

TO: Honorable Mayor & Members
of the City Commission

DATE: 2/24/17

SUBJECT: January 26th City Commission Meeting
Discussion Item on the *Economic
Impacts of Sea Level Rise on The City of
Miami* (DI.2)

FROM: Wayne Pathman
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Committee
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On January 26th, 2016, the City of Miami Sea Level Rise Committee (Committee/Board) appeared before the Miami City Commission for a discussion item (DI.2) entitled "*The Economic Impacts of Sea Level Rise on the City of Miami*". While the appearance included robust discussion on several economic considerations including insurance and taxation, it also expanded on other important issues including increasing staff capacity to address sea level rise (SLR), opportunities for strengthening building and zoning codes with resilience components, and working closer with the developer community to incentivize more resilient development. I was pleased to present along with fellow Committee members, Mr. Reinaldo Borges (Principal, Borges & Associates Architects) and Mr. David Martin (President, Terra Group) – and to be introduced by the City's Chief Resilience Officer (CRO), Jane Gilbert, who in partnership with this Committee has developed a plan for this board to work together with an interdepartmental team to develop recommendations for addressing SLR.

Miami is currently experiencing an unprecedented urban renewal with valuations higher than ever before. Unfortunately much of this renewal has occurred without adequate consideration and planning for addressing SLR. It is urgent that we as a City and community minimize our risk to the impacts of SLR not only for our physical continuity, but also for our future economic viability. Some of the critical aspects of the economic landscape surrounding this issue to consider are:

- The Miami real estate market has grown without adequate infrastructure to support it in the face of increased flooding risk due in large part to SLR.
- Increased risks and impacts of flooding events, will make it more difficult to ensure property, and/or collect on losses.
- Florida has the largest number of policies under our National Flood Insurance Program (NFIP) of any other state (37% of total). NFIP is the primary flood insurer of homes and small businesses and it is deeply in debt due to flooding claims occurring largely outside of Florida. NFIP is up for renewal in 2017.

- The risk of rising insurance costs will put real estate market at risk, which will have significant negative impacts to City tax revenues, and also make it more difficult to attract and retain a highly qualified workforce.

On behalf of the Committee, I wish thank the Honorable Mayor and City Commission for their time and willingness to discuss this critically important issue; as well as the Administration and Staff for working closely with this Committee to develop and implement pathways for strengthening the City's resilience to the many risks posed by sea level rise. During the January 26th discussion, the Committee indicated that it would submit a follow-up memo to the Commission summarizing the key takeaways and recommendations discussed on the floor – this memo serves that purpose.

Summary of Key Takeaways & Recommendations – DI.2, January 26th, 2016:

1. Strengthening Building and Zoning Codes

As mentioned, we are currently witnessing and amazing growth and urban renewal of Miami, but our leaders need to be thinking about building to be able to withstand and adapt to the shocks and stresses we will face over time, including SLR. The Committee along with ORS, the Building and P&Z departments, and other applicable departments – plans to identify how the City can encourage more resilient new construction and major renovations. Some preliminary recommendations to be explored further include:

- Raising building elevation requirements or allowances for properties within a flood zone. FEMA now recommends that buildings located within a 100 year flood zone where the BFE (Base Flood Elevation) is suspect (which City of Miami's is due to sea level rise) be constructed at least 3 feet above BFE. Current building code requires 1 foot above BFE for V and A zones.
- Raising flood sensitive electrical/mechanical equipment.
- Raising sea wall and/or recommend other approaches to shoreline protection along waterfront properties.
- Given high water table, consider eliminating allowance and/or strengthening design criteria for basements in certain areas.
- Miami 21 and Miami-Dade County Building codes are a very progressive code for smart growth, sustainability, and windstorm resilience. However, the City should explore opportunities for strengthening stormwater management and drainage and flood mitigation into Miami 21 and building codes for individual properties and neighborhood planning, including:
 - Further increasing permeability requirements;
 - Requiring stormwater catchment and reuse for landscaping and other non-potable uses;
 - Reinstating, increasing and/or enforcing set back requirements from all waterfronts; and
 - Revisiting where City focuses future increases in density.

- Providing resilient development incentives and flexibility, while ensuring all new development and significant renovations have current and future flood risks into account build adaptability into the design.
- Creating a check list for Special Area Plans (SAPs), new City Construction and RFPs.

2. Establishing a Working Partnership with Developers

Many developers are open to building more resiliently and seek a better working relationship with the City to achieve this. Strong leadership and collaboration is needed from the City to create the right environment for doing so, the Committee recommends the following:

- Explore methods and best practices for incentivizing (rather than penalizing) developers to build more resiliently.
- Open a dialogue with developers to jointly develop solutions that maximize value and minimize risk for residents and businesses.
- Consider developers as partners in ensuring the adequate infrastructure and quality of life features are built into plans.

