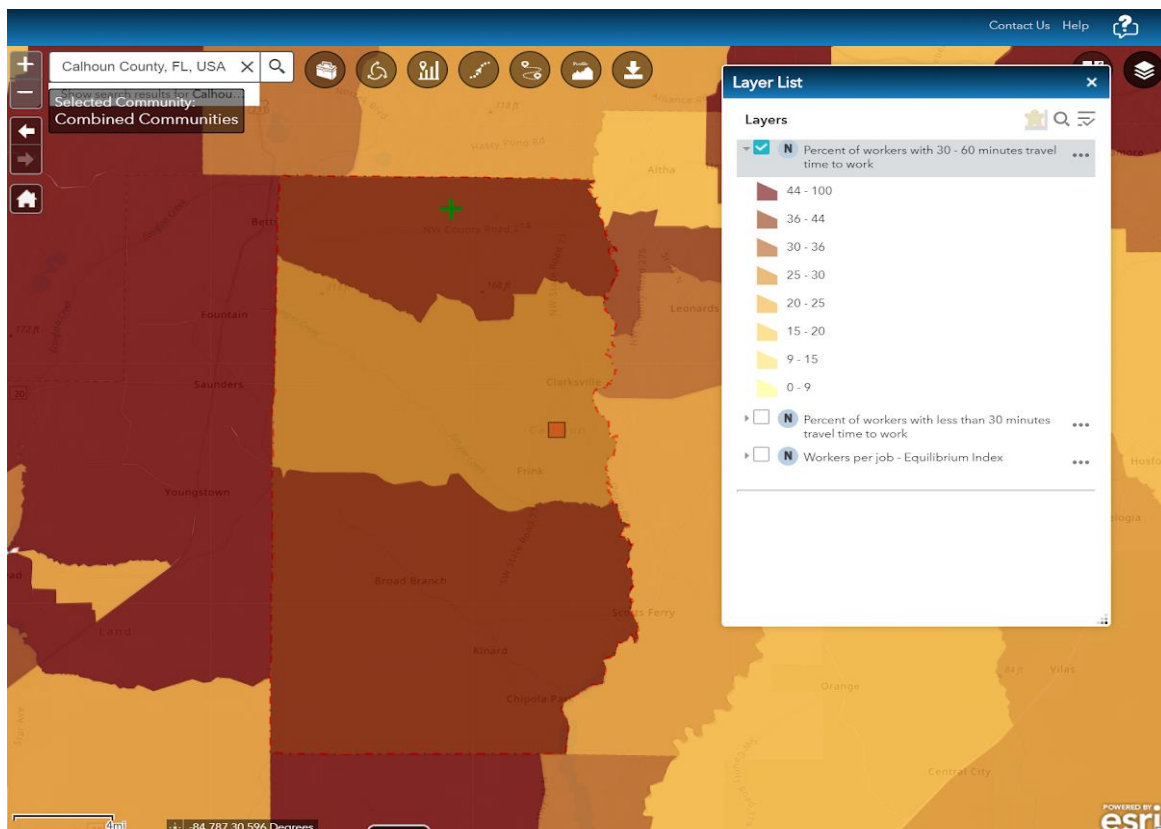
Hurricane Michael left devastating impacts across Florida's Panhandle. The losses were serious and left considerable damage to homes. Calhoun County has commissioned for the help of UWF students, to analyze potential possibilities for recovery and improvement in regards to housing in the community. Our team has been asked to provide solutions/recommendations that will improve the "replenishment of workforce housing near employment hubs." Through the analysis of data derived from the United States Census Bureau, EnviroAtlas, Calhoun County's Comprehensive Plan, and further research, we will be able to determine possible solutions within Calhoun County. By exploring and assessing present employment hubs and housing possibilities using EnviroAtlas, we were able to establish potential procedures to resolve the county's situation. The study of other rural areas in various geographic locations with a similar structure will allow us an expanded understanding of the process and regulations that come with connecting workforce and housing. Our job as a team is to ensure through the completion of our research, we have carried out a thorough assessment of what can be done to help Calhoun County flourish in regards to employment hubs and their connectivity to housing.

### METHODOLOGY

EnviroAtlas is a collection of interactive tools and resources that uses nationally and locally sourced data such as the 2011-2015 American Community Survey (ACS) and the US 2000 & 2010 Census. With this interactive map, the user is able to view demographic and supplemental data through specific layers to understand a certain area and inform planning decisions. Using EnviroAtlas, we were able to locate the existing hubs of economic activity in Calhoun County, with one of the major areas being Blountstown. We did this by viewing the county through the "employment to housing ratio" and "employment density (jobs/ac)" layers

on EnviroAtlas. The employment to housing ratio can be used as an indicator that an excess of jobs exists in a specific area because more workers are commuting there. A ratio that is greater than 1.5 implies that the area encompasses numerous jobs. The employment density (jobs/ac) layer illustrates where there is a greater volume of employment opportunities. EnviroAtlas was also used to understand the connectivity from employment to housing. Our team used a layer in EnviroAtlas that expresses the amount of people with commute times of 30 to 60 minutes. We then used this data and compared it to our other findings in order to understand how connectivity to housing relates to employment density.

## EMPLOYMENT CONNECTIVITY TO HOUSING



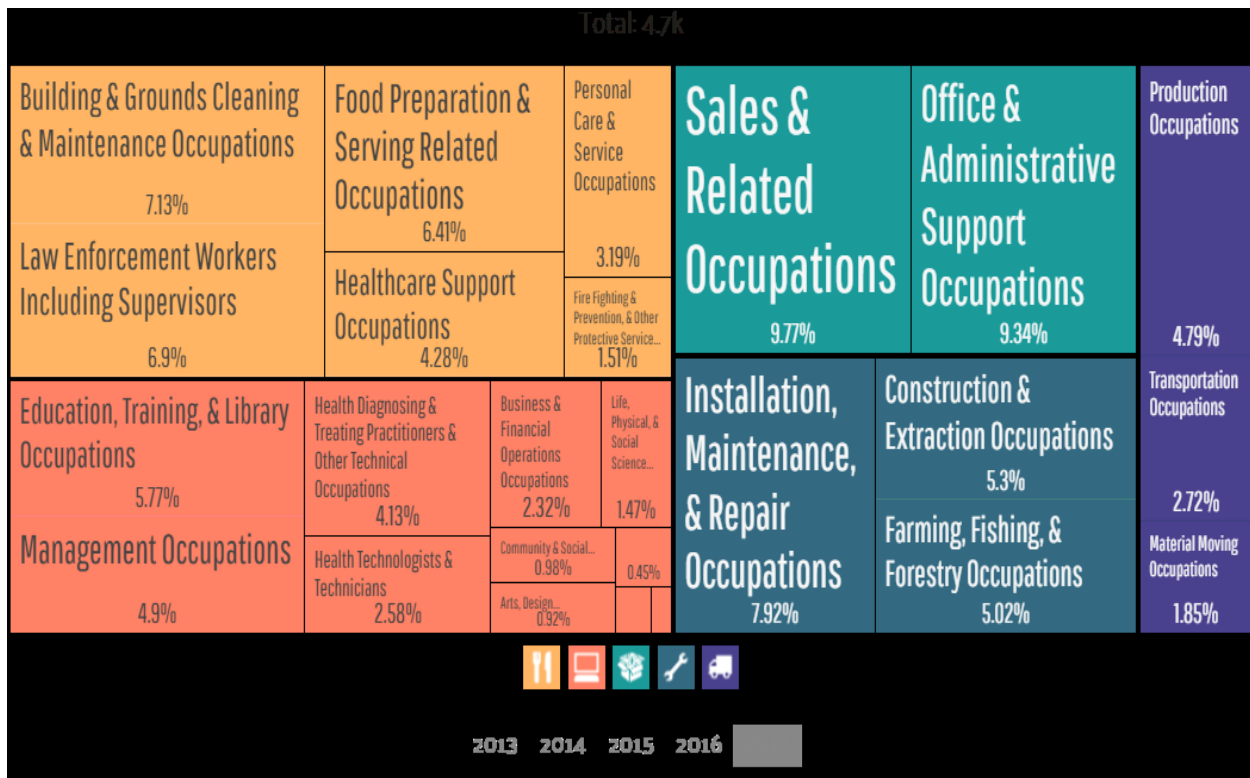
**Figure 6:** Percent of workers with 30-60-minute travel time to work. Source: EnviroAtlas

As shown in [Figure 6](#), from 2008 to 2012, the average commute time of 30-60 minutes rose from 30% to 100% of Calhoun County residents, demonstrating that people are commuting more to work. Such an increase also suggests that many of these jobs aren't local to

the county. By comparing this layer to those that focus on employment density and employment to housing ratios, it can be assumed that many residents are commuting to Blountstown and its surrounding areas, or areas outside of the county. In Figure 1, Blountstown is in the lighter colored areas, and as a result, its residents do not have commute times as long as those residents that live in the northern and southern parts of Calhoun County.

