

Agenda Item No. 2B6
October 6, 2015

Date: August 20, 2015

To: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor 

Subject: Status Report for Resolution No. R-44-15, Directing the Mayor or Mayor's Designee to Study the Feasibility of Designating Climate Change Adaptation Action Areas, as Recommended in the Comprehensive Development Master Plan

On January 21, 2015, the Board of County Commissioners (Board) passed seven resolutions, each supporting the implementation of one of the seven recommendations included in the "Miami-Dade Sea Level Rise Task Force Report and Recommendations." Resolution R-44-15, which requires a status report within 90 days and a final report within 180 days, directs the Mayor or Mayor's designee to study the feasibility of designating climate change Adaptation Action Areas, as recommended in the Comprehensive Development Master Plan (CDMP). Pursuant to R-44-15, this status report is submitted for your review.

Background

In July 2013, the Board created the Miami-Dade Sea Level Rise Task Force (Task Force) for the purpose of reviewing current and relevant data, science and reports, and to assess the likely and potential impacts of sea level rise and storm surge on Miami-Dade County over time. On July 1, 2014, the Task Force presented a report to the Board entitled, "Miami-Dade Sea Level Rise Task Force Report and Recommendations," providing the requested assessment along with recommendations on how Miami-Dade County can specifically begin planning and preparing for projected sea level rise impacts. In addition, Resolution R-451-14 and Ordinance 14-79 were adopted in 2014, requiring that planning, design, and construction of County infrastructure consider potential sea level rise impacts.

In December 2009, Resolution R-1388-09 committed Miami-Dade County to join with Broward, Monroe, and Palm Beach Counties to create the Southeast Florida Regional Climate Change Compact (Compact) with the purpose of working and collaborating regionally on climate change and sea level rise policy, planning, and action. Due in large part to the efforts of the Compact, the state legislature amended Section 163.3177 of the Florida Statutes, which states, in part, that "local governments that adopt an adaptation action area may consider policies within the coastal management element to improve resilience to coastal flooding resulting from high-tide events, storm surge, flash floods, stormwater runoff, and related impacts of sea-level rise." Subsequently, On October 2, 2013, the Board adopted two (2) policies into the CDMP to address Adaptation Action Areas, as follows:

- o **CDMP Policy LU-3K.** By 2017, Miami-Dade County shall determine the feasibility of designating areas in the unincorporated area of the County as Adaptation Action Areas as provided by Section 163.3177(6)(g)(10) of the Florida Statutes in order to determine those areas vulnerable to coastal storm surge and sea level rise impacts

for the purpose of developing policies for adaptation and enhance the funding potential of infrastructure adaptation projects.

- **CDMP Policy LU-3L.** Miami-Dade County shall work with its local municipalities to identify and designate Adaptation Action Areas as provided by Section 163.3164(1) of the Florida Statutes in order to develop policies for adaptation and enhance the funding potential for infrastructure projects.

In February 2008, Miami-Dade County entered into Joint Funding Agreement 08E0FL20817 with the United States Geological Survey (USGS) to develop an integrated surface/groundwater numerical flow model, with one of the objectives of the project being to evaluate if sea level rise will cause salt water intrusion into coastal wellfields. Technical staff from the Miami-Dade Water and Sewer Department (WASD) has worked with the USGS on this project since then and the numerical model was formally published by the USGS in September 2014. The model is designed to evaluate if the current surface-water structure control operational criteria effectively controls saltwater intrusion and flooding with projected population increase and sea level rise, among other uses.

This enhanced modelling capability is extremely important to all forthcoming adaptation planning for sea level rise in Miami-Dade County and the Southeast Florida region because it is a significant improvement upon former models used to generate “bathtub” sea level rise inundation maps. It provides critical information about the effect of sea level rise and precipitation events on the groundwater table, and how this may affect water resource management, including water supply, wastewater disposal, and canal operations. This will facilitate a more accurate understanding of areas and infrastructure more vulnerable to flooding in Miami-Dade County. WASD and the USGS used the modified guidance developed by the U.S. Army Corps of Engineers (USACE, 2011) and a planning scenario of nine (9) to 24 inches additional rise by 2060, consistent with projections presented in the 2014 National Climate Assessment, and formally adopted by the partner counties in the Compact for the modeling effort. Future efforts include updating the model to include the revised sea level rise projection, which is expected to be published in May 2015 by the Compact’s Sea Level Rise Consensus Workgroup.

Status Report for January 31, 2015 – April 30, 2015

The following steps have been taken towards implementation of Resolution R-44-15:

- Preliminary meetings with technical staff have been held to establish criteria to be used in the modeling scenarios that will support and help determine the Adaptation Action Area designation process. Additional staff working groups will be formed as necessary to develop appropriate adaptation strategies and guide outreach efforts to key stakeholders.
- The Compact’s Sea Level Rise Consensus Workgroup is currently finalizing a revised Sea Level Rise Projection for Southeast Florida. This projection, which is expected to differ to some degree from the original sea level rise projection developed in 2011, will be utilized by the partners of the Compact, including Miami-

Dade County, for planning purposes. This revised projection, and the accompanying documents are expected to be finalized and released in August 2015.

- The South Florida Regional Planning Council, in partnership with the Florida Department of Economic Opportunity and with funding from the National Oceanic and Atmospheric Administration, worked with the City of Fort Lauderdale to implement a pilot program for designating an Adaptation Action Area. Deliverables for this pilot program include a guidance toolkit that is currently being reviewed and finalized by the Department of Economic Opportunity. This guidance document, once released, will be reviewed to help determine next steps.

In accordance with Ordinance 14-65, this memorandum and report will be placed on the next available Board of County Commissioners meeting agenda.

If you have questions concerning the above, please contact Mark R. Woerner, AICP, Assistant Director for Planning, Department of Regulatory and Economic Resources, at (305) 375-2835 or mwoerner@miamidade.gov.

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