



#### ABOUT THE WATER INSTITUTE

The Water Institute is an independent, non-profit, applied research institution advancing science and developing integrated methods to solve complex environmental and societal challenges. We believe in and strive for more resilient and equitable communities, sustainable environments, and thriving economies. For more information, visit <a href="https://www.thewaterinstitute.org">www.thewaterinstitute.org</a>.

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Seaside believes in promoting the building of sustainable places through education and design. Seaside started in 1980 with an idea for a compact, walkable community and inspired new thinking about planning and design now known as New Urbanism. The Seaside Institute offers strategically designed educational programs and symposia that bring together residents, visitors, architects, and scholars to share ideas for building and supporting livable communities. The Institute's three core tenets—Sustainability, Connectivity, Adaptability—working together to expand the lessons of New Urbanism and develop new strategies for a rapidly changing world.

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# **ACRONYMS & DEFINITIONS**

Stillwater – The level that floodwaters could rise during a flood event due to storm surge, tides, wave setup, or other factors that cause water levels to increase, such as seasonal effects.<sup>1</sup>

AEP – Annual Exceedance Probability

CHHS – Coastal High Hazard Area

CRS – Community Rating System

HSDR – Hurricane Storm Damage Reduction

FEMA – Federal Emergency Management Agency

LDC - Land Development Code

NFIP – National Flood Insurance Program

NOAA – National Oceanic and Atmospheric Administration

SACS – South Atlantic Coastal Study

SFHA – Special Flood Hazard Area

SLR – Sea-Level Rise

TDT – Tourist Development Tax



# 1.0 WALTON COUNTY OVERVIEW

#### 1.1. COUNTY GEOGRAPHY

#### 1.1.1 County Boundary

Walton County is 1,038.29 square miles and shares its western border with Okaloosa County and its eastern border with Holmes, Washington, and Bay counties. The northern portion of Walton County borders Covington and Geneva counties in Alabama.



Figure 1. Walton County, FL, boundary.



#### 1.1.2 Water Bodies and Natural Areas

Walton County has a unique relationship with water. The southern portion of the county is located along the coast of the Gulf of Mexico, with the Choctawhatchee Bay stretching from Miramar Beach to Choctaw along the Bay's south shore and from Villa Tasso to Fluffy Landing on the north shore. The southern part of the county is also home to many bayous, creeks, and coastal dune lakes—water bodies located in dune ecosystems within two miles of the coast.<sup>2</sup> Walton County's coastal dune lakes are generally composed of both salt and freshwater, and intermittently break through the dune system and beach to empty into the Gulf of Mexico when they reach high water levels.

The northern part of Walton County, just north of DeFuniak Springs, contains several lakes. The Choctawhatchee River runs along the eastern border of the county—from the swamp land south of Fluffy Landing to the county's border southeast of Ponce de Leon—and separates Walton County from Washington County. Walton County is also home to several state parks, preserve parks and wildlife management areas.

#### 1.1.3 Environmental Characteristics

Though certain environmental challenges, such as failing septic systems and potential increases in pollution from cooling infrastructure like air conditioning, should be considered in any planning effort, environmentally, Walton County's water bodies and natural spaces are healthy overall. Samples across all beaches in Walton County indicate good water quality (measured by the amount of *Enterococcus* bacteria per 100 ml of marine water), and the dune lakes located throughout South Walton are also associated with good water quality.

#### 1.2. ECONOMY AND INDUSTRY

Because of its white sand beaches, diverse water bodies, and natural areas, Walton County has maintained a thriving tourism industry. Wide-scale benefits from tourism dollars can largely be attributed to the tourist development tax, which is paid by visitors staying in short-term rentals (i.e., hotels, condos, and beach houses). This tax is 5% in South Walton, and 3% in North Walton. Much of these funds support the development and maintenance of bike trails, public beach access, lifeguards, and special events throughout the county.<sup>3</sup> Additionally, working waterfront revitalization efforts currently underway in Freeport aim to improve access for fisherfolk, create a mooring field for boaters, and improve offloading facility access.<sup>4</sup>

Many Walton County residents are employed within South Walton's service industry. Eglin Air Force Base, which accounts for nearly one-third of Walton County's land area, is also a major employer in the county. In 2022, the base employed more than 6,000 civilians.<sup>5</sup>

#### 1.3. DEMOGRAPHIC AND SOCIAL CHARACTERISTICS

#### 1.3.1 Demographic and Social Changes

#### 1.3.1.1 Overview

Many of South Walton's residential areas around Highway 30A<sup>6</sup> are characterized by significant household wealth, which increased dramatically during the height of the COVID-19 pandemic. An



analysis of IRS data and migration patterns between 2020 and 2021 demonstrates a \$641.2 million net increase in income from migration into Walton County. Compared to all other counties across the U.S., Walton County experienced the biggest percentage rise in income due to migration within this period.<sup>7</sup>

Notably, much of the county's tourism workforce does not live along 30A due to lack of affordable housing. Many service industry workers reside in areas north of Choctawhatchee Bay, and commute to South Walton to work in restaurants, hotels, and other commercial spaces serving tourists. Compared to South Walton, the central and northern parts of Walton County are more socioeconomically diverse. Finally, like many other municipalities across the U.S., Walton County is currently experiencing stress due to lack of available and affordable housing stock.

#### 1.3.1.2 Population growth

Walton County's population steadily increased between 2010 and 2020 (an increase of almost 37% over 10 years), and grew dramatically between 2020 and 2022, increasing by nearly 11% in just 2 years.

