

2021 PROGRAM FOR PUBLIC INFORMATION (PPI) ANNUAL UPDATE & EVALUATION REPORT



Miami Beach dune system—the first line of defense in storm surge protection along the coast

**DEVELOPED FOR THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)
COMMUNITY RATING SYSTEM (CRS)**

December 8, 2021



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INTRODUCTION & BACKGROUND

ANNUAL UPDATE & EVALUATION REPORT OVERVIEW

The Community Rating System (CRS) is a voluntary program under the Federal Emergency Management Agency (FEMA) allowing communities to earn flood insurance discounts. Under FEMA’s National Flood Insurance Program (NFIP), communities earn points for conducting activities promoting flood insurance and reducing flood risk. The CRS rating score ranges from 1 to 10 (1 being the highest and 10 the lowest).

In 2020 and 2021, there was a new focus on understanding and communicating the changes occurring in local FEMA maps, in addition to the national changes happening with Risk Rating 2.0. Following a new coastal flood study in Miami-Dade County, using more advanced modeling methods, FEMA provided updated maps that could result in changes to the flood zone and base flood elevation for property owners. Through a separate process, Risk Rating 2.0 is changing how the NFIP prices the cost of flood insurance. In order to help communicate these changes, the city has provided outreach to point to and supplement the outreach FEMA has provided.

Miami Beach pursued an aggressive goal to improve its CRS ranking from a Class 6 to a Class 5 and was officially awarded the new score in 2019. As a result, many new policies and renewals after May 1, 2019 have been able to save 5% more on flood insurance premiums in comparison with 2018. Miami Beach has participated in the CRS program for many years. With this score improvement, the city receives a 25% discount that totals \$8.6 million in savings annually. This helps offset increasing federal rates.

In December 2020, the city had a three-year verification audit, a comprehensive review of all CRS-activities. While the results are pending, if the city retains the Class 5 rating the community will continue to enjoy 25% savings in flood insurance premiums.

FLOOD INSURANCE FACTS

- The City of Miami Beach participates in the National Flood Insurance Program (NFIP) Community Rating System (CRS).
- Miami Beach has improved its score to a Class 5. This makes the city one of the few municipalities to achieve this score in Miami-Dade County.
- This effort saves residents and businesses 25% on their flood insurance premiums—an estimated \$8.6 million in annual savings.

As a coastal barrier island, 97% of the properties in City of Miami Beach are located within or near a High-Risk Flood Zone Area (Special Flood Hazard Areas- "SFHA") as mapped by FEMA. The flood zone requires flood insurance coverage for any building with a federally backed mortgage.

As part of the CRS program, the Program for Public Information (PPI) is an activity available to cities as another way of earning points toward the CRS rating. This program allows cities to convene a committee and collaborate to identify communication projects that reduce flood risk and increase flood awareness.

The program complements the city's approach to public participation and is a key part of communications strategies regarding climate resilience and flooding. This is one way the city can help with economic resilience—to keep flood insurance as affordable as possible within the current National Flood Insurance Program.

The PPI requires a plan for implementation and an annual report updating the City Commission about the different outreach programs implemented.

This annual update and evaluation report highlights the progress made toward desired outcomes established on the plan, discusses project implementation status for 2021 and includes an update on existing recommendations as well as new ones. In 2017, the City of Miami Beach completed the Program for Public Information (PPI), referred to as the Resiliency Communications Plan at the time, through the Community Rating System (CRS). Since then, the Program for Public Information (PPI) Committee has met to monitor and evaluate status of projects and outcomes. City staff conducted outreach projects and other CRS activities, collected data on implementation and measures.

The Program for Public Information not only shows activities conducted but also demonstrates the impact that outreach projects have in the community. This report allows the committee to keep track of the plan's outcomes, celebrate achievements, identify areas of improvements and continue planning for the future.

The following items are covered in this report, as required by the National Flood Insurance Program:

- A review of projects conducted in 2020 and 2021
- Progress towards the desired outcomes
- Recommendations for improvement

PROGRAM FOR PUBLIC INFORMATION (PPI) COMMITTEE OVERVIEW

The Program for Public Information (PPI) Committee, made up of private and public stakeholders, guided the Program for Public Information (PPI). When the program started in 2017, the committee followed a seven-step planning and public involvement process defined by the Community Rating System Program. Their unique perspectives and expertise helped define target audiences, messages, outcomes, and outreach methods.

The City of Miami Beach has a wealth of knowledge regarding flood hazards and flood risk. The committee is comprised of six stakeholders, each with valuable perspectives and insight on flood risk and insurance. The committee member expertise is specified by the CRS program, which requires representation from the city’s Communications Department, the city’s Floodplain Office, real estate, banking, and insurance. The committee was previously formed by the City Commission through Resolution No. 2016-29585 on September 27, 2016; Resolution No. 2017-30104 on December 13, 2017; Resolution No. 2018-30658 on December 12, 2018; Resolution No. 2019-31083 on December 11, 2019; and Resolution No. 2020-31527 on December 9, 2020. The committee has been re-created annually to comply with the CRS program. In December of 2021, the committee is required to be re-created once again by the City Commission for the coming year.

Tonya Daniels (Melissa Berthier), Chair	Director Office of Marketing and Communications
John J. Lee, Vice-Chair	Insurance Agent Vice President, FirstService Financial
Scott Diffenderfer, CIPS, LCAM	Real Estate Agent Licensed Real Estate Broker Associate, Compass President of the Belle Isles Residents Association
Carlos Gutierrez, PA	Real Estate Agent Broker Associate, Coldwell Banker 2016 President Miami Association of Realtors
Mohsen Jarahpour, CFM	Floodplain Manager Building Department
Alan Randolph	Banking Industry Representative Regional Director, Bank OZK

PLAN DEVELOPMENT

SEVEN-STEP PROCESS

The committee followed a seven-step process that serves as a roadmap for completing and reviewing the PPI's activities. The committee held its first meeting in October of 2016 and since then staff has continued working diligently in completing several projects outlined on the following pages of this plan.



