

ULI/100RC/City of Miami Beach Panel

Review of Miami Beach Stormwater Management Program

PANEL SCOPE
February 14th 2018

With the support of the Rockefeller Foundation's 100 Resilient Cities initiative, the Urban Land Institute (ULI) has been invited to assess the City of Miami Beach's current stormwater management strategy. In recent years, the city has embarked on a proactive strategy to address flooding and sea level rise, which has included improving drainage systems, elevating roads and public seawalls and installing pumps to replace the aging gravity stormwater pipes. The Urban Land Institute will host a workshop, led by ULI members from both the local ULI Southeast Florida/Caribbean District Council and the national Urban Resilience program.

The City of Miami Beach has made a commitment to invest in aging infrastructure, adapt to sea level rise, and use the best available science to do so. The City is approximately 15% into a 10-year, \$500 to 600-million multi-year stormwater program, including:

- elevating roads
- upgrading its gravity-based stormwater infrastructure with tidal control valves, pump stations, pipes, and other innovative structures to improve drainage.
- The City is also replacing much of the water, wastewater, and utilities at the same time, as most infrastructure is old and in need of repair.

The stormwater program was initially engineering-led, and began in the most vulnerable areas as design-build contracts to move as quickly as possible to address immediate flooding. The City utilizes the South Florida Climate Change Compact Sea Level Rise Projections for planning purposes, and stormwater system designs will shift from a five to ten-year storm event, and will include planning for power redundancy.

The City has also updated the land use and development code to incorporate climate adaptation and resilience, such as:

- increasing sea wall height,
- increasing base flood elevation,
- establishing a freeboard above FEMA base flood elevation,
- requiring sea level rise and resiliency review criteria for Land Use Boards,
- introducing additional commercial height standards,
- and increasing set-backs and open space for single family homes.

They are also many innovative projects underway, such as green infrastructure, developing design guidelines for historic preservation in the face of sea level rise and climate change, and establishing a pool of contractors with the capacity to develop a business case analysis of the stormwater resilience program.

The city is now soliciting input for the strategy for the program going forward. As a result, the City of Miami Beach has invited ULI (through our membership in the 100 Resilient Cities Network) to address the following questions:

Assessment of existing stormwater program:

- What more, or what else, can the City of Miami Beach do to mitigate against flooding? How can the city improve the stormwater management program, considering engineering strategy, as well as aesthetics, placemaking and harmonization considering the elevation of surrounding private properties?
- What other investments in public infrastructure improvements could occur where construction is already underway?
- How can the City best communicate with residents and stakeholders about potential solutions and costs, and otherwise engage the community in the on-going stormwater management program?

Exploration of future opportunities:

- How can the city ultimately advance climate adaptation in private development, including residential and commercial development? What strategies could be used to involve the private sector and/or public-private partnerships in the design, funding and delivery of stormwater management and flood mitigation strategies?
- How might the city use its upcoming Business Case analysis to advance future climate adaptation/stormwater management decision-making?