



Mayor's Response to County Commission's Resolutions on Sea Level Rise

September 2016
Executive Summary

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History

Recognizing the importance of planning for sea level rise in Miami-Dade County, the Board of County Commissioners called for the creation of a task force focused on addressing this issue in July 2013. The Sea Level Rise Task Force (Task Force), chaired by the Honorable Harvey Ruvin, Clerk of Courts, explored the myriad implications of sea level rise on our environment, economy, communities, and policies.

After working together for almost a year, the Task Force recommended the County take several steps to better prepare for rising sea levels. Their seven final recommendations became six resolutions and one urging, sponsored by Commissioner Rebecca Sosa, and were passed unanimously by the Board of County Commissioners on January 21, 2015. In response to the resolutions, staff within the department of Regulatory and Economic Resources have been working to implement those resolutions and researching best practices. The final reports summarizing this work are the product of coordination between multiple departments, external organizations, and universities.

In the intervening time since the sunset of the Task Force, there have been several developments including the expansion of the Office of Sustainability to become the Office of Resilience. The County has also become part of Rockefeller Foundation's 100 Resilient Cities network, in partnership with the City of Miami and Miami Beach, as "Greater Miami and the Beaches." Additionally, there has been significant progress on adaptation and mitigation efforts with the Southeast Florida Regional Climate Change Compact (Compact) including the publication of the updated Unified Sea Level Rise Projections (Figure 1) which are being used consistently throughout the region.

Final sea level rise reports

While the County's work on resilience is defined more broadly, each of the final reports is focused on a separate facet of the problem in response to the structure of the six resolutions. The final reports focus on the following issues:

- Adaptation Action Areas
- The Environmentally Endangered Lands
- Developing an Enhanced Capital Plan
- Insurance and Long-term Risk Management
- Flooding and Saltwater Intrusion
- The Climate Change Advisory Task Force

SEA LEVEL RISE: WHAT CAN WE EXPECT?

Since reliable record keeping began over 100 years ago at the tide gauge in Key West, the average sea level has risen approximately 228 millimeters (or 9 inches). This rise has been primarily due to thermal expansion (as warmer water occupies more volume) and to melting from glaciers and ice sheets. Over the next century, the rate of sea level rise is very likely to accelerate due to increased melting from land-based ice sheets, in particular Greenland.

Recognizing the need for clear, consistent, and local information about future sea level rise projections, The Southeast Florida Regional Climate Change Compact developed the, “Unified Sea Level Rise Projection for Southeast Florida”. The updated projection, published in 2015, was developed by a panel of well-respected and informed scientists using the most recent and best available data. The projection (Figure 1) estimates that the region can expect to see average sea levels 6 to 10 inches higher by 2030 than they were in 1992, 14 to 34 inches higher by 2060, and 31 to 81 inches higher by 2100. There is a more certain estimate for near-term changes and a greater uncertainty for estimates at the end of this century. This change in average sea levels will amplify the risks of storm surge and nuisance flooding.

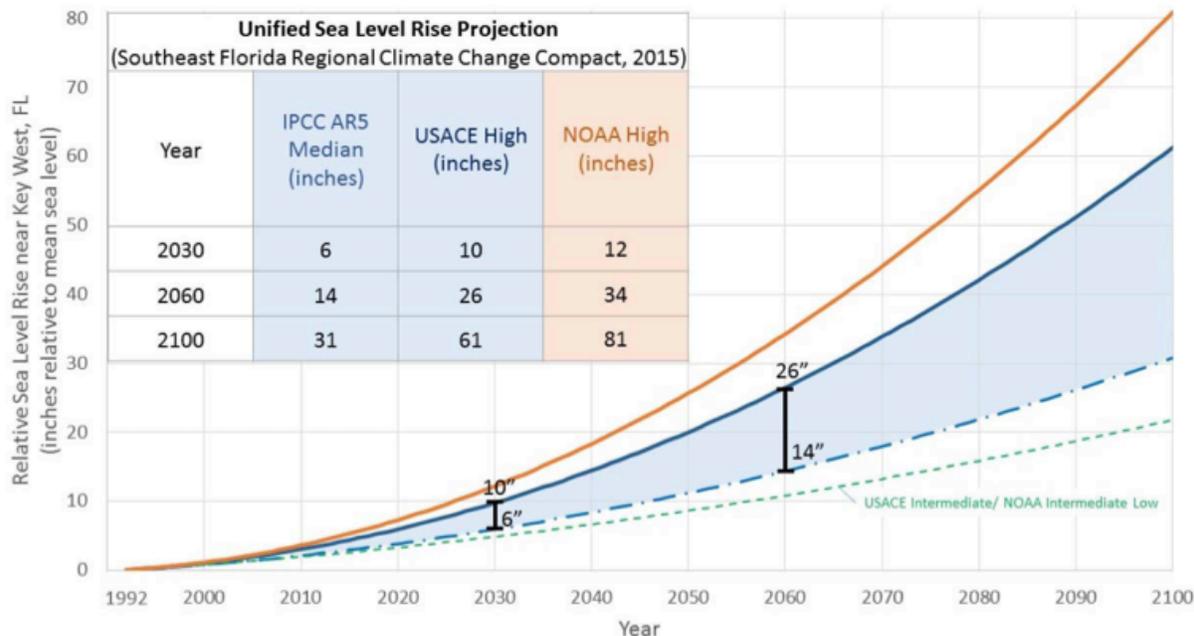


Figure 1: Unified Sea Level Rise Projection. These projections are referenced to mean sea level at the Key West tide gauge. The projection includes three global curves adapted for regional application: the median of the IPCC AR5 RCP8.5 scenario as the lowest boundary (blue dashed curve), the USACE High curve as the upper boundary for the short term for use until 2060 (solid blue line), and the NOAA High curve as the uppermost boundary for medium and long term use (orange solid curve). The incorporated table lists the projection values at years 2030, 2060 and 2100. The USACE Intermediate or NOAA Intermediate Low curve is displayed on the figure for reference (green dashed curve). This scenario would require significant reductions in greenhouse gas emissions in order to be plausible and does not reflect current emissions trends.