Below is a summary of the seven steps followed by the committee in the last three years:

- 1. Establish the Committee:** The committee was established in 2016 and meets at least twice a year to discuss initiatives within the program and approve documentation.
- 2. Assess the Community Information Needs:** The committee agreed that, for the purpose of the Program for Public Information, the entire city should be considered one target area with six different audiences (property owners, renters, businesses, recently flooded areas, repetitive loss sites, local organizations).
- 3. Formulate Messages:** The committee conducted an insurance coverage assessment and formulated specific messages to those properties that carry a lower rate of flood insurance. In addition, all the Miami Beach area is targeted with flood awareness messages disseminated through different channels.

- 4. Identify Outreach Projects to Convey the Messages:** The committee identified various outreach projects outlined on the outreach implementation table of this report. The projects are crucial to achieve established outcomes on this plan, such as increasing flood insurance coverage and awareness of flooding in the community.
- 5. Inventory of other Public Information Efforts:** The Program for Public Information requires examining existing information efforts. A list was compiled through staff research and committee members' input. This list is published on the City's Resiliency Communications Plan published in March of 2017 and available on the City's website.
- 6. Prepare the PPI Document:** Preparing the PPI document involved a concerted effort from staff and the committee. PPI documentation is updated every year through the evaluation annual report to make improvements to projects and increase community outreach.
- 7. Implement, Monitor and Evaluate:** The committee meets twice annually to evaluate the program and incorporate revisions. This report specifically addresses steps six and seven and includes a summary of the progress made in 2021.

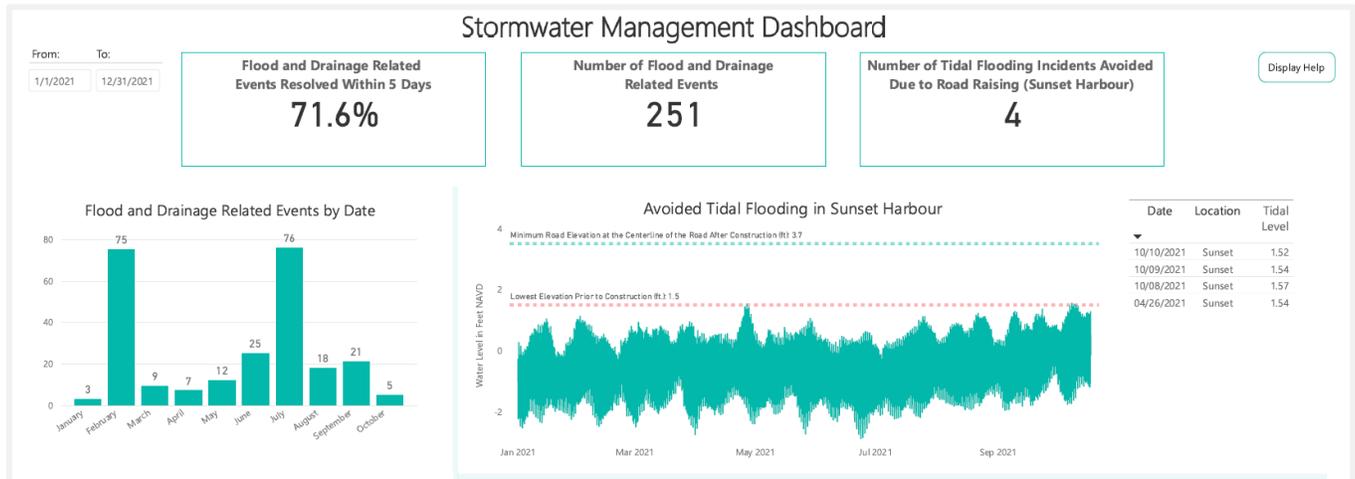
EVALUATION AND MONITORING

SUMMARY OF OUTREACH PROJECTS

City staff and the committee identified 11 original outreach projects in the 2017 PPI plan. In addition, this year the city worked on an additional 6 projects. All the projects planned for 2021 were completed or are on track to be completed, and new projects were identified for additional outreach opportunities. The only project that wasn't conducted was the After Action Review, which provides an opportunity to analyze city staff's response to severe flooding or storm events. However, in 2021 the city experienced less severe flooding or storm impacts. This project remains ongoing and will be implemented when necessary.

Stormwater Dashboard: Another innovative project includes the Stormwater Management Dashboard. This dashboard measures the effectiveness of the stormwater program, the impact of extreme events and infrastructure improvements. This data has been used to better prepare for flood events and communicate flood awareness information to the public. Phase II of the dashboard was completed to include tidal levels from the National Oceanic and Atmospheric Administration (NOAA). This data allows the city to analyze historical tidal data and compare NOAA's data with the city's tidal gauges. The data is especially important to prepare for King Tides and analyze the impact of these events.

In comparison to last year, the amount of flood and drainage related events resolved within 5 days increased from 63% to 72% and there were 107 fewer number of flood and related drainage events. The number of tidal flooding incidents avoided due to road elevation in Sunset Harbour was 4 this year, compared to 21 last year, due to the lower tides experienced.