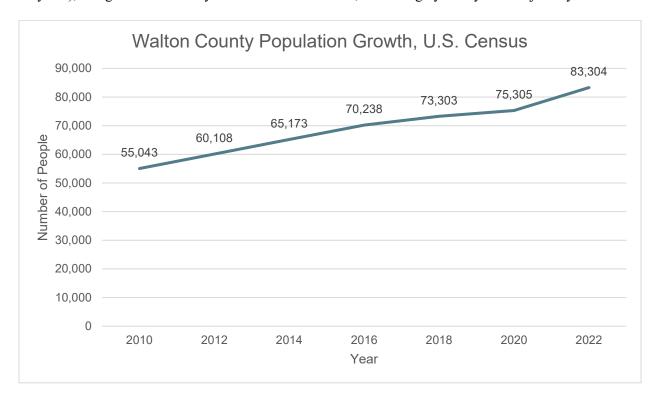


Figure 2. Walton County, FL, population growth.

#### 1.3.1.3 Race

Walton County is 83% white. The second most populous group is Hispanic or Latino (6.5%) and the third is Black or African American (4.2%).



# Race and Hispanic Origin in Walton County, U.S. Census

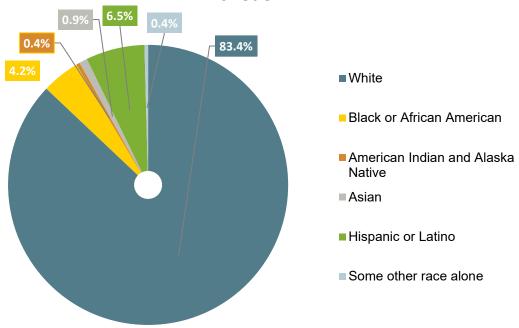


Figure 3. Race and Hispanic origin in Walton County, FL, U.S. Census.



#### 1.3.1.4 Income

Household wealth in Walton County is broadly distributed and often disparate, even within racial groups. For example, Figure 4 demonstrates a high median household income among residents that identify as Asian, but Figure 5 also shows relatively high percentages of poverty for the same group.

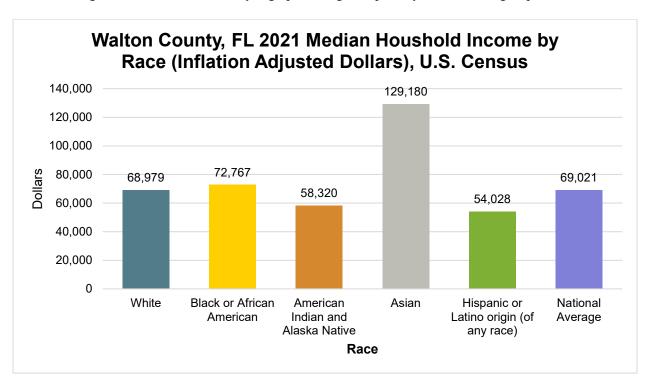


Figure 4. Walton County, FL, 2021 median household income by race (inflation-adjusted dollars), U.S. Census.9



Despite the wealth concentrated along 30A, 12.4% of Walton County residents are living in poverty, which is slightly more than the national average of 11.5%. However, this is not distributed evenly across race.

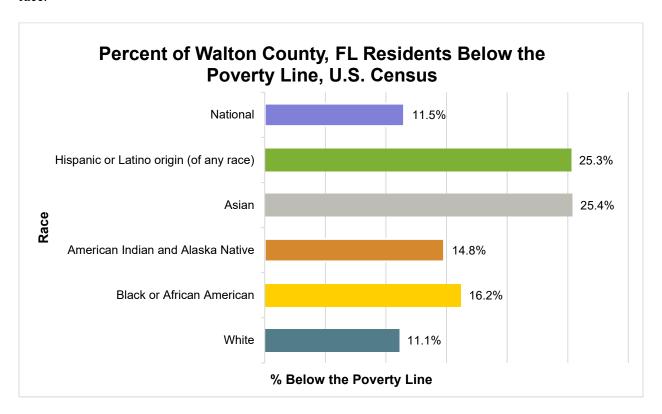


Figure 5. Percent of Walton County, FL, residents below the poverty line by race, U.S. Census. 10

#### 1.3.1.5 Healthcare

Many Walton County residents have concerns about access to healthcare. During one-on-one discussions, county and city employees, extension and outreach professionals, and local non-profit representatives expressed concerns regarding the lack of healthcare providers for acute and general care for both physical and mental health. This issue is exacerbated by the fact that health insurance coverage is below the national average in Walton County, with 15.4% of residents lacking health insurance. Furthermore, 11.7% of Walton County residents under the age of 65 have a disability. These percentages indicate residents are likely less resilient than residents living in other areas with more accessible medical services.



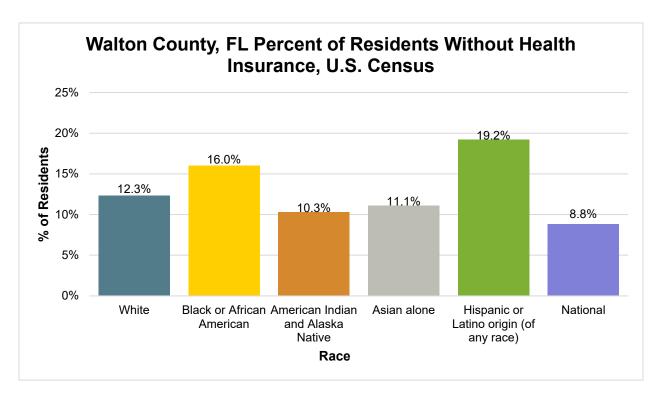


Figure 6. Walton County, FL, percent of uninsured residents, U.S. Census. 12

#### 1.3.1.6 Accessibility

Though 94.7% of households in Walton County have at least one computer, about 11% of households across the county lack a broadband internet subscription. <sup>13</sup> This could result in disproportionate access to care, resources, and educational opportunities.