A mix of residences, employment opportunities, and services, in an area can create a more balanced and accessible community. Through the assessment of employment density, it is apparent that Blountstown is a center for economic activity. By creating more jobs and housing surrounding this area, local governments will allow for growth in their economy, improving the efficiency of public spending, and enhancing the lives of low to moderate income residents (Southern Environmental Law Center, n.d.). In the long term, this improvement could save local governments money in regards to services such as police, firemen, street maintenance, and more (HUD, 2014). It is also important to note that different departments such as these, as well as other agencies and organizations, each play a role in creating connected communities (HUD, 2014). The ability of people to reach their jobs was found in a Virginia case study to be directly linked to affordability issues (Southern Environmental Law Center, n.d.). This study showed that having jobs and affordable housing far apart, meant longer commute times, traffic, and even higher unemployment rates. Through the addition of more job and housing opportunities within appropriate, conceivable distance from each other would diminish the effects of some of these issues. Within our analysis of existing and potential economic activity, we have determined some strategies that could be beneficial in the process of making Calhoun County a more connected community.

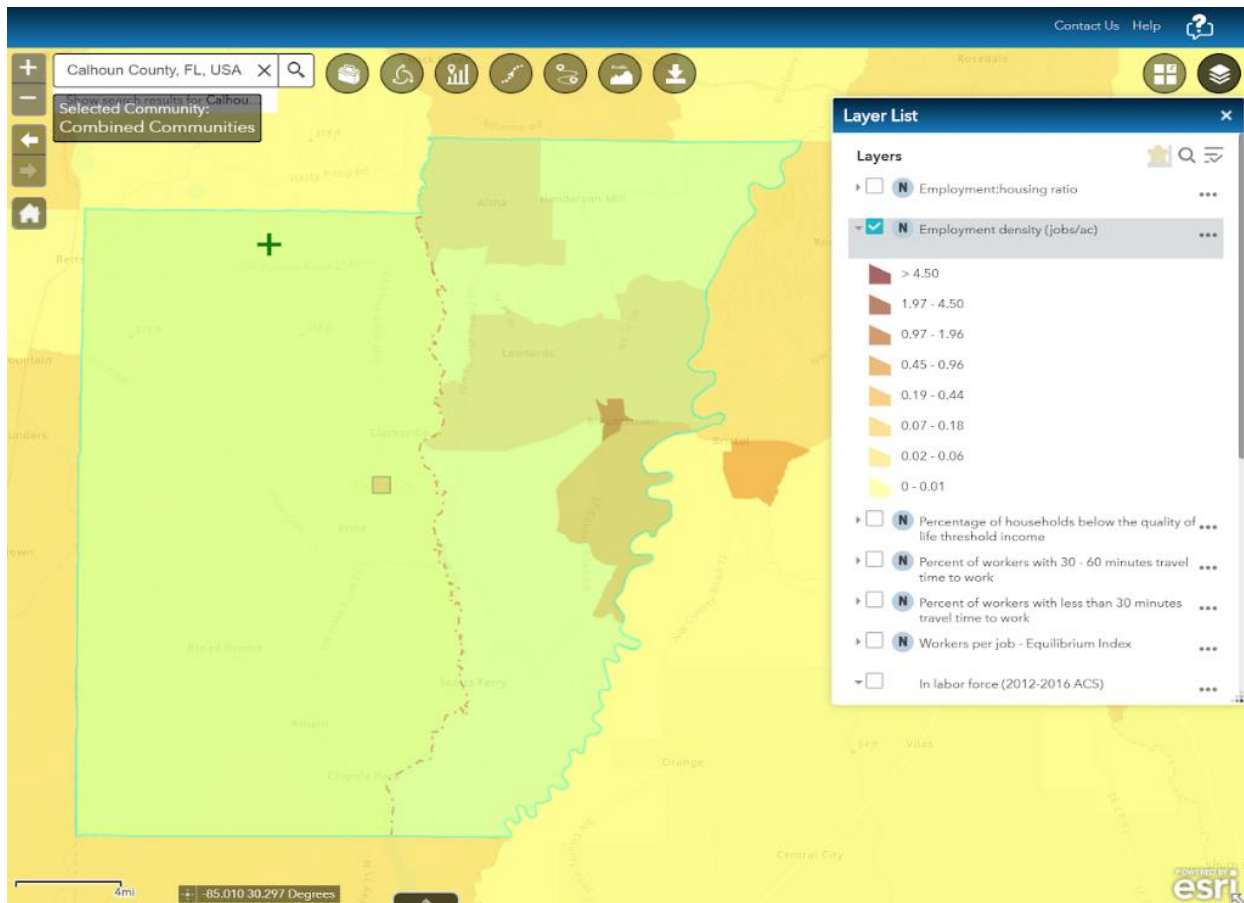
## EXISTING ECONOMIC ACTIVITY



**Figure 7:** The Most Common Jobs Held by Residents of Calhoun County. Source: Data USA (2019).

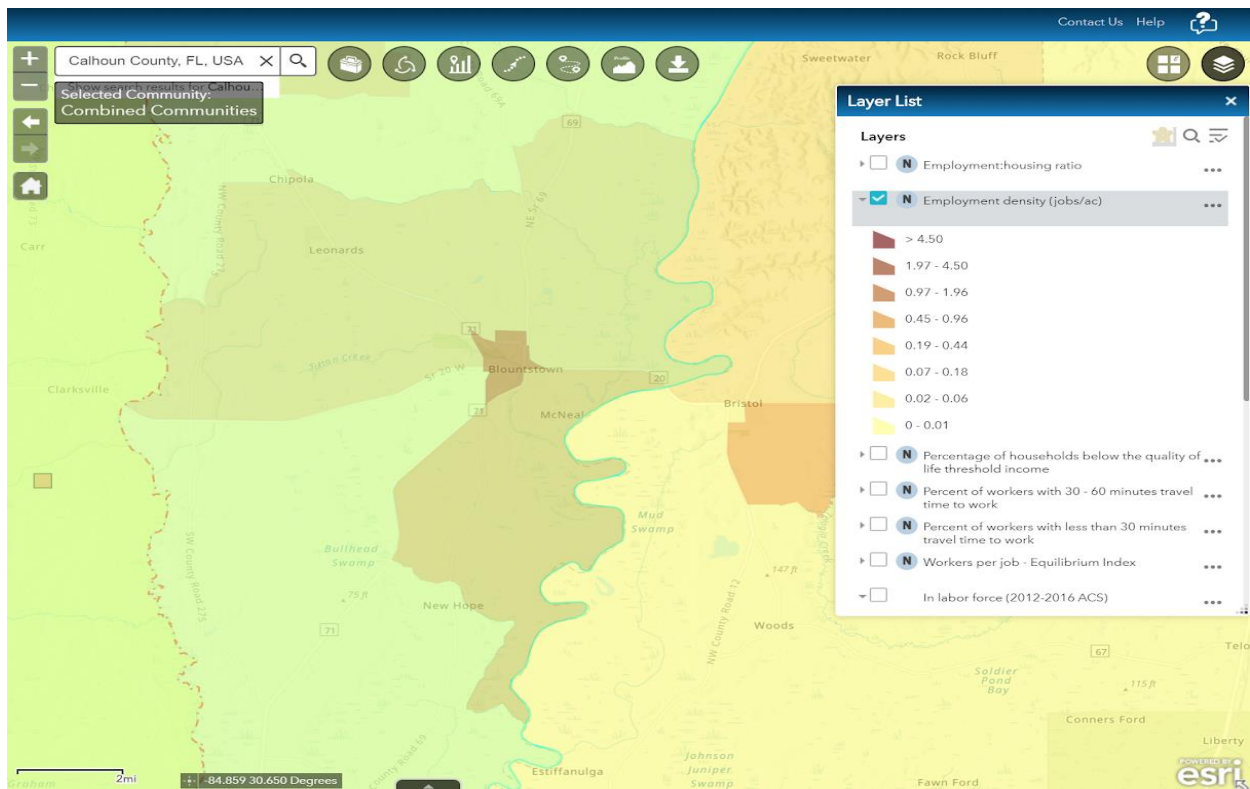
Figure 7 displays the most common jobs within Calhoun County. When determining what kind of employment can be expanded on, these job titles can serve as general focus points. The most common jobs in Calhoun County are Sales & Related Occupations, Office & Administrative Support Occupations, and Installation, Maintenance, & Repair Occupations.