Stormwater Management Dashboard

Flood awareness information provided to all properties: An important milestone in completing the seven steps of the program was to develop **10 messages** for flood awareness. The 10 messages are included in the Miami Beach Magazine which is mailed directly to 61,000 households every quarter and distributed at city’s public facilities. This year, four issues of the magazine were mailed to residents. Additionally, flood awareness materials were prominently featured in mbrisingabove.com and City of Miami Beach’s website. The MBRisingAbove website features a highlighted tab for “flood awareness”. The materials include the 10 steps to flood awareness, fact sheets and important resilience projects. In addition, the city hosted three community meetings focused on improvement projects that will reduce flood risk and 60 additional one-on-one meetings with individual properties impacted by neighborhood improvement projects. Additional meetings are in progress. The City also conducted two flood protection assistance meetings with individual property owners with the City Floodplain Manager.

Additionally, this messaging was shared by external sources, such as RE:MiamiBeach, a local newsletter that amplified the King Tide messaging that the city sent out via the city newsletter.

Flood Awareness and Hurricane Guide: The flood awareness guide has informed hundreds of residents about the different existing flood awareness messages. The guide has been published on the city's website since spring of 2017 and was updated in 2020. The hurricane guide includes flood preparation messages in addition to tips on how to respond to extreme weather events. For 2019 and 2020, COVID-19 added more complexity to hurricane preparedness. The hurricane response was modified to adjust to social distancing

protocols and protect the most vulnerable populations. The Divisions of Emergency Management (DEM) worked with all City departments to make sure all departmental plans reflect the current public health considerations. Hurricane exercises were conducted virtually to prepare for hurricane season in the context of the pandemic. In addition, messages continue to be sent out through email blasts to the community in advance of anticipated rainfall, King Tides and potential hurricanes.

Response to flood events: Responding to flood events in the community is an important priority for the city. In 2021 to-date, the city addressed more than 400 flood and drainage related requests and resolved 72% of them within five days. Flood and drainage related requests were mostly caused due to King Tides or heavy rain. Staff resolved requests by going on-site to address issues and also documented flooding and communicated with homeowners. Frequent communication with residents about flooding issues have led to projects that have alleviated flooding in different areas.

In addition, DEM provides damage assessment training to departments who respond to flooding incidents and utilizes software and computer applications that track flooding, tides and impacts to property. Information is collected and shared with Miami-Dade County Office of Emergency Management (OEM).

Social media messages: As more residents use social media, the city has expanded its reach via Twitter, Facebook and Nextdoor. Tweets related to flood awareness received more than 140,000 impressions in 2021. Impressions mean that Tweets were viewed by users and possibly re-tweeted. In addition, the city continues measuring the quality of flood awareness messaging in social media and email to ensure all communications have the desired change of behavior.

Letter from elected leadership: In 2021, a letter from the Mayor about the importance of purchasing flood insurance was sent out to the community via email. The letter includes messaging about being prepared for King Tides, the updates to the National Flood Insurance Program and Risk Rating 2.0, and a mention of the new fertilizer ordinance for water quality. This effort provides valuable activity points for the CRS Activity 370 Flood Insurance Coverage Improvement Plan.

Fact Sheets: In 2017, different fact sheets were created to reach various types of target audiences, focusing on the areas with low flood insurance coverage as defined through the flood insurance coverage analysis. In 2021, the following fact sheets were updated to include new information: 10 Steps to Flood Awareness, encouraging businesses to purchase flood insurance, and Keep It Clean Biscayne Bay water quality. In the absence of in-person customers in City Hall, fact sheets have been featured on the website and promoted through Program for Public Information (PPI) Committee. Through the flood insurance coverage assessment, 2-4 unit properties were identified as having low coverage. Special fact sheets were sent this fall to all these building types to encourage the purchase of flood insurance. Also, to prepare the community for King Tide season, flood preparation messages are communicated before and during these events. More than 10,000 subscribers receive this information via email. Additional fact sheets include information tailored to business owners, real estate agents, tenants, construction industry, potential homeowners and for Biscayne



Don't Settle for Soggy Dollars

Bay water quality protection.

Business Flood Insurance Fact Sheet, updated 2021

Private Property Adaptation Program: The City has approved \$1.3M for FY 2022 for this new innovative program which aims to reduce the risk of flooding for private properties. Currently under development, this grant program is for the following kind of Miami Beach property owners: single-family homeowners, multi-family property owners, and commercial property owners. This program will support property owners in assessing their flood risk and making flood mitigation improvements to their own properties through a 50/50 matching grant, with up to \$20,000 available per property. No match will be required for low to moderate income properties. Only proposed projects that directly address flooding mitigation will be funded. The program is divided into two phases. The first will be an assessment that will determine the flooding risk of the property and will propose possible projects. The second phase will be the design and construction of these projects. It is intended that this program will also link to existing City and Federal programs, like the FMA program for repetitive loss properties.

OUTREACH IMPLEMENTATION TABLE

The following outreach implementation table, required within the PPI, details the audiences, messages, desired outcomes, projects to support the messages, list of projects, project accomplishments for 2020 and 2021 and stakeholders that help disseminate the information. The table serves as a tracking mechanism to ensure that projects are completed on a timely manner. In order to evaluate the outreach project status for 2021, the table shows the status of projects for this year, achievements and output measures indicating the level of effort and resources invested for this plan.