## 2.0 CHANGING HAZARDS & IMPACTS

Residents of Walton County are familiar with hazards—regularly facing intense rainfall, hurricanes, and extreme heat; however, coastal conditions are changing, exacerbating existing hazards. To remain resilient, it is essential that communities understand the changes that are occurring, how those changes will affect hazards, and what that may mean to local economies and ecosystems if not addressed.

#### 2.1. ENVIRONMENTAL CHANGES

#### 2.1.1 Rising Seas

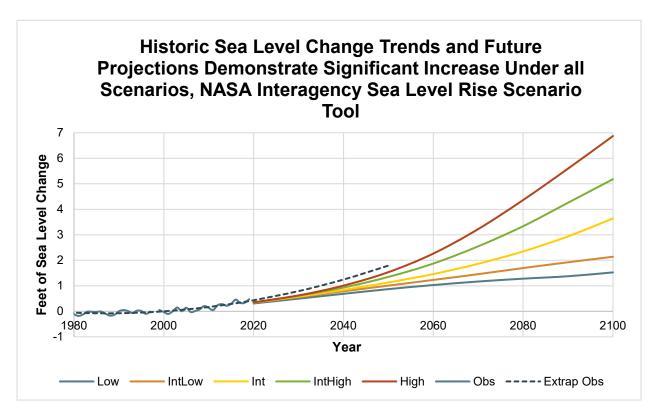


Figure 7. Historic sea level change trends and future projections demonstrate significant increase under all scenarios, NASA Interagency Sea Level Rise Scenario Tool. 14

The NASA Interagency Sea Level Rise Scenario Tool, which demonstrates sea-level rise (SLR) scenarios using information from the IPCC 6<sup>th</sup> Assessment Report, provides these scenarios at individual tide locations and on a 1-degree grid. It also provides regionally averaged scenarios around the coastal United States. Compared to the rest of the country, SLR in Walton County is slightly above global averages, which is consistent with the rest of the region. Additionally, there has been rapid acceleration in recent years, which has caused current SLR to trend above the current modeled SLR scenarios in the near term.



#### 2.1.2 Intensifying Storms and Increases in Extreme Weather

#### 2.1.2.1 Hurricanes

The recently released Fifth National Climate Assessment<sup>15</sup> established that hurricanes are intensifying more frequently and more rapidly. Though the scientific consensus on hurricanes is still developing, current data indicate the likelihood of less hurricanes but also indicate that the storms that do occur will be more powerful and contain more rainfall.

#### 2.1.2.2 Rainfall and Increasing Heat

# EXTREME RAINFALL



#### REGIONAL OBSERVATION

- The number of days with 3 or more inches of precipitation has been historically high over the past three decades<sup>14</sup>
- The number of days with heavy precipitation is increasing<sup>14</sup>

#### LOCAL FUTURE PROJECTION

 Under a 5.4°F (3°C) increase in Earth's temperature, the annual number of days with extreme precipitation (rainfall events that fall within the top 1% of historic rainfall events) is projected to increase by 23% <sup>15</sup>

# EXTREME HEAT



#### **REGIONAL OBSERVATION**

- Average summer temperatures during the past decade have been the warmest on record<sup>16</sup>
- There have been very large increases in nighttime temperatures and more modest increases in daytime temperatures<sup>16</sup>

#### LOCAL FUTURE PROJECTION

 Under a 5.4°F (3°C) increase in Earth's temperature, the annual number of days with temperatures 95°F or higher in Walton County is projected to increase by 55 days<sup>17</sup>

Figure 8. Extreme rainfall and extreme heat: regional observations and local projections.

#### 2.2. HAZARD SHIFTS

#### 2.2.1 Larger and Deeper Floodplains

The changes in sea level and rainfall, coupled with landscape changes such as development and undersized infrastructure, have led to measurable shifts in flood risk in Walton County. Concerns about flood risk are also exacerbated by the county's high ground water table, which impacts the condition of roads as well as the installation of public utilities and other infrastructure across the county.



#### 2.2.1.1 High Tide Flooding

High tide flooding, or the accumulation and overflow of water during high tides, has increased in frequency as sea levels continue to rise. This type of flooding can cause temporary road closures and overwhelm stormwater infrastructure in the near term but can also lead to more severe, long-term impacts such as wetland degradation and damage to infrastructure located below ground. <sup>16</sup> Figure 9, Figure 10, and Figure 11<sup>17</sup> demonstrate changes in mean higher high water under three different SLR amounts that could be observed as early as 2040 (1 ft of SLR).

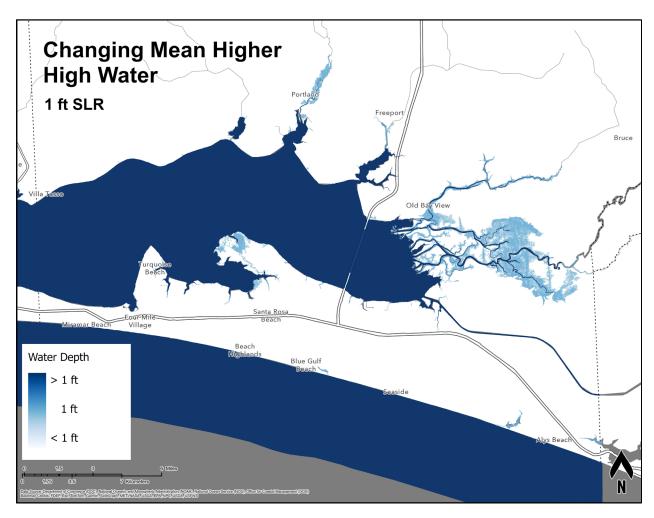


Figure 9. Changing mean higher high water (1 ft of SLR).