3. Establishing a Closer Working Relationship Between the Committee and City Staff

As articulated on the floor by the City's CRO, the Committee has been working closely with the City Staff, notably the Office of Resilience & Sustainability (ORS) and Planning & Zoning Department (P&Z), to outline a plan for better coordinating efforts to address SLR. Some of the key recommendations proffered included:

- ORS to work with the Committee, P&Z and the Building Department to identify opportunities for strengthening applicable codes for new construction and significant renovation within flood zones, to increase resilience to SLR.
- Per the Committee's recommendation, ORS to explore the outside expertise needed for more accurate mapping of our flood vulnerability, both to City assets and private property. The Committee believes this to be an urgent priority and encourages the City to fast-track this process where possible, as the standard timeframes associated with developing and procuring a study of this nature are typically lengthy and action on this issue is urgently needed.
- ORS will create an interdepartmental Resilient Miami task force to develop a vision for a holistic, neighborhood by neighborhood, approach to living with and managing water. The task force will include participation from the P&Z, Public Works, Building, Capital Improvements, Transportation, and Parks & Recreation departments, as well as the offices of Innovation and Strategic Planning. The task force will report progress and gain input from the Committee every other month.

4. Increasing Staff Capacity

As part of the City Manager's directive for this Committee to review of the 2016 University of Miami Climate Change Special Report (presented on September 8th, 2016, to the Miami City Commission), the Committee recommended that the City urgently explore various methods to

build staff capacity for addressing SLR. Building on those suggestions, during the January 26th, 2017 Discussion Item, the Committee recommended the following to address staff capacity needs:

- Hiring a Resilience Manager within the ORS dedicated to SLR response and serving as a subject matter expert on SLR to the Committee, Commission and Administration.
- Hiring five (5) graduate-level interns within the ORS to work with departments on mapping, data collection, assembling best practices, developing draft recommendations, and assisting with stakeholder/community engagement.

The Committee reiterates these recommendations as a cost-effective means for building staff capacity.

5. Creating an Interdepartmental Infrastructure Review Task Force

An Interdepartmental Infrastructure Review committee is currently investigating cost, timing, scope for a *vulnerability analysis* of City Infrastructure and most vulnerable areas of City to inform infrastructure planning. This would be a first step towards an updated Stormwater Management Master Plan. Per the recommendation of the Committee, ORS will lead interdepartmental teams to address the following:

- Build staff understanding and capacity to integrate sea level rise
- Review upcoming Capital Improvement Plans
- Develop an integrated, neighborhood (adaptation action area) approach to green and grey infrastructure and land use planning for sea level rise resilience.
- Explore opportunities to further reduce the City's NFIP Community Rating System Score – in order to maintain or reduce flood insurance costs to city, resident and commercial property.
- Investigate infrastructure financing mechanisms such as Tax Increment Financing Districts and vehicles for attracting private investment.
- Develop and implement a strategies for informing and engaging residents and stakeholders in development and implementation of City plans and in making their own properties more resilient to sea level rise.
- Present to Sea Level Rise Committee every other month and/or as necessary to gain their input

6. Resource Requirements

On August 19, 2016, the Committee passed the following resolution recommending a budget for the Committee and establishing a position within the ORS in direct support of the Committee, and the City's wider efforts to combat the effects of SLR:

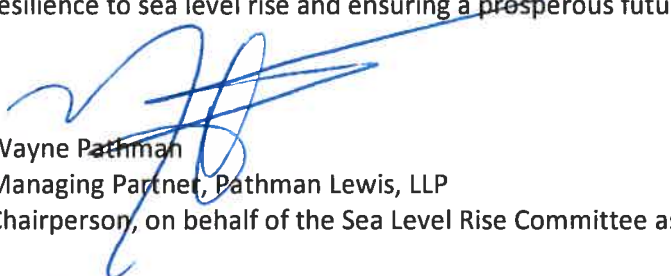
"A RESOLUTION OF THE SEA LEVEL RISE COMMITTEE ("SLRC") TO: RECOMMEND TO THE MIAMI CITY COMMISSION THAT A BUDGET OF \$500,000 BE ESTABLISHED FOR FUNDING SLRC ACTIVITIES RELATING TO ADDRESSING SLR ISSUES FACING THE CITY, INCLUDING - COMMISSIONING A COMPREHENSIVE SLR VULNERABILITY/GAP ANALYSIS FOR THE CITY AND RETAINING A QUALIFIED CONSULTING FIRM TO PROVIDE THESE SERVICES; AND, RECOMMEND THAT THE OFFICE OF RESILIENCE & SUSTAINABILITY, ESTABLISH A POSITION FOCUSED

SPECIFICALLY ON SLR ISSUES THAT WILL ALSO SERVE AS A SUBJECT MATTER EXPERT LIAISON (NOT ADMINISTRATIVE) TO THE SLRC.”

As presented to the City Commission on January 26th, 2017 the Committee has refined the proposed budget as follows:

Budget:		
Special Projects Manager: Salary + Benefits		\$100,000
5 Graduate Interns		\$75,000
Vulnerability Analysis		\$300,000
Subject matter expertise		\$25,000
TOTAL		\$500,000

On behalf of the entire Sea Level Rise Committee, I wish to thank you for this opportunity to present this information, and look forward to continuing working closely with the City on strengthening our resilience to sea level rise and ensuring a prosperous future for all Miami.



Wayne Pathman
Managing Partner, Pathman Lewis, LLP
Chairperson, on behalf of the Sea Level Rise Committee as a whole

Cc: Honorable Mayor and Members of the City Commission
Daniel J. Alfonso, City Manager
Todd B. Hannon, City Clerk
Dr. Nzeribe Ihekwebaba, Assistant City Manager
Jane Gilbert, Chief Resilience Officer
Members of the Sea Level Rise Committee
Xavier Alban, Assistant City Attorney
Ajani Stewart, Board Liaison