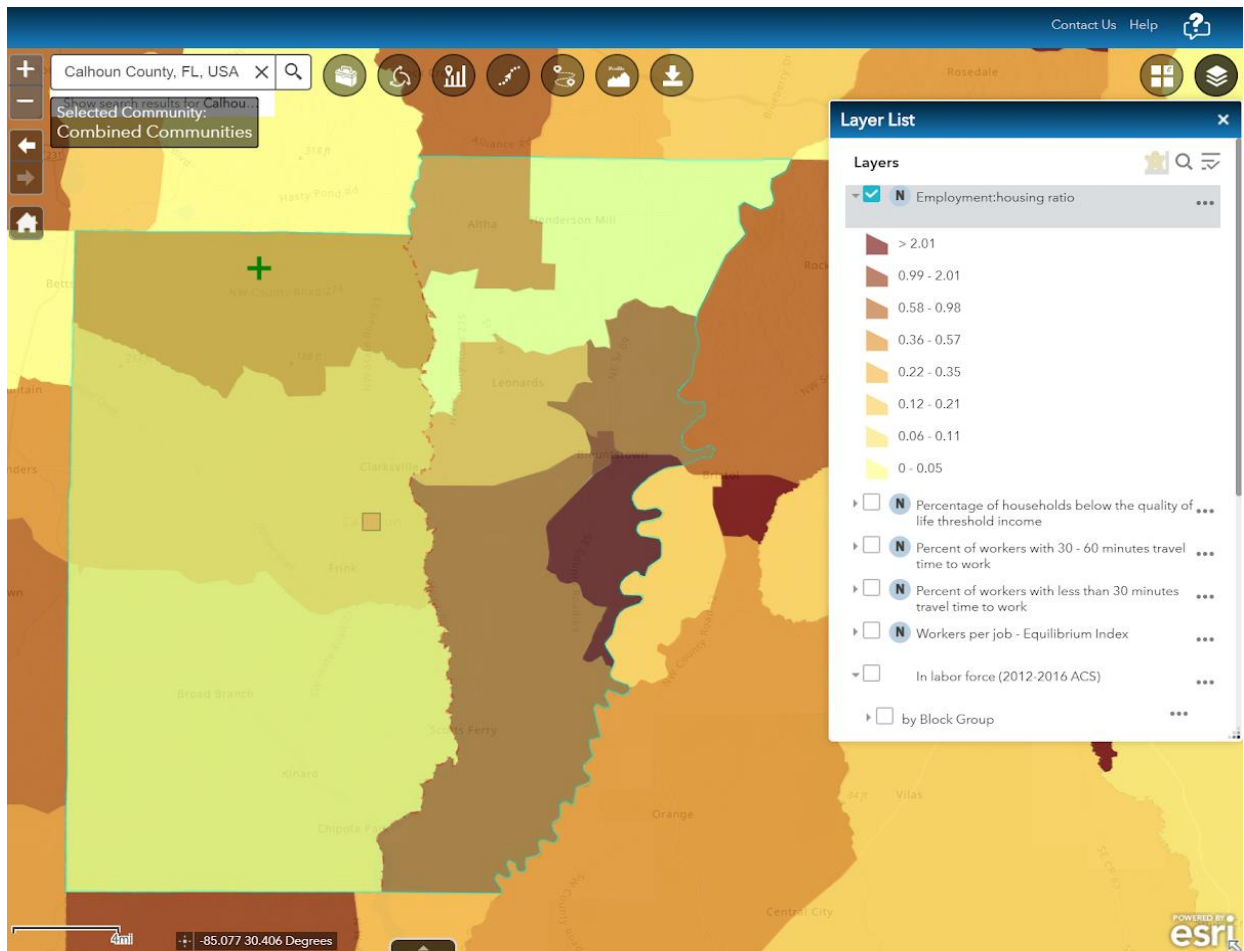
**Figure 8:** Employment density (jobs/acre). Source: EnviroAtlas

Figure 8, pulled from the employment density layer in EnviroAtlas, displays the areas with a greater density of jobs in Calhoun County. The lighter areas indicate the lowest density of employment, or amounts of jobs per acre, while the darker areas indicate greater densities of employment.



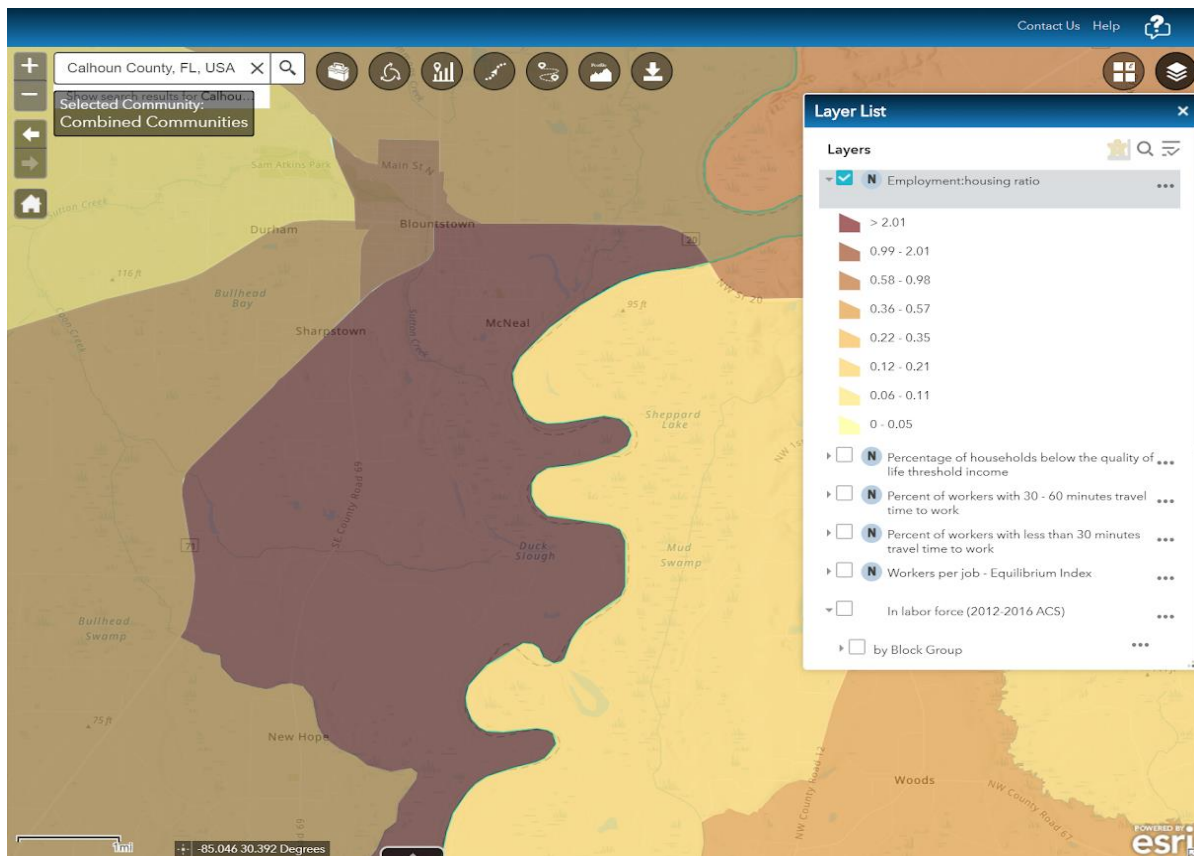
**Figure 9:** Closer view of employment density (jobs/acre). Source: EnviroAtlas

Figure 9 is a close up of Figure 8 showing employment density in Calhoun County. This figure focuses on the areas with a higher density of employment, with Blountstown as the area with a more concentrated density of 1.97 - 4.50 jobs per acre. The town of McNeal falls under the area with an employment density of 0.97 - 1.96 jobs per acre.



**Figure 10:** Employment to housing ratio. Source: EnviroAtlas

Figure 10, obtained from the employment to housing ratio layer on EnviroAtlas, indicates that there are more people commuting to the areas that are colored the darkest. Therefore, the area with a ratio higher than 2.01, as shown in the figure, contains the highest number of commuters driving to their jobs. In contrast, the areas of Calhoun County that are lighter colored have fewer job opportunities.



**Figure 11:** Closer view of employment to housing ratio. Source: EnviroAtlas

Figure 11 is a close-up of the Figure 10 that shows the employment to housing ratio. Blountstown falls in the darker colored area, meaning that the employment to housing ratio there is higher than 0.99. This reinforces the fact that Blountstown is an area with existing economic activity.