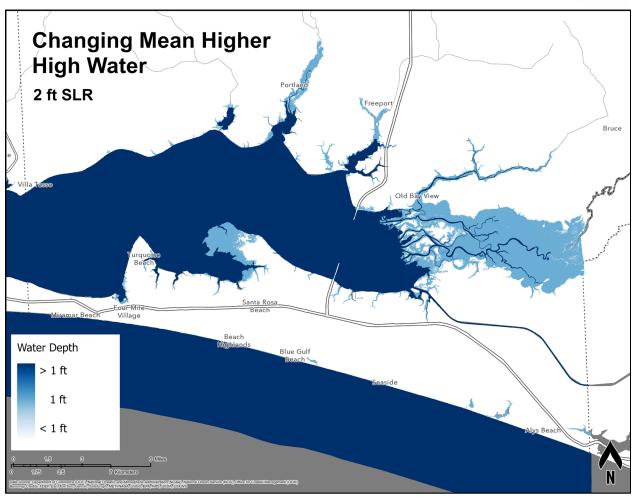


Figure 10. Changing mean higher high water (2 ft of SLR).



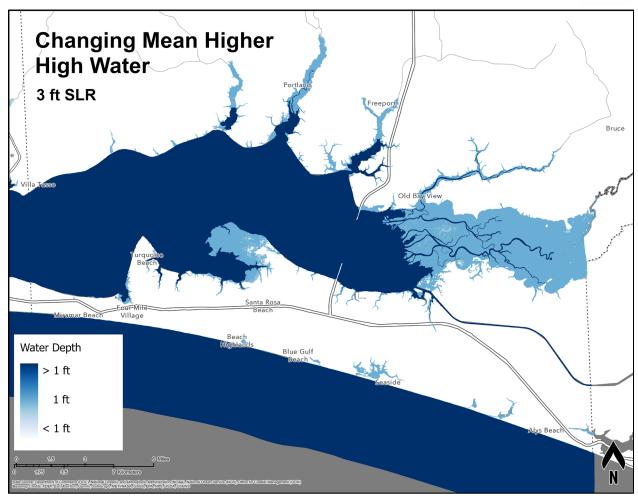


Figure 11. Changing mean higher high water (3 ft of SLR).

#### 2.2.1.2 Storm Surge

Given the low, flat coastline in Walton County, the depth and extent of storm surge will magnify as seas rise. This change is not as simple as adding 1 foot of surge depth for 1 foot of SLR. There are complex interactions that can have differing impacts. A NOAA-funded research project explored how surge will change in the northern Gulf, including Walton County. <sup>18</sup> As illustrated in the figures below, there is an expansion in the footprint of surge in Walton County coupled with areas already in the floodplain becoming deeper. The figures also demonstrate increased exposure, which is particularly apparent up streams and bayous.



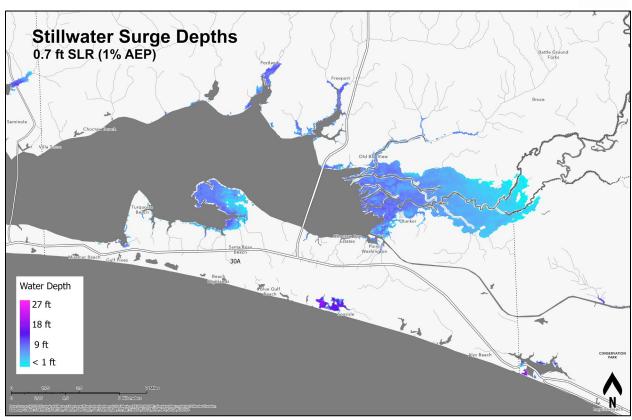


Figure 12. Stillwater surge depths under 0.7 ft of SLR (1% AEP).



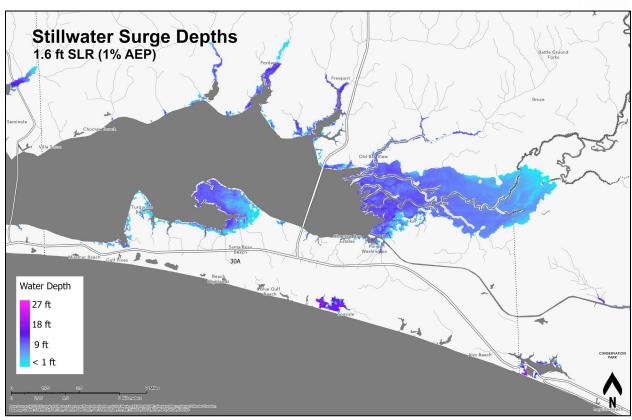


Figure 13. Stillwater surge depths under 1.6 ft of SLR (1% AEP).



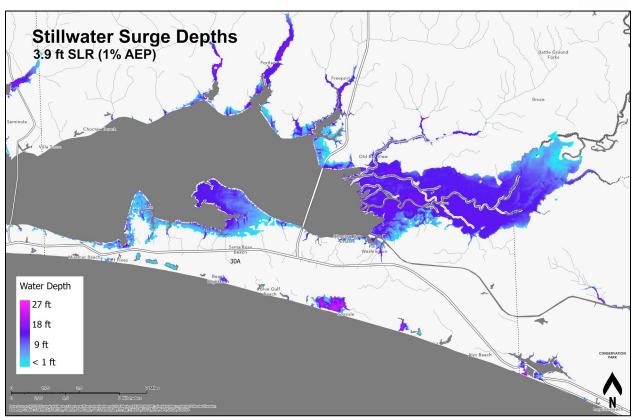


Figure 14. Floodplain depths under 3.9 ft of SLR (1% AEP).

#### 2.2.1.3 Stormwater

Currently, there are no modeled, quantified projections of how stormwater drainage capacity could be reduced with rising seas and how that might interact with increasing development to change rainfall-related flooding for Walton County. Conceptually, because of the nature of Walton County, it is assumed that higher seas will likely reduce drainage capacity, as could increased development. Concerns related to rainfall flooding in central and north Walton County have already been expressed by residents and people working on resilience within the county, and there are intentions to address some of this through large-scale efforts at the county level and at a more localized scale by groups such as the Community Redevelopment Agency.

