



MONROE COUNTY'S CLIMATE CHANGE ACCOMPLISHMENTS

OVER A DECADE OF CLIMATE CHANGE PLANNING AND ACTION TO BUILD RESILIENCE AND REDUCE RISK

Monroe County is unique in the State of Florida because it is the only County that is threatened in its entirety by sea level rise. In 2008, Monroe County began to invest in strategies to mitigate future flood risk posed by sea level rise (SLR), in order to protect our citizens, homes, businesses, roads, public facilities and infrastructure.

Our efforts, outlined below, demonstrate the complex and multifaceted approach required for future adaptation: SLR modeling, vulnerability assessments, adaptation and mitigation methodologies, engineering and design criteria, policy formation, comprehensive plan consistency, legal considerations, budgetary demands, and public engagement.

- 2008 Conducted *GREENHOUSE GAS EMISSION INVENTORY* and convened the Monroe County *GREEN BUILDING TASK FORCE*
- 2009 Joined as founding member the *SOUTHEAST FLORIDA REGIONAL CLIMATE COMPACT*
- 2010 Implemented the *2010 KEYS ENERGY CONSERVATION INITIATIVE* with a \$1.2M US DOE/Florida Energy and Climate Commission grant.
- 2011 Convened a *CLIMATE CHANGE ADVISORY COMMITTEE* which drafted County's first *CLIMATE ACTION PLAN*
- 2012 Created the County's *OFFICE OF SUSTAINABILITY* and position of *COUNTY SUSTAINABILITY DIRECTOR*
- 2013 Added *ENERGY AND CLIMATE ELEMENT* to the County's Comprehensive Plan
- 2013 Commenced *DEVELOPMENT OF THE GREENKEYS RESILIENCE AND SUSTAINABILITY ACTION PLAN*
- 2015 Completed *COUNTYWIDE VULNERABILITY ASSESSMENT* on habitat, critical facilities, and infrastructure including utilities
- 2015 Began multi-year initiative to improve rate classes with *FEMA'S COMMUNITY RATING SYSTEM*
- 2016 Completed and formally *ADOPTED THE GREENKEYS RESILIENCE AND SUSTAINABILITY ACTION PLAN*, an in-depth, five-year work plan to guide the County's response to sea level rise.
- 2016 Completed the *ROADS ELEVATION/SLR ADAPTATION PILOT PROJECT REPORT* identifying existing conditions, engineering-based mitigation technologies and cost estimates for two specific flood prone roads in Key Largo and Big Pine Key.
- 2016 Completed flood risk reduction measures to achieve *CLASS 5 IN FEMA COMMUNITY RATING SYSTEM*, from a Class 10 (Class improvements have resulted **\$5M in annual savings** for NFIP policyholders and a **cumulative savings to date of \$19M.**)
- 2017 Added Comprehensive Plan *POLICIES TO DIS-INCENTIVIZE DEVELOPMENT IN HIGH-RISK AREAS*
- 2017 Adopted an *INTERIM DESIGN CRITERIA RESOLUTION FOR ROAD ELEVATIONS* that factor in SLR and future flood risk
- 2018 Incorporation of *SLR PROJECTIONS INTO NEW COUNTY FACILITY CONSTRUCTION*
- 2018 Completed *SITE-SPECIFIC VULNERABILITY ASSESSMENT AND ADAPTATION PLAN* for County's Assisted Living Facility
- 2019 Completed the *COUNTYWIDE MOBILE LIDAR* elevation data. County invested **\$500K** for the highly accurate data.
- 2019 Completion of design work for the *ROADS ELEVATION/SLR ADAPTATION PILOT PROJECTS*
- 2019 Completed the *WATERSHED MANAGEMENT PLAN*, a Vulnerability Analysis of County's storm water infrastructure
- 2019 Commenced the US Army Corp *FLORIDA KEYS COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY*, Shoreline and US 1 Flood Risk Vulnerability with mitigation solutions (a **\$3M study completed 2021, with Chief's Report and pending addition to WRDA '22.**)
- 2019 Develop criteria for *ADAPTION ACTION AREAS* (areas that experience coastal flooding due to extreme high tide and storm surge and are vulnerable to the related impacts of sea level rise.)
- 2019 Revise Comprehensive Plan to *ADD PERIL OF FLOOD REQUIREMENTS* for Coastal Element and *INCORPORATE CLIMATE, ENERGY AND SEA LEVEL RISE STRATEGIES AND DATA THROUGHOUT THE PLAN*
- 2019 Commenced an extensive *COUNTYWIDE ROADS VULNERABILITY ASSESSMENT/ELEVATION AND ADAPTION PLAN* for 300 miles of county roads to respond to severe and persistent flooding from SLR, King Tides and storm inundation, a **\$1.8M study** funded by Monroe County. Adaptation of County roads could **potentially cost \$1.8B.**
- 2020 Completed *REPETITIVE LOSS ANALYSIS* to identify mitigation strategies for homes at risk for repetitive flood loss.
- 2020 Completed requirements to further reduce flood risk to *ACHIEVE CLASS 4 RATING IN FEMA COMMUNITY RATING SYSTEM* (will result in **\$6M in annual savings** for NFIP policyholders; **cumulative savings of \$25M** for policyholders this year.)
- 2022 Completion of the *COUNTYWIDE ROADS VULNERABILITY ASSESSMENT/ELEVATION AND ADAPTION PLAN*: in-depth evaluation of methodologies for road elevation ranking criteria and neighborhood-wide flood mitigation and adaptation approaches.
- 2022 Implementation of *CLASS 3 RATING IN FEMA Community Rating System* (35% discount - **\$7M annual savings**) due to flood mit work.
- Ongoing Pursuit of funding to implement road elevation projects, including **State RF program, CDBG-MIT, CDBG-DR Grants, FEMA BRIC Grants**, and additional necessary local revenue sources.