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
<p>All of Miami Beach audience</p> <p>Note that the flood awareness messages and outreach projects are important for all of Miami Beach residents and businesses, since 97% of all properties are within a SFHA (Special Flood Hazard Area).</p>	Messages 1-10	<p>Increase comprehensive awareness of flood hazard and Miami Beach messages related to people and properties protection for flood event.</p>	<p>OP#1-Flood awareness information provided to all properties through MB Magazine.</p> <p>Additional outreach through email blasts, direct text messages through MBAlert, and public meetings.</p> <p>The City website features a quick link on the front page to the "Flood Awareness" page which features flood information, tools, and flood insurance material. In addition, the front page has a link to the "RisingAbove" webpage that houses all resilience and sustainability material. (350)</p>	Communications	<p>MB Magazine: Four times this year</p> <p>Ongoing</p>	<p>In 2021, flood awareness information was provided quarterly to all households through MB magazine. MB Magazine is mailed directly to 61,000 households and distributed at City's public facilities.</p> <p>The 10 message fact sheet was updated 2021 and was communicated at community meetings and through neighborhood association emails.</p>	Neighborhood associations share messages.
	Messages 1-5, 7 & 9		<p>OP#2-Letter from elected leadership encouraging purchase of flood insurance coverage and sharing King Tide messaging. (370)</p>	City Manager's Office	Complete - Fall 2021	In 2021, a letter from the Mayor about the importance of purchasing flood insurance was sent out to the community via email. The letter includes messaging about being prepared for King Tides, the updates to the National Flood Insurance Program and Risk Rating 2.0, and a mention of the new fertilizer ordinance.	No
	Messages 1-10		<p>OP#3-Flood Awareness Guide provided on website.</p>	Building and City Manager's Office	Ongoing	The flood awareness guide has informed hundreds of residents about the different existing flood awareness messages. The guide has been published on the City's website since 2017 and the 10-messages are communicated via MB Magazine to residents.	Yes-associations
	Messages 1-3 and 7-8		<p>OP#4-Hurricane Guide. E-blasts and newsletters including hurricane preparedness messaging are also sent out to the community. (Supports Activity 330)</p>	Emergency Management / Communications	Ongoing	In addition to providing the Hurricane Guide, hurricane evacuation routes are posted on the city's website. This Guide is in addition to the ones that residents receive from Miami-Dade County.	Yes- residents, business owners
	Messages 2, 3, 4, 5, 9		<p>OP#5-FEMA and State of Florida Flood Hazard and Flood Insurance Guides available at City Hall.</p>	Building	Ongoing	Informational fact sheets are provided in highly trafficked areas of city hall.	No

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
<p>All of Miami Beach audience</p> <p>Note that the flood awareness messages and outreach projects are important for all of Miami Beach residents and businesses, since 97% of all properties are within a SFHA (Special Flood Hazard Area).</p>	Messages 1-10	<p>Increase safety awareness before, during and after flood events.</p> <p>Reduce preventable accidents and damage from flood waters.</p>	<p>OP#6-For Flood Response (before, during and after a flood) Messages 1-10 provided through email blasts. Additional messages provided through social media.</p> <p>Flooding SOP: standardize and coordinate the involved department's flood response procedures.</p>	Communications, Public Works, Emergency Management	<p>Spring and Fall King Tide season emails.</p> <p>Beginning of hurricane season in June and preparation messages.</p> <p>Flood communications SOP is current</p>	<p>Flood response procedure remains in effect and is part of Public Works manual.</p> <p>Several emails and social media posts were sent out in 2020 and 2021 to prepare the community for extreme weather conditions and as flood response.</p> <p>In 2021, the Stormwater Dashboard (see-Special Projects OP#13) documented 452 instances of flood and drainage related work orders in which Public Works responds to standing water and flooding issues.</p>	Yes- local news and social media sharing; flood documentation precude shared with stakeholders University of Miami and Florida International University
	Messages 1-10	Increase comprehensive awareness of flood hazard and Miami Beach messages related to people and properties protection for flood event.	OP#9- Held community meeting(s) to provide Fact Sheet, provide FEMA map and flood insurance update, and information on reducing flood risk.	Communications, Public Works, Capital Improvement, Building Department, City Manager's Office	Ongoing	<p>In 2021, the city held 3 community meetings to discuss important resilience projects aimed at reducing flood risk and 60 additional one-on-one meetings. Also, an online portal with all resilience projects and project updates was developed.</p> <p>Vision 2070: the city worked with Florida International University and architecture students to host a community workshop in July 2021 to create conversation with the community about what kind of future we can imagine for Miami Beach.</p> <p>A virtual community meeting was held April 2021 on "Reducing Your Flood Risk" that was open to all community members to increase flood awareness, provide FEMA map and flood insurance update, and provide information on how homeowners can reduce risk.</p> <p>A meeting in May was conducted by the Building Director for the Miami Beach Chamber of Commerce to talk about FEMA floodplain compliance.</p>	<p>Yes- residents, Chamber of Commerce</p> <p>Vision: yes, conducted in partnership with local academic institute</p>
	Messages 1-5, 9	<p>Increase insurance coverage</p> <p>Increase in the use of flood resistant materials</p> <p>Increase comprehensive awareness of flood hazard</p>	<p>OP #16- Information provided to the community about changes to FEMA maps and the upcoming changes in Risk 2.0. (370)</p> <p>See OP#5, 9</p>	City Manager's Office, Communications, Building	Ongoing	A piece was featured on the MB Magazine on updates to the National Flood Insurance Program and Risk Rating 2.0 in the Fall 2021 issue. In addition, a Letter to the Commission was issued to explain these changes.	Yes- shared with residents and elected officials