#### 2.2.2 Extreme Heat

#### 2.2.2.1 Increases in Extreme Heat Days

Prolonged extreme heat events can become a public health emergency; especially in events where temperatures do not cool overnight and residents without sufficient cooling infrastructure are unable to get reprieve from the heat. Table 1 demonstrates the relationship between global warming and projected increases in the annual number of high heat days (days over 95°F and days over 100°F).



Table 1. Walton County change in the number of days over 95° and 100° Fahrenheit.

Global Warming	Global Warming	Projected Increase in	Projected Increase in	
Level (°F)	Level (°C)	Annual Number of Days	Annual Number of Days	
		over 95°F (35°C)	over 100°F (37.7°C)	
2.7	1.5	14	3	
3.6	2	28	6	
5.4	3	55	17	
7.2	4	75	27	

#### 2.3. IMPACTS OF CHANGING HAZARDS ON RESIDENTS

#### 2.3.1 Housing Stock: Affordability and Availability

Over time, it is likely that more of the existing housing stock throughout Walton County will be directly exposed to hazards. As a result, this increased exposure could contribute to increasing insurance premium costs, which in turn reduces affordability. Additionally, there may be periods of severely reduced housing stock as more properties are damaged during extreme weather events such as hurricanes.

#### 2.3.2 Increasing Damages to Overall Structures and Housing Stock

As flooding from storm surge continues to become more frequent and severe, it becomes more critical to evaluate the consequences to structures, including housing. Walton County contains 34,602 residential buildings. <sup>19</sup> For a 1% annual exceedance probability (AEP) event, compared to the number of damaged structures under 0.7 ft of SLR, about 14 times as many structures would be damaged under 3.5 ft of SLR. Under a 0.2% AEP event, compared to the number of damaged structures under 0.7 ft of SLR, nearly seven times as many structures would be damaged under 3.5 ft of SLR. Table 2 differentiates between the number of estimated "damaged" and "substantially damaged" structures across three SLR scenarios, for both a 100-year event (1% AEP) and a 500-year event (0.2% AEP). <sup>20</sup>

Table 2. Damage estimates for Walton County structures under future Stillwater flooding scenarios. 21

Feet of	AEP	Damage	Substantial	AEP	Damage	Substantial
SLR		(# of buildings)	Damage		(# of buildings)	Damage
			(# of buildings)			(# of buildings)
0.7	1%	111	29	0.2%	389	141
1.6	1%	412	144	0.2%	1,355	507
3.9	1%	1,612	618	0.2%	2,695	1,188

#### 2.3.3 Disaster Response Needs

#### 2.3.3.1 Essential facilities impacted

Currently, no essential facilities in Walton County are at risk to future flooding under the 0.2% annual chance flood event. However, rising sea levels will result in incremental risk to essential facilities throughout the county. Under 1.6 ft and 3.9 ft of SLR, 17% of essential facilities will be at risk of flooding. Under the 6.6 ft SLR scenario, 100% of essential facilities will be at risk.





Figure 15. Essential facilities at risk of future flooding in Walton County for a 0.2% annual chance flood event with SLR.

#### 2.3.3.2 Displaced people and shelter needs

As seas rise and surge worsens, the need to house people temporarily and for extended periods of time after disasters will continue to increase.

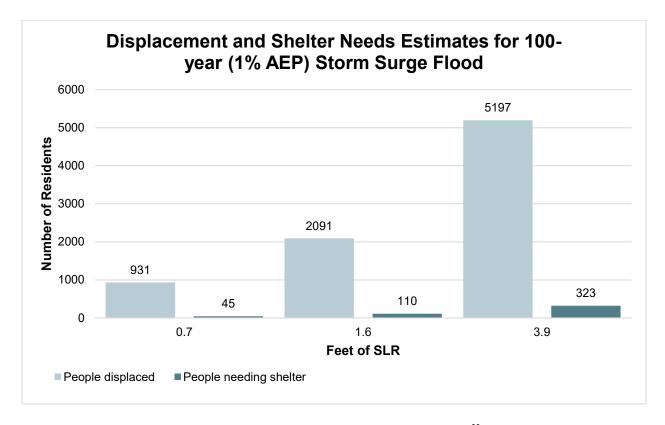


Figure 16. Displacement and shelter needs estimates for 1% AEP storm surge flood.<sup>22</sup>



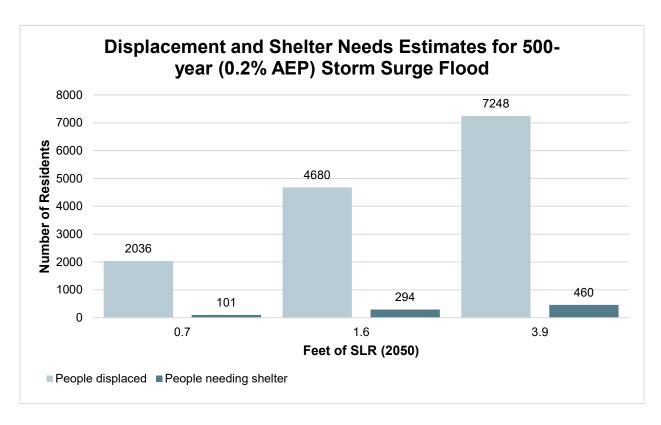


Figure 17. Displacement and shelter needs estimates for 0.2% AEP storm surge flood.<sup>23</sup>

Roads at risk of future flooding are another important consideration when planning for immediate needs during and after a disaster. When planning for evacuations, understanding future flood risk to roads is critical to ensuring the safety of Walton County's residents. Currently, 24 miles of roads throughout the county are at risk of flooding in a 1% annual chance flood event, but that length doubles under 1.6 ft of SLR, and increases fivefold under 3.9ft of SLR. This also does not include the combined risks from rainfall and surge or rainfall flooding alone.