### POTENTIAL ECONOMIC ACTIVITY

Using EnviroAtlas, Blountstown was discovered to be the employment hub in Calhoun County. Given this information, it would be advantageous to utilize underdeveloped or partly developed plots of land located in or around Blountstown. Developing this land can be used to open new businesses and create new housing which would greatly benefit the county's economy. With more housing located around new businesses in Blountstown, it could also

provide shorter commute times which would alleviate congestion, pollution, and provide a higher quality of life.

The large distances between areas in Calhoun County create long commute times, which in turn, raises the cost of transportation. The amount of money being spent on transportation then limits housing options. Mixed use development, which is the combination of residential and commercial buildings, can be developed to promote a more compact and walkable community and connect jobs, transportation, and housing.

Increased development near highway entrances and exits is a common way for rural counties to increase economic activity. Businesses near highways should be targeting individuals who are passing through the county while at the same time be accommodating to its own residents. Examples of this development include restaurants, gas stations, hotels, and even auto parts stores.

In the future, Calhoun County can consider promoting more connected communities to give the county an economic boost. For example, people-friendly places with plenty of walkable and bikeable areas can push employers and residents to open businesses and spend money. Also, this will invite new people to visit and contribute to the economy. This development will in turn boost competition between businesses and save residents money by producing a shorter commute time.

## **EMPLOYER ASSISTED HOUSING**

Employer-assisted housing (EAH) is where an employer participates in a housing program that finances and/or assists their employees in some way (GMHF, 2014). An EAH housing guide is available through the Greater Minnesota Housing Fund (GMHF) and provides plausible programs and resources available through both private and public agencies that could be applied in Calhoun County (GMHF, 2014). There are various options available dependent on the level of financial contribution that could potentially be put forth from the employer. It is important to note that because employer-assisted housing is not applied currently in Calhoun County, strategies would have to be introduced locally in order to get private firms on board (NYU Furman Center, 2019). We will discuss possible options for diverse situations. Project

development for increasing the affordable housing supply is one route. It consists of developing the housing first through the determination of where the site will be, the number of housing units available, and the potential budget available (GMHF, 2014). Then the county would need to obtain support locally while determining the funds available through both public and private financial routes. These routes could include down payment assistance, development loans, land donation, and more.

Another pathway may be about homeownership or rentals. A program is created where funds are applied to a program, with specific requirements and regulations applied to employees (GMHF, 2014). Employers can work with the local government, even to obtain matching funds, in order to market to employees in hopes they will participate in the program for homeownership or a rental. This pathway would include communication with realtors and/or lenders (GMHF, 2014). The Low Income Housing Tax Credit Investment (LIHTC) Program is another option. Essentially, the federal government can provide funds to the program. Then, the county would have the most influence of what housing gets built. Developers receive funds towards the construction of this housing, and then low-income renters get the opportunity to live in an affordable home (GMHF, 2014). Investors then receive a ten-year tax credit for the investment they made to an affordable housing program (GMHF, 2014).

There are issues present for employees in these situations because employees then must save enough money for down payments and sometimes other fees. This problem can be mitigated through the offering of grants and loans from the employer to the employee (GHMF, 2014). Incentives can be provided to an employee from both public and private sources to work towards renting or owning an affordable home (NYU Furman Center, 2019). Individual Development Accounts (IDA) programs encourage saving by providing matching funds. Payroll Savings Matches allow for employees to dedicate a portion of their paycheck into a special account for future use (GHMF, 2014). That way, the employer has the ability to deduct a predetermined amount of money in order for it to be saved.

Each program and potential option has benefits dependent upon the community's needs. By evaluating the needs of both the employees and the community, a housing strategy that works best for both parties can be determined. Local businesses interested in the idea of

Employer-Assisted Housing will find many beneficial initiatives involved in affordable housing projects. These projects can be cost effective for a business, benefit the community and its stability, and lessen the burden of housing costs for residents (GHMF, 2014). Dependent on various needs, these programs and grants can be combined for specific needs and concerns of a community. Referring to Figure 2, it would be useful to analyze the most common jobs within Calhoun County in order to determine how the county and big employers can participate in these beneficial Employer-Assisted Housing programs.

## **CONCLUSION**

By utilizing resources such as EnviroAtlas, we were able to identify Calhoun County's most concentrated economic center. We discovered that residents of Calhoun County were commuting dominantly to Blountstown. Blountstown is also the area with the highest employment density of 1.97-4.50 jobs/acre. Therefore, the further development of Blountstown may be the best way to boost the economy. We were then able to provide ideas for future economic growth by looking at other towns and reviewing files that were provided to us. This increased economic growth included ideas such as developing mixed-use buildings and increasing development along highway exits. Our team also explored employer-assisted housing and found that because it isn't currently being applied to Calhoun County. It will have to be introduced locally in order for private firms to contribute. There are a plethora of opportunities for employer-assisted housing, from grants and loans to employer designated programs. We have also determined that further analysis of the community's specific needs will help the county narrow down these potential pathways for employer-assisted housing.

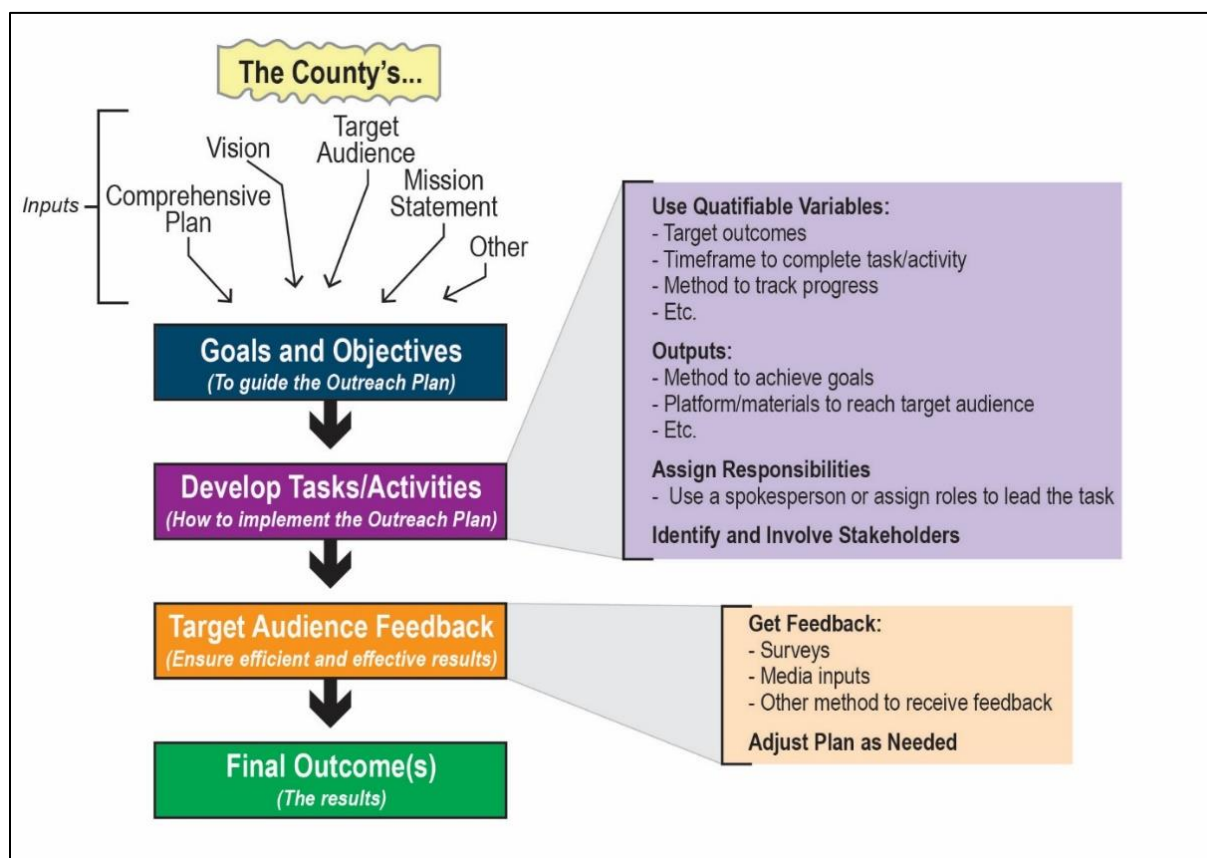
# CHAPTER FIVE

## PUBLIC OUTREACH

*Authors: Bridget Ellis, Margaret Johnson, and Amber Sweet*

### INTRODUCTION

A public outreach plan defines a group's goals, objectives, and strategies to inform, obtain feedback from, and educate their target audience (Harrison, Cohen, Hinchey, Moerke, & von Dassow, 2015; Family Pride). This paper establishes a framework that Calhoun County can use to build their public outreach plan. This framework includes identifying the need, goals, target audience, and tasks and projects that would support starting a public outreach plan. Typical components and the general process of an outreach plan are outlined in Figure 12.



