

EXECUTIVE SUMMARY

We have continually changed the relationship between the land and the water throughout the course of Miami-Dade County's history. **Chapter 1: Living With Water**, summarizes this history and describes how rising sea levels will force us to reimagine this relationship in the coming decades. Sea levels have already risen approximately 9 inches since 1930. Our region's Unified Sea Level Rise Projection indicates sea levels will be approximately 2 feet higher in 40 years and will continue rising.

We are feeling the effects already. Because we live just a few feet above the ocean and the groundwater, small changes in sea levels ripple through our entire water system. The gradual shift in water levels becomes much more visible during events such as King Tides, hurricanes and heavy rains. Sea level rise amplifies existing flooding risks, and flooding becomes deeper and more extensive, while also lasting longer than it did in the past. Unlike other types of flooding, long-term sea level rise will not recede. This is not a phenomenon that we have experienced before and therefore it requires new ways of thinking. Fortunately, we can draw on our long history of managing water in South Florida. We have a wealth of knowledge in our community, government agencies, local businesses, and universities.

We are continually learning and adjusting. The County and our partners have been working for years to understand and prepare for these changes. Within this Strategy, we not only provide a summary of the previously studied impacts on our infrastructure, but also a comprehensive adaptation pathway that addresses the issues we have known for many years. Recognizing both the short- and long-term benefits, the County is already investing in adaptation to reduce physical risks and the growing future economic risk. Regional and national studies show this investment in adaptation can provide benefit-cost ratios from 2-to-1 to as high as 40-to-1. Because it is not economically feasible to reduce all risk from sea level rise, there is a continuous balancing act between accepting a certain level of flooding and avoiding risks we cannot tolerate.

We will use five approaches to adapt to sea level rise. As cities around the world respond to rising sea levels, Miami-Dade County's unique geology, history, and communities require a unique set of approaches. No single infrastructure project will address sea level rise. For the County to successfully adapt to rising waters and secure a future that supports our economy, environment, and communities, we must consider a mosaic of approaches. **Chapter 2: Adapting to Sea Level Rise** outlines five approaches that are being used to adapt. All have been used successfully in the past, though they will need to be prioritized, brought to scale and adjusted.

We will tailor these approaches based on the geography and physical characteristics of each area. Most importantly, we will tailor these approaches based on community and stakeholder input. The County will implement these broader approaches at the local level using Adaptation Action Areas to create more detailed plans for the most impacted areas. This program will allow us to work more directly with residents, businesses, and other stakeholders to collaboratively create detailed adaptation plans for specific neighborhoods. We will also work collaboratively with other local governments to support their adaptation efforts. These approaches will be implemented through a series of key actions and projects that are outlined in **Chapter 3: Next Steps**.

Five Adaptation Approaches

Build on Fill: raise the land on artificial fill

Build Like the Keys: elevate structures on pilings and live with more water

Build on High Ground Around Transit: promote new development in the least flood-prone areas along transit corridors

Expand Greenways and Blueways: expand waterfront parks and make room for canals in our most flood-prone neighborhoods

Create Green and Blue Neighborhoods: create a network of small spaces for water in our yards, streets, and parks

We will follow stakeholder identified principles as we take the next steps to address sea level rise. While specific projects and needs will change over the coming decades, our decisions will be shaped by the guiding principles that emerged from the community engagement process. These principles, state that our adaptation investments must make us safer, reduce environmental pollution, be equitable, build with nature, be flexible, and be well aligned with other initiatives.

We have prioritized 10 key actions that are the most impactful regulatory and policy changes, investments, and planning efforts we can pursue now to reduce future risk. The actions build upon years of previous work. Many are already underway, and several will be worked on simultaneously.

We have identified key projects in Chapter 3, including County projects, totaling approximately \$1.7 billion, that have been funded or completed and will help us build a safer community. We have also identified additional unfunded projects that will help us respond to sea level rise and for which County departments are seeking resources to complete. This Strategy includes projects led by regional, state, and federal entities. The County will continue to engage with these partners which are responsible for larger-scale projects, such as Everglades Restoration, Coastal Storm Risk Management Studies, and a Re-study of the Central and Southern Florida (C&SF) Project. We will leverage external resources as much as possible and maximize their benefit to the County.

These projects are just one piece of the larger suite of investments needed in the coming decades. Studies such as the U.S. Army Corps of Engineers Back Bay Coastal Storm Risk Management Feasibility Study suggest that measures to reduce future storm surge risk in the most vulnerable areas could cost at least \$6.1 billion. However, the potential return on investment is also significant which means that the more we invest in the short-term, the much smaller the costs will be in the long-term. The strategic investments and policy changes presented in this Strategy can help our community be more resilient, to not just one, but to all flood risks made worse by sea level rise. If those investments are aligned with our guiding principles, they can have multiple benefits.

We will be nimble and adjust our planning and investment as new conditions arise and new funding revenues become available. We will revisit these recommendations regularly and report on progress annually.

We recognize sea level rise is just one challenge we are facing. Our current economic and public health crisis underscores the importance of continuing to focus on addressing our broader resiliency challenges outlined in the Resilient305 Strategy. Resilience, for us, means providing the opportunity for every person and every community to bounce back after large-scale events, such as floods, hurricanes, and the current public health and workforce crisis, and to not only survive, but actually thrive in the face of long-term challenges, including sea level rise, expensive housing, and highly uncertain economic conditions. Fortunately, there are many steps we can take now that will also help us address urgent short-term challenges while also setting us up to be better prepared for rising sea levels.

What are the next steps?

This Strategy presents 10 key actions and an array of projects that will help us prepare for flooding made worse by sea level rise.