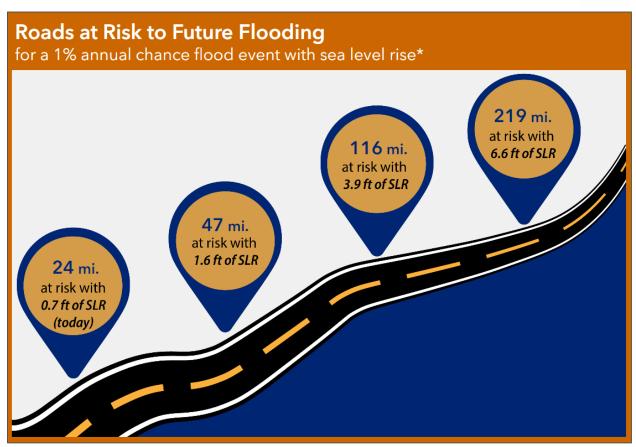


Figure 18. Roads at risk of future flooding under a 1% annual chance flood event with SLR.

#### 2.3.4 Business Considerations

Because Walton County is a tourist destination, the risk of storm surge flooding combined with rising seas is a threat not just to residential homes, but also to local businesses, jobs, and any infrastructure proximal to the Gulf coast and Choctawhatchee Bay. In 2022, Walton County had a total positive economic impact of \$7.2 billion (\$4.8 billion of which was from direct spending of tourist dollars).<sup>24</sup>

Small businesses make up about 90% of all businesses in coastal northwest Florida. The longer a business is closed after a disaster, the less likely it is that they will reopen. FEMA research shows that 40–60% of businesses with smaller networks and fewer resources fail after a natural disaster. Stalton County, along with the rest of coastal northwest Florida, is particularly vulnerable to natural disasters that could significantly impact small businesses.

#### 2.3.5 Disproportionate Impacts

Many factors, including income, housing, race, ethnicity, and other characteristics, contribute to quality of life and longevity. In Walton County, there is nearly a 13-year difference in life expectancy between census tracts with the lowest life expectancy and those with the highest.<sup>27</sup>

In addition to the 14% of families in Walton County living below the poverty line, nearly 32% are asset limited, income constrained, and employed (ALICE).<sup>28</sup>



Walton County was the seventh-fastest growing county in the United States from 2020 to 2021,<sup>29</sup> which may place strains on infrastructure, healthcare access, and housing availability and affordability if planning is not strategic. With a median housing value of \$390,200 and median rent of \$1,390 per month, the cost of living in Walton County is higher than both the nation and the state of Florida.<sup>30</sup> According to the 2022 Walton County Community Health Assessment,<sup>31</sup> the ranges in income in Walton County result in 17% of Walton County households experiencing at least one of the following: overcrowding, lack of kitchen facilities, lack of plumbing facilities, or high housing costs.

Because economic insecurity and strains on infrastructure, healthcare access, and housing availability and affordability make it more difficult for residents to withstand and recover from shocks and stressors, it is critical that any current and future planning efforts address these challenges in a comprehensive way.



## 3.0 WALTON COUNTY RESILIENCE EFFORTS

Walton County has actively been working to reduce risk and there are efforts across the county to enhance the ability of residents to not just survive but thrive post disaster.

#### 3.1. ONGOING RESILIENCE WORK

Walton County has conducted extensive planning efforts, including the development of a variety of plans, policies, programs, and projects at different jurisdictional levels that guide land use and development, hazard mitigation, emergency management, watershed planning, and transportation planning, among others. These existing planning efforts were preliminarily reviewed from the perspective of current and future resilience and are summarized below.

#### 3.1.1 Housing

Florida's Live Local Act,<sup>32</sup> signed into law in March 2023, provides up to \$811 million for affordable housing programs. Affordable housing developments located in commercial, industrial, and mixed-use zones are, under this act, entitled to:

- 1. Use: Allowed to build without a zoning or land development change,
- 2. Density: The highest density is allowed anywhere where residential development is allowed, and
- 3. Height: Allowed to build to the highest currently allowed height for a commercial or residential development within 1 mile of the proposed development or 3 stories, whichever is higher.<sup>33</sup>

The Live Local Act has the potential to facilitate the development of affordable housing in areas of low flood risk and will require close coordination within local governments to start planning for these opportunities.

#### 3.1.2 Floodplain Management

#### 3.1.2.1 Walton County Floodplain Management Ordinance (WCFMO)

The WCFMO<sup>34</sup> provides guidance and regulations for building/development requirements based on historic flood zones but does not account for future conditions such as SLR, nor does it disallow development in special flood hazard areas (SFHA).

The WCFMO coordinates and aligns with the Florida Building Code, but Florida statutes allow adoption of local administrative and technical amendments (i.e., higher building standards) that are more stringent than the Florida Building Code to better protect residents or earn a higher Community Rating System (CRS) class.

#### 3.1.2.2 National Flood Insurance Program (NFIP) and CRS Participation

As of September 2023, Walton County participates in the NFIP and the CRS. The CRS is an incentive program that rewards residents of participating communities with discounted flood insurance premiums based on adoption and implementation of floodplain management practices that exceed the minimum requirements of the NFIP. CRS classes are ranked from 9 to 1, with 1 being the highest rating achieved and a maximum of a 45% reduction, or discount, for flood insurance premiums, and 9 as the entry point with a 5% reduction in premiums.<sup>35</sup> Walton County participates in the CRS at a Class 6, meaning that



policy holding residents currently receive a 20% discount on their flood insurance premiums based on efforts the county has implemented to reduce flood risk. This CRS rating indicates the County has already undertaken a great deal of work to reduce risk and to communicate remaining risks in the County.