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
<p>All of Miami Beach audience</p> <p>Note that the flood awareness messages and outreach projects are important for all of Miami Beach residents and businesses, since 97% of all properties are within a SFHA (Special Flood Hazard Area).</p>	Messages 1, 6	Increase awareness of City flood mitigation infrastructure and natural flood protection systems	OP#17- New Ordinance: Dune Protection Ordinance 2021-4434 (Activity 430)	Environment and Sustainability	Passed Summer 2021	This ordinance was passed in Summer 2021, which provides protection to the City's dune system, which serves as a natural system that provides protection by blocking storm surge and absorbing wave energy, in addition to accreting sand and minimizing beach erosion rates.	No
<p>1. Repetitive Loss Areas (RLA) (RLAs are defined by FEMA)</p>	Messages 1 through 10	Increase comprehensive awareness of flood hazard and Miami Beach messages related to people and properties protection for flood event.	See OP#1,3,4,5	Building	See OP#1,3,4,5	RLA property owners are part of the greater target audience.	See OP#1,3,4
	<p>Messages 1 through 10 (Supports Activity 360 Flood Protection Information)</p>	Increase building retrofits and flood resistant materials inquiries from Repetitive Loss Area property owners.	OP#7-Letter mailed to all RLA properties, (supports Activity 360)	Building	Fall 2021	Letters to RLA property owners are sent out to encourage flood resistant construction and prevent flood damage. The letter was sent to over 300 property owners before Dec 2021.	No
	<p>Messages 1, 2, 3, 4, 5</p> <p>Maps illustrate planned risk reduction improvements in relation to Repetitive Loss Areas (Activity 320)</p>	Increase in map information inquiries from Repetitive Loss Area property owners.	<p>OP#8-Fact Sheet with public infrastructure improvements and guidance for private property resilient building options</p> <p>Activity 320-Map information services provided by the Floodplain Manager</p>	Building, Public Works	Factsheet and inquiries: Annual, ongoing	<p>Due to public health regulations, public meetings have not taken place, however, the information is made publically available through the website. Flood-related public meetings conducted virtually promote this material.</p> <p>Information on floodplain maps is made available to the public on the website, which was also updated to redirect to preliminary floodplain map. Building Department staff responded to 130 flood maps information inquiries in 2021.</p>	yes- shared
<p>2. Recently flooded areas</p>	Messages 1 through 10	Increase comprehensive awareness of flood hazard and Miami Beach messages related to people and properties protection for flood event.	See OP#1,3,4,5, 6	Building, Public Works	Flood response emails and social media posts as needed.	*Described previously in the 'All of Miami Beach' audience	No

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
2. Recently flooded areas	Messages 1, 2, 3, 4, 5, 7	Increase awareness of being safe before, during and after flood events. Reduce preventable accidents and damage from flood waters.	See OP#6 OP#8-Fact Sheet and messages provided online, through social media, eblasts to stakeholders, radio/tv.	Lead: Communications Support: Building, Emergency Management, Environment and Sustainability, Public Works	Spring and Fall King Tide season emails. Beginning of hurricane season in June and preparation messages. Flood response emails and social media posts. Neighborhood meetings to address flood concerns.	OP#12- As part of increasing awareness about being safe during a flood event, more than 35 tweets and 40 Facebook posts about flood awareness topics have been posted	Yes-local news
	Messages 1, 2, 3, 4, 5, 9, 10 Importance of reducing personal flood risk.	Increase insurance coverage Increase building retrofits, and flood resistant materials inquiries. Increase flood preparedness awareness	OP#8-Fact Sheet with resources for the specific flooded area. OP#8-Disseminate Fact Sheet through packets on doors, neighborhood associations, social media. See OP#9, 16	Lead: City Manager's Office, Building, Communications, Environment and Sustainability, Public Works	Ongoing	Due to public health regulations, public meetings have not taken place, however, the information is made publically available through the website. Flood-related public meetings conducted virtually promote this material.	Yes-area associations can share
3a. Residents: tenants	Messages 1 through 8 Importance of insurance coverage for renters. Discuss storm/ flood preparation with landlord.	Increase insurance coverage Increase flood preparedness awareness Increase in the use of flood resistant materials by tenants.	See OP#1,3,4,5,6,16 OP#8-Fact Sheet for tenants provided on website	City Manager's Office, Building	See OP#1,3,4,5,6, 16 OP#8-Ongoing	The tenant fact sheet was created to specifically target tenants and is available on the website. Due to public health regulations, public meetings have not taken place, however, the information is made publically available through the website. Flood-related public meetings conducted virtually promote this material.	No
3b. Residents: property owners*	Messages 1 through 10	Increase comprehensive awareness of CRS and Miami Beach flood messages.	See OP#1,3,4,5,6	City Manager's Office, Building, Communications	Ongoing	*Described previously in the 'All of Miami Beach' audience	Yes - local news, retweets.
	Messages 1, 2, 3, 4, 5, 6 The City is investing in flood risk reduction efforts. Know your elevation and your options to reduce risk.	Increase retrofits, use of flood resistant materials Increase in inquiries/technical assistance to the Flood Plain Manager	OP#8-Fact Sheet designed for all residents that highlight risk reduction from the sand dune system, street elevation and stormwater pumps, and promoting resilient construction practices. Flood Protection Assistance meetings conducted one-on-one with Flood Plain Manager (Activity 360)	Building, Communications	Ongoing	The resilient construction fact sheet was created to target all property owners. Due to public health regulations, public meetings have not taken place, however, the information is made publically available through the website. Flood-related public meetings conducted virtually promote this material. In 2021, 2 flood protection assistance meeting took place with individual property owners.	Yes