**Figure 12:** Components of an Outreach Plan. Sources: (9+ Outreach Strategy Plan Examples – PDF, n.d.) (Enroll America) (Family Pride)



## **Assumptions**

Input from Calhoun County, Florida, was limited to public sources; therefore, the following assumptions were established to set a baseline for developing a framework for a public outreach plan:

- Calhoun County does not have an existing public outreach plan; however, they do conduct some outreach activities when it is necessary.
- Calhoun County does not currently facilitate educational courses or materials for the public to learn about emergency preparedness and recovery.
- The county does provide limited materials and information to the public before, during, and directly after an event, such as a hurricane.
- Source material for this study was only available through internet resources and databases. It is assumed that input from the county will occur after this report is reviewed. No new information was provided during the presentation to the Calhoun County Board of County Commissioners on December 2019.

## **NEED FOR PUBLIC OUTREACH**

The 2019 *FEMA-HUD Hurricane Michael Housing Impact Assessment (DR-4399)* identified the need for “executing education and outreach initiatives” for areas impacted by Hurricane Michael (US Department of Housing and Urban Development, FEMA, and State of Florida, 2019). This focus area is described in this assessment as the following:

*“Impacted community members are overwhelmed and need assistance with identifying resources available to them and learning about recovery options tailored to their individual circumstances and needs. Additional tools to plan and prepare for future disasters are needed to enhance family and community sustainability and resiliency. The local county commissions, along with housing authorities and their philanthropic partners are diligently coordinating efforts to respond to and address the community’s necessities through on-going public education and*

*outreach.” (US Department of Housing and Urban Development, FEMA, and State of Florida, 2019)*

Even though the *FEMA-HUD Hurricane Michael Housing Impact Assessment* identifies the need for an education component within the public outreach plan, it was determined, during our analysis of defining an outreach plan, as a method or tool to implement strategies to achieve their goals. Further, this determination resulted in focusing the framework on only public outreach and not on education. Education has been proposed as a method to reach the target audience.

Calhoun County should view the development of a public outreach plan as a way to improve their communication and overall relationship with their constituents. A formalized plan would also help consolidate and organize all outreach efforts so that they are more efficient and better presented to the public than the current efforts. Such a plan would also assist in the improvement of the methods of communication to the public – centralized website, online surveys, Facebook, Twitter, etc. An outreach plan can also address and incorporate goals that are in-line with the Calhoun County’s *Land Development Code* and the *2025 Calhoun County Comprehensive Plan*.

The responsibility of developing and implementing this plan would include the local government, its departments, and other stakeholders. Currently, there is no known organizational structure within the county to adapt to a public outreach plan. A small committee or existing board could likely take on the responsibility(s) of a public outreach plan.

## **PUBLIC OUTREACH GOALS**

The goals and strategies are the foundation for guiding the development of the proposed activities of the public outreach plan. Also, these items ensure the plan is following Calhoun County’s *Land Development Code* and the *2025 Calhoun County Comprehensive Plan*. Since Hurricane Michael in 2018, Calhoun County’s priority has focused on emergency preparedness and recovery, and long-term efforts to improve the quality of housing and other structures. The proposed goals and strategies (listed below) focus on preparing Calhoun County residents, business owners, organizations, and other groups for disasters and

emergencies. Three categories of preparation were identified while analyzing how someone could prepare for a disaster: before the event, during the event, and after the event. Additional goals should be added with input from Calhoun County.

**GOAL 1: Helping residents better prepare in the long-term for an event**

- *Knowing the latest information to be prepared* – Attend a “community days” or other public-forum style event to find out the most relevant information for the current hurricane season. This event could include standard preparedness information packets.
- *Register for home insurance* – Insure homes, including flood insurance. Renters should confirm that their belongings are included in their insurance policy. If a resident is not familiar with insurance companies, consider recommending that they look into their car insurance company to see if they also offer home or renters insurance. Most car insurance companies also insure homeowners and apartment renters.
- *Secure your property* – Everyone in the community should have their home inspected by both local and government agencies before an event occurs. Also, be aware of specific hurricane and flood preparations that differ for different types of properties and neighborhoods (e.g. small business, farm with animals, single-family homes neighborhood, mobile home neighborhood, etc.). Securing property could include, but is not limited to: boarding windows, landscaping to remove dead trees/foliage, relocating and securing light-weight outdoor furnishings indoors, properly maintaining buildings’ structural elements, and reinforcing fencing.
- *Preparations Checklist* – Recommend that all residents, business owners, organizations’ leadership, and local government departments have and complete a prepared checklist with specific tasks, shopping lists, important phone numbers, important documents, maps, and other resources. This list can include but is not limited to gathering both drinking water and tap water, having extra flashlights and batteries, stocking non-perishable foods, securing a copy of a bill for proof of residence, copy of insurance policy, and locating potential evacuation destinations, both local and beyond the path of a disaster. Also, highlight unique tasks for specific types of properties that may require

extra care. For example, a farm with animals should be sure farm animals' halters are taken off for safety and have access to shelter. Do not lock animals inside of buildings as this action can be more dangerous than leaving them the option to escape. See Appendix A for examples of preparation checklists. Lastly, develop a map and schedule of a local "community days" event, churches, and other public areas that may serve as a distribution point for free and discounted items and other resources.

- *Go-bag*– In case of evacuation, a go-bag should be ready in case there is a need to quickly leave if needed. Pack items like two pairs of clothes, socks, and undergarments. For those with children, make sure each child has a few sets of clothes. Pack a container of any medication (in a waterproof container) and other everyday items. For individuals with pets, be sure to have a few days' worth of food and bowls for water. Leave leashes and carriers out for quick access.
- *Utilities* – Purchase items to provide support if there is an outage of any utility. This purchase can include a generator for back-up power with operating instructions. Note: be sure that the generator is outside of the house because of emissions released during use. Have multiple flashlights with extra batteries. When purchasing flashlights, consider different forms such as headlamps and lanterns. Purchase back-up charger batteries so that one can charge phones, computers, or other electronic devices. Also, consider items that can accommodate daily needs during outages in the water and wastewater utility systems.
- *Supplies* – Be sure to purchase water bottles, canned food, other foods that do not need cooking, batteries, and gasoline (if a generator is in use). One can make these purchases more affordable by purchasing them throughout the year instead of buying it all at one time. Maintain a stocked first aid kit in case of medical emergencies. Have smaller to-go first aid kits in the cars or travel bag to take with you in case of an evacuation.

## **GOAL 2: Helping residents better understand what to do during the event**

- *Where do I go?* – Provide maps, addresses, and phone numbers of certified shelters for people to go if they cannot travel. Residents should put aside an emergency fund for

travel, hotel, and food in case an evacuation order is given for their residence. Inform people about monetary and/or transit support if they cannot afford or have the capability to evacuate.

- *When an emergency occurs, there are many resources one can reach out to.* If the power goes out, one can report the power outages to their local power company. Have a list of phone numbers for your service providers so you can contact them if connectivity are lost.
- *Know your emergency phone numbers* – Contact either 911 or Calhoun County Emergency Management 850-674-8075 for emergencies.

### **GOAL 3: Help residents better prepare for the aftermath of a storm or flood**

- *Recovery*– The Environmental Protection Agency (EPA) has an online list of storm and flood-related recovery. This website covers an extensive range of topics, from mold to drink, and provides links to more information. See <https://www.epa.gov/natural-disasters/hurricanes#recover>.
- *Local Recovery Efforts* – Coordinate all local efforts to recover from an extreme weather event with all applicable parties. Use the public outreach plan as a tool to help inform residents on local recovery efforts. See Appendix C for information related to Florida Statutes that can help with recovery efforts.
- *After an event* – Have flooded buildings inspected for mold and electric damage. Take notes and pictures before and after an event to insurance proof of private property.

### **TARGET AUDIENCE**

An area’s target audience can vary from location to location. It is important to focus on the demographics specific to Calhoun County and what parts of the community should be the focus of this Outreach Plan. This section focuses on the target audience for Calhoun County and the specific groups of people this plan is aimed to reach out to. Our goal is to provide information that can be useful to the local government, the residents of the county, local business owners, and other organizations located within the county.