#### 3.1.3 County Wide Comprehensive Planning

Comprehensive planning allows communities to envision current and long-term growth and development, and to protect natural resources. Walton County has conducted extensive comprehensive planning efforts, including the development of its Walton County Comprehensive Plan (WCCP) and the Walton County Land Development Code (LDC), as well as the City of DeFuniak Springs' 2025 Comprehensive Plan.<sup>36</sup>

#### 3.1.3.1 Walton County Comprehensive Plan

The WCCP is comprised of multiple comprehensive planning elements, including capital improvements, conservation, coastal management, future land use, housing and infrastructure planning, intergovernmental coordination, property rights, and recreation and transportation improvements. Walton County began updating the WCCP in late 2023. Regarding aspects of resilience, the current WCCP:

- Establishes regulations and guidance for future land use that aims to sustainably accommodate
  population growth and development while preserving the county's unique character and natural
  resources.
- Encourages preservation of natural areas through tools such as density transfer bonuses (in non-environmentally sensitive areas), conservation easements, and land acquisition to connect greenway corridors and trails, increase recreational areas, preserve open space, and increase beach and shoreline access.
- 3. Appropriates funds for projects located in the Coastal High Hazard Area (CHHA) to maintain existing infrastructure at current level of service standards but emphasizes that public funding shall not be used to increase density in this area.

#### 3.1.3.2 Walton County Land Development Code

The Walton County LDC<sup>37</sup> provides guidelines for implementation of the WCCP. The LDC articulates standards for development, establishes zoning and land use regulations, ensures adequate provision of infrastructure, preserves open space, establishes procedures for permits/development plans and orders, prescribes penalties for code violations, and aims to enhance aesthetic appeal.

Resilience-related actions emphasized in the LDC include incentivizing protection, restoration, and creation of wetlands through density transfer bonuses, as well as placing restrictions on allowable uses in wetlands, the CHHA, and other hazardous areas.

#### 3.1.3.3 Walton County 2001 Beach Renourishment Project

In 2001, Walton County and the City of Destin collaborated to enhance regional beach management and to conduct an integrated feasibility study<sup>38</sup> for their combined 32-mile beach along the Gulf.

The feasibility study recommended beach and dune restoration along a 7-mile stretch in Western Walton County and Destin, and a regional sand source investigation identified potential borrow sites for beach



management activities. Ultimately, the completed project successfully maintained the targeted pre-Hurricane Opal profile characteristics.

#### 3.1.3.4 2014 Hurricane Storm Damage Reduction Project

The Hurricane Storm Damage Reduction (HSDR) Project<sup>39</sup> was a USACE effort aimed at the ∼19 miles of coastline that were not addressed in the 2001 Beach Renourishment Project. This effort was set to be funded exclusively by the Walton County Tourist Development Tax (TDT) but failed to materialize due to lack of participation from beachfront property owners (88% of this group of property owners refused to grant the County permission to renourish their beaches).<sup>40</sup>

The plan was to place sand at the toe of existing dunes and on flat sandy areas of the beach to create sacrificial dunes. In the event of storm destruction, the Federal government committed to rebuilding and replenishing the coastline back to its pre-storm state. Had it come to fruition, this project would have substantially bolstered the shoreline and safeguarded the dune system, upland structures, and economy.

#### 3.1.3.5 City of DeFuniak Springs 2025 Comprehensive Plan

The City of DeFuniak Springs' Comprehensive Plan<sup>41</sup> offers objectives and policies for the various planning elements similarly included in the WCCP. In addition to these elements, the plan encourages the use of flexible zoning tools, such as incentive zoning, planned unit development, performance zoning, and clustered development to protect and maintain natural resources, as well as promote conservation of open space and recreational areas.

DeFuniak Springs' plan also includes progressive planning elements, such as offering a yard waste composting program, encouraging compact growth to reduce sprawl and increase walkable areas, and promoting low-impact development and identification of potential properties for conservation. For new development projects, the plan also requires water-conserving fixtures, as well as at least 10% of native vegetation to remain on site to absorb stormwater.

#### 3.1.3.6 City of Freeport Comprehensive Plan and Land Development Code

The City of Freeport's Comprehensive Plan<sup>42</sup> includes details related to capital improvements, conservation, economic development, future land use, housing, infrastructure, intergovernmental coordination, recreation and open space, transportation, and property rights. The housing component of this plan details the need for affordable housing solutions, and the infrastructure section is focused on water quality and capacity—outlining specific goals for each. The economic development, conservation, future land use, and transportation goals incorporate themes of resilience such as economic diversification, protection of natural resources, and safe, cost-effective transportation.

Freeport also has its own land development code,<sup>43</sup> which was adopted between 2016 and 2018. The Land Development Code outlines administration and enforcement standards, land using and zoning, resources protection standards, and development design and improvements standards. It also includes details related to dimensional requirements, trees, shrubs, and groundcovers, technical standards, equine standards, and floodplain management regulations.

#### 3.1.3.7 Transportation Planning

Resilient transportation infrastructure is key to making a place truly resilient. The transportation systems that exist should be able to withstand acute shocks like hurricanes and chronic stressors such as extreme



heat, should be able to recover quickly after experiencing these shocks or stressors, and should provide equitable access to all residents. 44 Walton County transportation planning efforts to address these hazards have been conducted at both the regional and countywide scales.

The 2045 Okaloosa-Walton Transportation Planning Organization Long Range Transportation Plan (LRTP)<sup>45</sup> Update defines the 25-year transportation vision for the region (20-year, long-term planning horizon plus the current Five-Year Plan), examines future transportation needs, establishes goals and objectives that will lead to achieving the vision, and allocates projected revenues to transportation programs and projects to address those needs.