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
3b. Residents: property owners*	Message 1, 2 Insure your property from flood loss.	Increase in insurance coverage for 2-4 family unit properties. (Targeted through Flood Insurance Coverage Assessment)(370)	OP#8-Fact Sheet mailed for 2-4 Family Unit properties. See OP #5,9,16	Building, Communications	Fall 2021	Through the flood insurance coverage assessment, 2-4 unit buildings were identified as having low coverage. Special Fact Sheets were sent in Dec 2021 to all these building types to encourage the purchase of flood insurance. A piece was featured on the MB Magazine on updates to the National Flood Insurance Program and Risk Rating 2.0 in the Fall 2021 issue. In addition, a Letter to the Commission was issued to explain these changes.	Yes-associations share with multi-family bldg. residents
	Message 1, 2, 4, 5, 9, 10 Insure your property from flood loss.	Increase retrofits, use of flood resistant materials Reduce preventable accidents and damage from flood waters. Increase in inquiries/technical assistance to the Flood Plain Manager Increase insurance coverage	OP #15- Private Property Adaptation (PPA) Program to promote and support flood mitigation property improvements	City Manager's Office (Resilience)	Ongoing	The PPA program is currently under development and has been approved \$1.3M for FY2022. To apply, properties must provide proof of flood insurance and obtain an Elevation Certificate. Presentation was given to Miami Beach Chamber of Commerce to promote the upcoming PPA program and provide a brief overview of flood awareness. With participation from elected official.	Yes- public officials beginning to share program
	Messages 1-10 King Tides are normal in coastal areas but can cause flooding. Protect your family, home, and your vehicles.	Reduce preventable accidents and damage from flood waters.	OP#8-Fact Sheet designed for King Tide seasons. Fact sheet messages distributed through social media, eblasts to stakeholders.	Communications, Environment and Sustainability	Spring and Fall King Tide messages sent by email and social media.	King Tide fact sheet messages are communicated before and during King Tide season. More than 4,000 subscribers receive these email blasts.	Yes- associations share with members, have seen additional promotion through community newsletters like RE:MiamiBeach
	Messages 1, 2, 4, 5	Reduce preventable accidents and damage from flood waters.	OP#17- New Ordinance: Seawall Ordinance 2021-4393 establishing construction standards and establishing a minimum elevation of 5.7' NAVD for new construction of seawalls. (Activity 430)	Environment and Sustainability, Building, Public Works, City Manager's Office	Passed January 2021	This ordinance was passed in January 2021. The first year focuses on communication and education. Enforcement will begin 2022. A letter was sent directly to property owners to inform them of new ordinance	Yes- residents

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
3c: Residents: Condo/Neighborhood Associations	Messages 1 through 10	Increase insurance coverage Increase retrofits, flood resistant materials	See OP#1,3,4,5,9,16 OP#8-Fact Sheet provided in person at meetings, and also shared by associations with members.	Building, Communications	Ongoing	*Described previously in the 'All of Miami Beach' audience	Yes-associations share with members
4a. Businesses: tenants*	Messages 1 through 10 Importance of insurance coverage and discussing storm/ flood preparation with landlord.	Increase insurance coverage Increase retrofits, flood resistant materials (Targeted through Flood Insurance Coverage Improvement)	See OP#1,3,4,6,16 OP#8-Fact Sheet emailed and mailed with the Business Tax Receipt (BTR) renewals.	Building, City Manager's Office, Finance	Fall 2021	This fact sheet was updated Fall 2021. It is mailed to businesses renewing their Business Tax Receipts. Approximately 6,200 copies were mailed to businesses in 2020.	No
4b. Businesses: property owners*	Messages 1 through 10 Importance of insurance coverage and discussing storm/ flood preparation with tenants. Resources to understand elevation, public infrastructure improvements, resources for retrofits.	Increase insurance coverage Increase retrofits, flood resistant materials (Targeted through Flood Insurance Coverage Assessment)	See OP#1,3,4,6,16 OP#8-Fact Sheet emailed and mailed with the Business Tax Receipt (BTR) renewals. (Supports Activity 360) Flood Protection Assistance meetings conducted one-on-one with Flood Plain Manager (Activity 360)	City Manager's Office, Building, Finance	Fall 2021	This fact sheet was updated Fall 2021. It is mailed to businesses renewing their Business Tax Receipts. Approximately 6,200 copies were mailed to businesses in 2021. In 2021, 2 flood protection assistance meeting held place with individual property owners.	No
	Message 1, 2, 4, 5, 9, 10 Insure your property from flood loss.	Increase retrofits, use of flood resistant materials Reduce preventable accidents and damage from flood waters. Increase in inquiries/technical assistance to the Flood Plain Manager Increase insurance coverage	OP #15- Private Property Adaptation (PPA) Program to promote and support flood mitigation property improvements	City Manager's Office (Resilience)	Ongoing	The PPA program is currently under development and has been approved \$1.3M for FY2022. To apply, properties must provide proof of flood insurance and obtain an Elevation Certificate. Presentation was given to Miami Beach Chamber of Commerce to promote the upcoming PPA program and provide a brief overview of flood awareness. With participation from elected official.	Yes- public officials beginning to share program
4c. Businesses: contractors	Message 1 through 8 Importance of protecting equipment and vehicles. Education in retrofits and flood resistant materials.	Increase resilient retrofits, flood resistant materials.	See OP#6 OP#8-Fact Sheet for "building resiliently" issued with building permits.	Building	Ongoing	The retrofit fact sheets have been handed out to homeowners, contractors, architects and engineers through the building permitting process and the community industrial construction meetings.	Yes-contractors share with property owners