- *Local Government:* The local government should be informed on the correct preparedness procedures, evacuation routes, and how to keep the community informed and involved in these processes. They could also help facilitate the implementation of a public outreach plan.
- *Residents:* According to the demographics provided in the HUD Housing Assessment, Calhoun County is populated with low-income households, households with disabled residents, and a decent amount of an elderly population. These specific demographic groups are the main target audience for this plan; however, others should not be excluded as emergency preparedness is important for everyone.
- *Business Owners:* In addition to residents, business owners have more than just their personal property to manage. Local business owners are vital to small towns. Therefore, the business owners located in Calhoun County should be informed of the necessary precautions to take to protect their businesses during disasters, such as Hurricane Michael.
- *Organizations and Other Groups within the County:* This group includes clubs, churches, and other groups that have a property and/or people they care for. Locations such as churches are important during times of need and provide a haven for those that lose everything. Ensuring that these places are protected during extreme weather events, so that they are standing after, is important to the community's well-being after going through devastation.
- This section looks at how to monitor the effectiveness of a public outreach plan and proposes a list of tasks and activities to start an outreach plan in Calhoun County.

## **PROPOSED ACTION PLANS TO CREATE AN OUTREACH PLAN**

This section looks at how to monitor the effectiveness of a public outreach plan and proposes a list of tasks and activities to start an outreach plan in Calhoun County.

### **Measuring the Plan's Effectiveness**

It is important to know if the plan's outreach efforts are working and meeting the needs of your target audience in practice. If you are not reaching them – there is a problem with how the plan is being implemented. Therefore, it is highly recommended that periodic (e.g. 25%

complete, 50% complete, 75% complete) input from the target audience is gathered to evaluate the plan’s effectiveness. This periodic input will allow the county to have the time to make adjustments before the activity is completed so a productive outcome can be achieved.

**Proposed Actions to Implement the Public Outreach Plan**

The following table (Table 7) summarizes a list of proposed actions to implement the public outreach plan. This example framework can be developed further as Calhoun County’s leadership begins developing their public outreach plan.

**Table 7: Proposed Public Outreach Tasks**

	<b>Activity / Task</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Staff Responsible</b>	<b>Measure of Effectiveness</b>	<b>Status /Comments</b>
1	An outreach plan has some flexibility in how it can be put together. Review existing outreach plan templates and guides to review additional background knowledge to assist in building an outreach plan.	Complete before starting to develop the outreach plan.	Makes setting up and maintaining an outreach plan easier. Allows staff to adapt their process as elements change.	Leadership, meeting facilitators, outreach plan’s author(s)	Present findings to leadership and agree on a way forward at 50% complete.	See Appendix B for resources.
2	Learning the primary concerns of residents – specifically related to the goals and objectives. Recommend a survey or public-forum style event to obtain input.	Before goals and objectives are finalized.	Make the plan more oriented towards the target audience.	Recommended public relations experience.	-Leave a blank field for a custom comment or write-in opinion. -Summarize and publish the responses.	Recommend a public meeting, written comment PO Box, and/or survey to hear concerns.
3	Organize with schools and other public venues to present educational instruction and materials to the public – of all ages and demographics.	Complete at least one class or lecture via a guest speaker during the	Reach additional demographics within the target audience. Improve the	Set up a committee to organize and facilitate these classes.	Make sure you are reaching your audience via a survey or quiz before and after the	A way to reach a varied demographic

	<b>Activity / Task</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Staff Responsible</b>	<b>Measure of Effectiveness</b>	<b>Status /Comments</b>
		school year at a school and before the hurricane season starts.	availability of information.		course. Adjust future courses, as needed.	
4	Surveying the target audience about their understanding of emergency procedures and information provided on checklists.	Survey every 6 months to a year, or after public outreach events.	To ensure the information provided is being utilized and understood.	Public outreach staff of local government .	The purpose of this activity is to measure the effectiveness of the whole outreach plan.	This medium is a great way to interact with the community and show them genuine concern for their safety.
5	Identify the current concerns citizens may have before, during, and after a hurricane (or other natural disasters)	Complete before developing educational materials and preparation checklist.	Confirming and identifying concerns from a resident's viewpoint. Ensures there is an agreement between the facilitators and the target audience.	Assign to someone knowledgeable in public relations.	Summarize and publish the responses. Catalog response on a yearly basis to see how concerns change over time.	Recommend a public meeting, written comment PO Box, and/or survey to hear concerns.
6	Establish an annual "community days" or other public-forum style event to bring the community together. This would also serve as a place to present information on the current season's preparedness efforts. Could have a raffle for	Before the hurricane season. Host the event annually.	A way to both give and receive information in an informal atmosphere. Better inform residents of the latest information	Setup a committee. Bring together stakeholders to help.	Have a comment box and questionnaires available to receive feedback.	



	<b>Activity / Task</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Staff Responsible</b>	<b>Measure of Effectiveness</b>	<b>Status /Comments</b>
	preparedness items, like a first aid kit, to promote interest.		on preparedness			
7	Insert additional actions to meet the county's goals and objectives.					

# CHAPTER SIX

## CAPACITY BUILDING

*Authors: Teal Black, Hannah Mendillo, and Lena Owen*

### INTRODUCTION

County Commissioners for smaller communities, such as Calhoun County, are more likely to have a personal passion and willingness to help their community thrive at the most optimal level possible. Natural hazards can cause community morale to plummet in large communities with easier access to resources, so the damage caused to smaller communities is unimaginable. This case of Hurricane Michael's impact on Calhoun County is of special interest because there has been a high number of residents that have fled their homes. The community members who stayed behind are fighting to not only improve their lives but also hopefully attract more residents and businesses. With challenging access to resources and discouraged morale, it can be difficult to find a starting point for community redevelopment/recovery from a hurricane. Our capacity building team is hoping to offer insight into a variety of ways for Calhoun County communities to rebuild and improve.

For rural counties, like Calhoun County, a lack of vital resources is an unfortunate reality that inhibits community revitalization, therefore, obtaining grants and loans is essential. Grants are most ideal since they do not have to be repaid but loans are still a useful alternative. Although monetary resources are vital for rebuilding, there is plenty of alternative assistance available. Some examples include training programs, voluntary assistance, and other various projects that when combined can transform a damaged community. This paper explores various resources that Calhoun County has the potential to capitalize upon, therefore maximizing redevelopment and improving projects that are already in progress.

### EXISTING CAPACITY DEVELOPMENT

Calhoun County, being such a rural county, seems to lack the funds to achieve ultimate redevelopment on its own. While hiring a main planner to research and advise commissioners

during decision making is a good start, one person is not necessarily the most reliable source of planning for an entire county (Urban Planning Lecture, 2019). To make up for this, the county has called on the free assistance of UWF Urban Planning students. This is a great resource to take advantage of because Calhoun County does not have to pay for any of our advice.

A major point of rebuilding conflict the county is experiencing is the questioning of factors like cost-benefit ratio, efficiency and best long-term outcome in terms of rebuilding damaged affordable housing units (Urban Planning Lecture, 2019). Funds are set to go toward the rebuilding, but the county is conflicted over whether to use recycled materials to rebuild existing units or to expand by building new and improved affordable housing in viable forested areas (US Department of Housing and Urban Development, 2019). This plan is also accompanied by the desire to emphasize improving housing quality, not just building the same housing that was less than resilient to disastrous weather (US Department of Housing and Urban Development, 2019).

Another well-thought-out method of community improvement is the concept of increasing insurance rates in an attempt to enhance overall resilience in the future (US Department of Housing and Urban Development, 2019). According to the county's Hurricane Michael Housing Impact Assessment, uniformly insufficient insurance rates are significant contributing factors to the lack of disaster relief funds. There is a concern, however, about if this plan will be as useful as intended since there is a focus on the revitalization of affordable housing units (US Department of Housing and Urban Development, 2019). The plans for future community enrichment through educational programs/outreach will also hopefully be beneficial so residents can grasp a deeper understanding of where they live, whom they live with and how to be better prepared for disasters. Capacity building has a deeper meaning than just funds to redevelop communities; building a sense of togetherness and communal bonds is also essential to community redevelopment and this sense of community is exactly what Calhoun County plans to focus—through a focus on local development (US Department of Housing and Urban Development, 2019).

## **METHODOLOGY**

For our research, we assessed the needs of Calhoun County and identified one of them to be financial assistance. Our goal was to find at least three grants or loans that would apply to Calhoun County's rebuilding efforts. The research was done primarily through the U.S. Department of Housing and Urban Development (HUD). Simple searches for "capacity-building grants", "housing loans", "hurricane mitigation grants", etc. also proved to be helpful. Housing Assessments for municipalities, like Calhoun County, usually outlined the grants their capacity building team used, so those were all looked at as well. Many of the financial aid that was found was for cities with populations of 50,000+ people. Seeing as though Calhoun County only has around 14,000 citizens, this qualification was missed. Some grants are only able to be used on certain housing projects and were too specific to be used for Calhoun County. We only wanted to include financial aid in our paper that can be used by the county. We were careful to consider application deadlines and whether aid was from a public or private source. To further our research we will continue to find and evaluate viable financial aid for Calhoun County. We adjusted the feasibility ranking of all the aid proposals and made an updated recommendation based on the new data. We are also focused more on grants that specialize in a topic that Calhoun County, such as restoring abandoned or foreclosed properties.