The Walton County 2040 Mobility Plan<sup>46</sup> is a vision for how the county's transportation system will transition from one focused primarily on moving vehicles to a multimodal system focused on safely moving people over the next 20 years. The Mobility Plan considers multimodal lanes that provide a dedicated space for micro mobility devices (e.g., electric bikes, electric scooters, segways, golf carts, etc.), so that sidewalks, paths, and trails can be used for pedestrians and travel lanes used for cars and trucks. The goal of this plan is to provide safer options for transportation that is not exclusively reliant on automobiles.

## 3.1.4 Hazard Mitigation Planning

#### 3.1.4.1 Walton County Local Mitigation Strategy (LMS)

The LMS<sup>47</sup> identifies natural and man-made hazards and the assets, infrastructure, and critical facilities that participating communities (unincorporated Walton County, and the cities of DeFuniak Springs, Freeport, and Paxton) in Walton County may be vulnerable to, as well as strategies for mitigating these threats.

The LMS provides a vulnerability and risk assessment for each hazard under current conditions and discusses how changing weather patterns may exacerbate these hazards. For example, a warmer future may increase flooding, which could impact the functionality of dams in Walton County and cause them to become obsolete. Changing weather patterns may also increase the occurrence of droughts, which could impact drinking water supply, agriculture, wildfires, and urban fires.

#### 3.1.5 Disaster Planning

#### 3.1.5.1 Walton County Emergency Management Plan (2020)

The Emergency Management Plan (EMP)<sup>48</sup> guides Walton County's response to and recovery from disasters. The EMP establishes the framework to prepare for, respond to, and recover from hazards that may impact Walton County.

#### 3.1.5.2 Walton County Post Disaster Redevelopment Plan (PDRP)

The PDRP<sup>49</sup> identifies roles, responsibilities, policies, and operational strategies to support post-disaster decision making for long-term recovery and redevelopment in Walton County.

The PDRP was published in 2012 and is no longer required by the State of Florida, but is a useful tool for local governments, particularly if applying for potential disaster recovery, hazard mitigation, and other federal and state funding.



#### 3.1.6 Watershed Planning

#### 3.1.6.1 South Atlantic Coastal Study (SACS)

The SACS, conducted by the United States Army Corps of Engineers (USACE), is a comprehensive study that identifies actions for advancing coastal resilience along the 65,000 miles of tidally influenced shoreline in the U.S. states of North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi, as well as the U.S. territories of Puerto Rico and the U.S. Virgin Islands.

The SACS Main Report<sup>50</sup> examines the SACS areas at regional scales and describes the Coastal Storm Risk Management (CSRM) framework. The SACS Florida Appendix<sup>51</sup> considers specific conditions for Florida's focus areas, including discussions of region-specific problems and opportunities, risk assessment, and comprehensive CSRM strategies.

The SACS Florida Appendix identifies existing and future conditions for Walton County, including primary hazards such as inundation, wave attack, and erosion, as well as the effect of SLR on these hazards. Secondary hazards identified as significant threats for consideration include wind damage, compound flooding, saltwater inundation and intrusion, and nuisance flooding and its associated impacts to stormwater drainage.

#### 3.1.6.2 Choctawhatchee Bay Community Based Watershed Plan

The Choctawhatchee Bay Community Based Watershed Plan<sup>52</sup> identifies a priority suite of projects needed to improve and maintain watershed health and match projects with funding. The plan is the result of a watershed planning process initiated by The Nature Conservancy in 2013 in response to the Deepwater Horizon Oil Spill. It was developed with the community and prepared for funding opportunities derived from settlements with British Petroleum (BP).

Choctawhatchee Bay Community Based Watershed Plan projects relevant to Walton County and the immediate surrounding area:<sup>53</sup>

- 1. Eglin Air Force Base (AFB) Stormwater Master Plan;
- 2. Generational restoration and preservation of natural habitat and resources in the Florida Panhandle (City of Freeport);
- 3. Choctawhatchee Basin Restoration (Walton, Washington, and Holmes Counties);
- 4. Coastal Dune Lake Hydrologic Restoration (Walton County);
- 5. Living shorelines projects (Walton and Okaloosa Counties);
- 6. Stormwater infrastructure (Walton County);
- 7. Stormwater Management Project Suite (Walton County); and
- 8. Critical habitat restoration (Walton County).



#### 3.2. UPCOMING RESILIENCE WORK

#### 3.2.1 Waterfronts Florida: Freeport Working Waterfront

In 2012, the Fourmile Creek Community located within the City of Freeport received its designation as a Waterfronts Florida Partnership Community. This designation came with resources to support the community in revitalization of its designated waterfront area. That same year, a document to guide the working waterfront work called The Fourmile Creek Waterfront Vision Plan<sup>54</sup> was developed. Priorities established during the visioning process included:

- 1. Public access to the waterfront;
- 2. Hazard mitigation;
- 3. Protection of environmental and cultural resources; and
- 4. Economic enhancement (or restructuring, as feasible).

Currently, Freeport's infrastructure committee has identified three projects for which it is seeking funding: a boat ramp, a turn basin mooring field, and an extended bulkhead near the Freeport shipyard and marina. The City Council in Freeport has approved all three projects in the city's capital improvements program.

#### 3.2.2 Vulnerability Assessment

Walton County received funding to conduct a SLR vulnerability assessment under the Resilient Florida Program. The aim of this assessment is to evaluate hazards specifically regarding changing sea levels, how these hazards will impact infrastructure, and what actions can be taken to address them.



# 4.0 OUTSTANDING UNKNOWNS

- There is a great deal of existing knowledge about the hazards and risks facing Walton County—enough to take meaningful action.
- However, there are still some areas where additional information could help inform and advance resilience efforts. These include:
  - o Mapping of compound flooding
  - Housing plans
  - Plans to improve healthcare access
  - o Any updates to the Future Land Use Map (last version is from 2011)
  - The WMP modeled flooding under various critical storm events and factored up to 5 feet of SLR.
  - Other



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# **APPENDICES**

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