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
4c. Businesses: contractors	<p>Message 8</p> <p>Importance of keeping the Biscayne Bay clean and the storm drain system clean.</p> <p>(Supports Activity 540 Drainage System Maintenance- Compliments National Pollution Discharge Elimination System (NPDES) outreach.)</p>	Reduce dumping and pollutant discharges to storm drains and Bay.	<p>OP#8-Fact Sheet for Biscayne Bay and storm drain system cleanliness issued with building permits (Supports Activity 540)</p> <p>Activity 540-Included as a condition in Right of Way and Building Permit Condition.</p> <p>OP#17- New Ordinance: Fertilizer Ordinance and Erosion Control Ordinance (Activity 540 and Activity 430)</p>	Building, Environment and Sustainability	<p>Ongoing</p> <p>Ordinances passed Fall 2021</p>	<p>This fact sheet was updated Fall 2021 and is available at the City's website and physical copies can be found at the Building Department.</p> <p>The following ordinances were passed: Fertilizer Ordinance 2021-4392 that restricts the use of fertilizer to minimize negative environmental effects; Erosion Control Ordinance 2021-4435 that controls, reduces, and prevents the discharge of stormwater pollutants (540 and 430)</p>	Yes-contractors share with sub-contractors
5. Real Estate Agents and Insurance Agents	<p>Messages 1 through 8</p> <p>The City is investing in flood risk reduction efforts. Know your elevation and your options to reduce risk.</p> <p>Resources to understand personal property elevation, if there is any history of flooding.</p> <p>(Supports Activity 340 Real Estate Agents Brochure)</p>	<p>Maintain or increase flood insurance coverage rates.</p> <p>Increase resilient retrofits with renovations.</p> <p>Increase in information inquiries/technical assistance to the Flood Plain Manager.</p>	<p>See OP#1,3</p> <p>OP#10-Real Estate Fact Sheet available on City website</p> <p>OP#10-Real Estate Fact Sheet to be distributed to MB agencies, and by the Miami Association of Realtors.</p> <p>OP#11-Letter to Real Estate Agents, Insurance Agents, and Banks.</p>	Building, Communications	Fall 2021	Targeted letter sent to more than 90 real estate agents, insurance agents, and banks on Miami Beach advising about flood zone information.	Yes-Real Estate agencies and agents share
6. Local Organizations (Schools, Neighborhood Associations, Civic Organizations, Cultural Organizations, etc.).	<p>Messages 1 through 10</p> <p>Importance of flood insurance and building resiliently.</p>	Increase in information provided at organization meetings.	<p>See OP#1,3,4</p> <p>OP#8-Fact Sheet provided at meetings by Community Outreach Specialist</p>	Building, Communications	See OP#1 for more information.	Marketing and Communications Department attends meetings and provides fact sheets. Due to public health regulations, public meetings have not taken place, however, the information is made publically available through the website. Flood-related public meetings conducted virtually promote this material.	Yes- organizations share
	Importance of being prepared through signing up with City communications channels for information on flood, hurricane, and King Tide preparedness.	Increase in organizations signed up for Social Media and E-Blasts.	See OP#6	Communications	<p>Spring and Fall King Tide season emails.</p> <p>Beginning of hurricane season in June and preparation messages.</p> <p>Flood response emails and social media posts.</p>	OP#12- In 2021, there were more than 10 Tweets specifically containing messages about King Tides. Tweets related to flood awareness received more than 140,000 impressions.	Yes- organizations, media share.

Target Audience	Messages	Outcome (Desired Changes in Behavior)	Project(s) to Support Message	Department Assignment	2021 Status of Projects	2020/2021 Project Accomplishments	Stakeholder
7. Special Projects All audiences	<p>Messages 1,3,5</p> <p>Stormwater Management Dashboard</p> <p>Importance of reducing flood risk, measuring the effectiveness of stormwater program and responding to flooding.</p>	<p>Increase safety awareness before, during and after flood events.</p> <p>Reduce preventable accidents and damage from flood waters.</p>	<p>Additional Project: OP#13 Stormwater Management Dashboard</p>	<p>City Manager's Office (Resilience), Public Works, IT</p>	<p>Spring 2020 Phase II completed</p>	<p>The dashboard's purpose is to measure how the city is becoming more resilient over time, track the effectiveness of the stormwater program and understand the impact of extreme events as well as the city's response.</p> <p>The dashboard has a section on resilient improvements such as number of properties that have been built above BFE and number of properties with resilient improvements.</p> <p>In 2021, dashboard documented 452 instances of flood and drainage related work orders in which Public Works responds to standing water and flooding issues.</p>	<p>No</p>
	<p>Messages 1 and 3</p> <p>After Actions Capturing Extreme Rain Events and King Tides</p> <p>Importance of understanding the impact of heavy rain events and how the city can better respond and document.</p>	<p>Increase safety awareness before, during and after flood events.</p> <p>Reduce preventable accidents and damage from flood waters.</p> <p>Increase retrofits, flood resistant materials.</p> <p>Increase flood preparedness awareness.</p>	<p>Additional Project: OP#14- After Actions</p>	<p>City Manager's Office (Resilience), Public Works</p>	<p>Ongoing - as needed</p>	<p>Understanding the impact of heavy rain events and King Tides allows the city to better prepare, communicate and make improvements. After Actions include recommendations to improve the city's response to flooding and data collection efforts. In 2021, the city did not experience heavy impacts from flooding or storms, so an After Action was not necessary.</p>	<p>Shared in Sustainability and Resiliency Committee - open to residents.</p>

SUCCESS MEASURES

The following success measures show progress toward the desired outcomes described on the outreach implementation table. The measures not only serve as a tracking mechanism, but they are also important to celebrate successful initiatives and identify areas of improvement. The measures help illustrate the city’s stormwater program resilience initiatives and efforts undertaken in the past years. The PPI plan’s outcomes are highlighted below based on importance, alignment with the city’s goals and data availability. The tables show the plan’s desired outcomes (at the top) and are followed by measures indicating progress made and corresponding data.