## **PROPOSED GRANTS**

### [Hurricane Loss Mitigation Retrofit Program](#)

The Hurricane Loss Mitigation Program Grant is dedicated to the improvement of building resiliency. They work with local authorities and non-profit organizations to provide hazard mitigation to residential and commercial buildings. Activities that they fund include retrofits, inspections, construction, and modification to buildings to reinforce their structure. This grant wants to ensure that all the buildings that they work with will be able to withstand future Hurricane conditions. This program is allocated up to \$3.4 million to improve applicable community resiliency with a reimbursement of \$194,000 for Local Mitigation Strategy projects. Applications for this grant are advertised through Request for Proposals (RFP). To receive announcements email [HLMP@em.myflorida.com](mailto:HLMP@em.myflorida.com).

### [Florida Job Growth Grant Fund](#)

Enterprise Florida is a program dedicated to improving public infrastructure and workforce training. Public infrastructure must include improving public transportation. Workforce training must include transferable skills that many different employers will value. They will provide approximately \$40 million to communities that are focused on their economic growth. This includes creating jobs, training for a highly-skilled workforce, attracting more businesses, and increasing business. Proposals must be submitted by email to [FloridaJobGrowthGrantFund@enterprise florida.com](mailto:FloridaJobGrowthGrantFund@enterprise florida.com) after July 1, 2019, and will be considered for the 2019-2020 cycle.

### **PROPOSED LOANS**

#### [Disaster Relief Resources And Information: Hurricane Michael](#)

The Florida Housing Finance Corporation provides information and sources for those negatively impacted by Hurricane Michael. They have the Hurricane Recovery Loan Program that assists homebuyers by providing down payment assistance. The Hurricane Housing Recovery Program (HHRP) assists homeowners and renters with home repairs or temporary relocation. Approximately \$65 million was appropriated for this program. The Foreclosure Counseling Program provides counseling for homeowners to help prevent them from having to foreclose on their homes. Finally, the Rental Recovery Loan Program helps fund development in the areas that were affected by Hurricane Michael. This program was allocated \$55 million by the Florida Legislature.

#### [Small Business Administration: Disaster Loans](#)

The U.S. Small Business Administration provides disaster loan assistance for businesses, private nonprofit organizations, homeowners, and renters. To be able to apply for a loan the following information must be provided: contact information, SSN, FEMA registration number, deed or lease information, insurance information, financial information, and EIN for business applicants. They have a three-step process for applying for disaster loans; Step 1: Apply for Loan, Step 2: Property Verified and Loan Processing Decision is Made, and Step 3: Loan Closed and Funds Dispersed.

## **FEASIBILITY OF PROPOSALS**

Recovering from a hurricane is an expensive and stressful process. Many grants and loans are available to business owners, non-profit organizations, homeowners, renters, and government officials. Depending on the extent of the damage caused by a hurricane it can take several years for a community to recover. Because of the length of time needed to rebuild, grants provide the best help. The Hurricane Loss Mitigation Program Grant provides up to \$3.4 million to rebuild and enhance existing buildings (Hurricane Loss Mitigation Program, 2019). They also provide \$194,000 in reimbursement for other community-related projects (Hurricane Loss Mitigation Program, 2019). A grant that is available for improving economic growth is the Florida Job Growth Grant Fund. They provide funding for projects that seek to better educate the workforce and seek to create businesses, jobs and increase business (Florida Job Growth Grant Fund, 2019). The great thing about a grant is that there are no requirements for paying it back. To receive the grant all of their specifications must be met.

Loans provide funding for any project that needs to be done. This allows the loanee to be creative as long as the expenditure does not exceed the amount provided. With a payment plan loans can be paid off over time but they do have to be paid back and usually with interest. The SBA Disaster Loan provides up to \$2 million to any size business for rebuilding (Disaster Loan Assistance, 2019). For homeowners and renters, \$200,000 can be borrowed to repair or replace housing and \$40,000 can be used to repair or replace the personal property of the loanee (Disaster Loan Assistance, 2019). Florida Housing Finance Corporation also provides loans for disaster relief. They provide four programs that victims of Hurricane Michael can apply for. The Hurricane Michael Recovery Loan Program (Homeownership) provides fixed interest loans for the first mortgage up to \$15,000 in down payment assistance and a 140 AMI or higher will receive closing cost assistance (Disaster Relief Resources and Information, 2018). Veteran Affairs loans can receive up to \$5 million in DPA as long as it is used alongside Florida Housing's Homebuyer Loan Program Disaster Relief Resources and Information, 2018). The Hurricane Housing Recovery Program (Homeowners/Renters) has \$65 million from the Florida Legislature for the State Housing Initiatives Partnership (SHIP)-eligible local governments (Disaster Relief Resources and Information, 2018). The Foreclosure Counseling Program (Homeowners) has \$10

million for counseling to prevent housing foreclosure (Disaster Relief Resources and Information, 2018). The Rental Recovery Loan Program (Developers) has \$55 million for funding development in the locations affected by Hurricane Michael (Disaster Relief Resources and Information, 2018). All these programs provide information that can provide help for people that are going through different recovery problems.

### **BEST COURSE OF ACTION**

After carefully reviewing our current proposals for financial aids, The Florida Job Growth Grant is our chosen best course of action. First and foremost, this is a grant. Grants do not have to be paid back, unlike a loan. A loan would not be the best choice for Calhoun County because of its small size and its median household income of \$36,237 (US Census, 2018). Although grants can only be used for specific purposes, this grant would be helpful in the rebuilding of Calhoun County. This program not only provides money used to encourage economic growth. This would include education, job building, and business recovery. The business recovery aspect would be especially important to Calhoun County because small businesses make up their economy. Under this grant the education and outreach team should also be covered. After meeting with the Calhoun County commissioners, such a grant is what the County is looking for. Calhoun County does have the option of applying to more than one grant. However, this grant should be given priority because of its practical applications to Calhoun County.

### **CONCLUSION**

Through the research of applicable capacity building and housing-related grants and loans, a recommendation of the best course of action was made in favor of applying to all grants provided with special emphasis on The Florida Job Growth Grant. This grant would give Calhoun County assistance to continue to rebuild their economy. Any loans found in this paper need to be carefully considered by the county. We recommend that all financial aid outlined in this paper be used to rebuild the houses and public services, like roads, of Calhoun County. An emphasis on future storm resiliency and planning can be aided by these grants and loans.

# APPENDICES

## APPENDIX A

### SURVEY QUESTIONS

- How long have you lived in Calhoun County?
- Do you have home insurance? (Y/N)
  - If yes, do you believe this is a reasonable investment? Why or why not?
- Do you have flood insurance?
  - If yes, do you believe this is a reasonable investment? Why or why not?
  - Would you recommend this type of insurance to others? Why or why not?
- Have you experienced flooding before Hurricane Michael? (Y/N)
- Did you experience flooding during Hurricane Michael? (Y/N)
- How many people are in your household?

## APPENDIX B

### EXAMPLE HANDOUTS

#### FEMA Emergency Supply List

**Website:** [https://www.fema.gov/media-library-data/1390846764394-dc08e309debe561d866b05ac84daf1ee/checklist\\_2014.pdf](https://www.fema.gov/media-library-data/1390846764394-dc08e309debe561d866b05ac84daf1ee/checklist_2014.pdf)





### Additional Items to Consider Adding to an Emergency Supply Kit:

- Prescription medications and glasses
- Infant formula and diapers
- Pet food and extra water for your pet
- Important family documents such as copies of insurance policies, identification and bank account records in a waterproof, portable container
- Cash or traveler's checks and change
- Emergency reference material such as a first aid book or information from [www.ready.gov](http://www.ready.gov)
- Sleeping bag or warm blanket for each person. Consider additional bedding if you live in a cold-weather climate.
- Complete change of clothing including a long sleeved shirt, long pants and sturdy shoes. Consider additional clothing if you live in a cold-weather climate.
- Household chlorine bleach and medicine dropper – When diluted nine parts water to one part bleach, bleach can be used as a disinfectant. Or in an emergency, you can use it to treat water by using 16 drops of regular household liquid bleach per gallon of water. Do not use scented, color safe or bleaches with added cleaners.
- Fire Extinguisher
- Matches in a waterproof container
- Feminine supplies and personal hygiene items
- Mess kits, paper cups, plates and plastic utensils, paper towels
- Paper and pencil
- Books, games, puzzles or other activities for children

# Ready

Prepare. Plan. Stay Informed.®



## Emergency Supply List



# FEMA

[www.ready.gov](http://www.ready.gov)



### Recommended Items to Include in a Basic Emergency Supply Kit:

- Water, one gallon of water per person per day for at least three days, for drinking and sanitation
- Food, at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both
- Flashlight and extra batteries
- First aid kit
- Whistle to signal for help
- Dust mask, to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place
- Moist towelettes, garbage bags and plastic ties for personal sanitation
- Wrench or pliers to turn off utilities
- Can opener for food (if kit contains canned food)
- Local maps

Through its **Ready Campaign**, the Federal Emergency Management Agency educates and empowers Americans to take some simple steps to prepare for and respond to potential emergencies, including natural disasters and terrorist attacks. **Ready** asks individuals to do three key things: get an emergency supply kit, make a family emergency plan, and be informed about the different types of emergencies that could occur and their appropriate responses.

All Americans should have some basic supplies on hand in order to survive for at least three days if an emergency occurs. Following is a listing of some basic items that every emergency supply kit should include. However, it is important that individuals review this list and consider where they live and the unique needs of their family in order to create an emergency supply kit that will meet these needs. Individuals should also consider having at least two emergency supply kits, one full kit at home and smaller portable kits in their workplace, vehicle or other places they spend time.

# Ready.



# FEMA

Federal Emergency Management Agency  
Washington, DC 20472

## **FloridaDisaster.org – Plan and Prepare**

**Website:** <https://www.floridadisaster.org/planprepare/>

**Overview:** Multiple PDFs and checklists available – Family Plan, Business Plan, etc.

## **Ready.gov**

**Website:** <https://www.ready.gov/>

**Overview:** Includes a variety of information about winter weather, flooding, thunderstorms/lightning, power outages, wildfires, focus on family/kids, storm surge, financial preparedness, and making a plan.

## **APPENDIX C**

### **SOURCES TO HELP BUILD A PUBLIC OUTREACH PLAN**

Below is a listing of links and brief overviews of relevant sources. If applicable, the downloadable PDFs from these sites will be included on a CD.

#### **B.1 Existing Sources of Information**

**NOAA:** The National Oceanic and Atmospheric Administration (NOAA) helps one learn more about the basics of hurricanes. What hurricanes are, what causes them, hurricane safety, storm surge, and more. <https://www.noaa.gov/education/resource-collections/weather-atmosphere-education-resources/hurricanes>

**NWS:** National Weather Service (NWS) provides active maps, hurricane safety tips, flood information, usable preparedness flyers to print or email, and other useful features.

<https://www.weather.gov/wrn/hurricane-preparedness>

**EPA:** The Environmental Protection Agency (EPA) has information about the health and safety of citizens during natural disasters. Website: <https://www.epa.gov/>

**FEMA:** Federal Emergency Management Agency (FEMA) provides a lot of information for residents in many of different forms (listed below). Website: <https://www.fema.gov/>

- There is a mobile app for smartphones where you can set up real-time emergency alerts, emergency tips, and shelter locations <https://www.fema.gov/mobile-app>
- FEMA provides lots of flood information with maps and insurance information.

**American Red Cross:** This organization provides information about disaster shelters, water safety, hurricane safety, and more. Website: [www.redcross.org](http://www.redcross.org)

**Florida Disaster.org:** Includes preparation checklists and other information to help prepare. Also has information that specifically applies to Hurricane Michael. There are many resources such as public notices, disaster recovery areas, financial assistance resources, and more.

Websites: <https://www.floridadisaster.org/>, <https://www.floridadisaster.org/info/michael/>

**Calhoun County Emergency Management:** Provides emergency information with an alert system. One needs to register through a link on the website that can get emails and text messages about emergency in the area. The website also includes an evacuation map. Website:

[http://calhounflorida-org.server-wreathmedia-com.vps.ezhostingserver.com/wp-content/uploads/2015/10/CC\\_EvacMap.jpg](http://calhounflorida-org.server-wreathmedia-com.vps.ezhostingserver.com/wp-content/uploads/2015/10/CC_EvacMap.jpg)

- Phone: (850) 674-8075

- Email: caladmin@fairpoint.net
- Web: calhounflorida.org

## **B.2 Outreach Plan Examples and Guides**

**Title:** How to Create an Outreach Work Plan

**Website:** <https://www.thenationalcouncil.org/wp-content/uploads/2013/12/Enroll-America-Factsheet-HowToOutreachWorkPlan-final.pdf>

**Title:** A Step-By-Step Guide: Creating an Outreach Plan

**Website:**

<http://www.orgwise.ca/sites/osi.ocasi.org.stage/files/resources/A%20Step%20by%20Step%20Guide%20to%20Creating%20an%20Outreach%20Plan.pdf>

**Title:** 9+ Outreach Strategy Plan Examples – PDF

**Website:** <https://www.examples.com/business/outreach-strategy-plan.html>

**Title:** American Planning Association – Planning for Post-Disaster Recovery: Next Generation

**Website:** <https://www.planning.org/research/postdisaster/>

## APPENDIX D

### FLORIDA STATUTES THAT RELATE TO PUBLIC OUTREACH

Considering Florida is a state that sees many hurricanes and other natural disasters, there are few statutes and laws related to public outreach. Most of the laws or statutes reviewed are now expired, or they were not relevant to the topic. However, we were able to find three Florida statutes that are relevant to public outreach and hurricane recovery, some specify hurricane Michael.

#### **Florida Hurricane Catastrophe Fund**

**Statute:** 215.555. Florida Hurricane Catastrophe Fund

**Website:** <https://www.sbafla.com/fhcf/>

**Overview:** A tax-exempt state trust fund under the direction of the State Board of Administration. These are important features in this statute partially for the Calhoun County including but limited to emergency assessment, an announcement section where one can find documents to post or send via email, a bonding program, and a calendar of meetings and workshops to learn more.

#### **Featured Items:**

- [FHCF Emergency Assessment](#)
- [Hurricane Related Insurer Information](#)
- [Announcements](#) – Announcements and documents available from the FHCF.
- [FHCF Reports](#) – Get the FHCF annual report and other documents.
- [Legislation](#) – Information on FHCF legislative issues and Florida Statute 215.555.

- Bonding Program – Claims paying capacity estimates, Ratings, and SEC Disclosure.
- FHCF Calendar – Schedule of FHCF meetings and workshops.
- FHCF LISTSERV – Notification of Website Updates. Select the List Name, then Subscribe or Unsubscribe

### **My Safe Florida Home Program**

**Statute:** 215.5586. My Safe Florida Home Program

**Overview:** This statute passed by the State of Florida is to help keep its residents safe, informed and prepared. This program allowed for free inspections for owners of site-built, single-family, residential properties and grants to eligible applicants as funding allows. This includes hurricane mitigation, contract management, and public outreach.

Section 3 Education and Consumer awareness: The department may undertake a statewide multimedia **public outreach** and advertising campaign to inform consumers of the availability and benefits of hurricane inspections and of the safety and financial benefits of residential hurricane damage mitigation. The department may seek out and use local, state, federal, and private funds to support the campaign.

The county can reach out to the state to be able to inform its residents about this program with a grant or state funding. Toll-free Helpline: 1-866-513-6734

“Section 8 is specifically set up to reach out to contractors, real estate brokers, and sale associates.”

(8) **PUBLIC OUTREACH FOR CONTRACTORS AND REAL ESTATE BROKERS AND SALES ASSOCIATES.**—The program shall develop brochures for distribution to general contractors,

roofing contractors, and real estate brokers and sales associates licensed under part I of chapter 475 explaining the benefits to homeowners of residential hurricane damage mitigation. The program shall encourage contractors to distribute the brochures to homeowners at the first meeting with a homeowner who is considering contracting for home or roof repairs or contracting for the construction of a new home. The program shall encourage real estate brokers and sales associates licensed under part I of chapter 475 to distribute the brochures to clients before the purchase of a home. The brochures may be made available electronically.

This section of the program is important for the protection, fairness, and due process of a homeowner or future homeowner to understand the program and the rights they have to the free inspection. This is designed to grant residential property owners some disaster-relief assistance.

### **Hurricane Loss Mitigation Program**

**Statute:** 215.559 Hurricane Loss Mitigation Program

**Overview:** This statute is established under the Division of Emergency Management. This statute breaks down federal funding to specifically help residence, owners of mobile homes, and public hurricane shelters. In section 2 b., there is a sentence about public education and outreach:

*“The program shall include an education and outreach component to ensure that owners of manufactured and mobile homes are aware of the benefits of participation.”*

This ensures that the county can receive funding for outreach to its citizens about this program and the benefits they could receive from it.

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