Outcomes:

1. Increase comprehensive awareness of CRS and Miami Beach flood messages
2. Increase awareness of being safe before, during and after flood events.

Success Measures	2017	2018	2019	2020	2021
	Actual	Actual	Actual	Actual	Actual
Number of Twitter impressions about flood awareness messages	256,224	410,747	1,217,629 ¹	635,463	142,631
Number of pageviews on MBRising Above website ²	N/A	13,255	28,134	19,651	21,619
Usefulness of City of Miami Beach's flood awareness information shared through Facebook (by percent of respondents rating the item as very useful or moderately useful)	N/A	N/A	47%	39% ³	n/a ⁴

Usefulness of City of Miami Beach's flood awareness information shared through Twitter (by percent of respondents rating the item as very useful or moderately useful)	N/A	N/A	53%	25% ³	n/a ⁴
Usefulness of City of Miami Beach's flood awareness information shared through city email (by percent of respondents rating the item as very useful or moderately useful)	N/A	N/A	78%	96%	n/a ⁴

¹Twitter impressions increased significantly in 2019 due to the implementation of communication campaigns and outreach efforts. Data was obtained from the City's Office of Marketing and Communications.

²Number of pageviews captured through mid-October. Data was obtained from the City's Office of Marketing and Communications.

³Questionnaire is not statistically valid.

⁴Annual resident survey was not able to be conducted in 2021 and online poll did not receive sufficient responses

Using various channels to reach different audiences has been a key part of this outreach plan. Since social media is such an important communication channel for various demographics, the city is reaching several residents through this outlet and raising awareness of flooding issues. Promoting flood awareness materials online has also been an important way of communicating with residents and businesses. The city continues measuring the usefulness of flood awareness information by conducting an annual questionnaire. This helps the city tailor messaging for different channels and audiences. Due to the pandemic, the city was unable to conduct its annual citywide survey in 2021. However, as part of outreach for the upcoming Private Property Adaptation program, a poll was conducted in 2020 that found:

- Usefulness of City of Miami Beach's flood awareness information shared through Facebook was 38%.
- Usefulness of City of Miami Beach's flood awareness information shared through Twitter was 25%.
- Usefulness of City of Miami Beach's flood awareness information shared through city email is the most useful, which was high at 96%.

One of the limitations of the questionnaire is that is not statistically valid, however there more than 400 responses. The number of pageviews on MB Rising Above increased from 19,651 in 2020 to 21,619 in 2021. Pageviews increased primarily in 2019 due to the highly

publicized Miami Beach Rising Above education campaign created to better educate residents and visitors about the city’s resilience efforts. In addition, in 2020 the city launched a Neighborhood Services team with a project-specific portal for public engagement on specific flood mitigation projects that has been widely utilized.

Outcome: Reduce preventable accidents and damage from flood waters

Success Measures	2016	2017	2018	2019	2020	2021
	Actual	Actual	Actual	Actual	Actual	Actual
Linear feet of elevated roadways (cumulative) ²	2,700	10,000	40,500	58,800	58,800	58,800
Cumulative increase in stormwater treatment system capacity (gallons per minute) ³	16,000	148,400	357,600	481,600	481,600	481,600
Percent of flood and drainage complaints resolved in 5 days from initiation date	71%	88%	73%	73%	66%	74%
% of catch basins and associated piping cleaned annually	85%	95%	100%	100%	100%	100%
Total NFIP (National Flood Insurance Program) claims	15	445	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵

¹ Data provided is accurate to-date of written report, does not reflect November or December data

² This data considers all roads elevated in linear feet. The data doesn’t take into consideration the different number of lanes per street raised and their width. Methodology updated by Public Works Department, including only projects that have reached substantial completion since 2016.

³ Includes stationary stormwater treatment systems. Methodology updated by Public Works Department including projects that have reached substantial completion since 2016. Only new generation stormwater treatment stations are being counted.

⁵ Data from 2017 reflects claims associated with Hurricane Irma. Data for 2018, 2019, and 2020 data was requested from FEMA and is not yet available.

Reducing preventable accidents and damage from flood waters is an important desired outcome of the plan and the stormwater program. The measures above help the city track progress on this area but also reflect the various efforts dedicated to improving the storm water system, responding to flooding more efficiently and building resiliently.

The City of Miami Beach reduces potential pollution and continuously improves its stormwater management through a combination of education and outreach, good housekeeping, as well as the use of cutting-edge technology and industry-vetted operational practices. As it relates to the operations of its stormwater system, the city has made a commitment to inspect, clean and maintain the entire stormwater system at least once per year. Public Works Operations staff responsible for overseeing these activities is evaluated annually on their ability to meet this metric. In addition, every year Environment and Sustainability Department staff conducts an audit of these activities as part of the National Pollution Discharge Elimination System (NPDES) annual reporting.

The city goes above-and-beyond in its stormwater management. For reference, the NPDES permit that governs the system’s operation requires the entire system be inspected, cleaned and maintained a minimum of once every three years. The NPDES annual reports for most municipalities show that they clean their system approximately once every five to seven years. In addition to exceeding the required NPDES frequency the city cleans certain structures more frequently than once a year. For example, stormwater treatment systems are cleaned at a minimum once per quarter as required by their maintenance manuals. The city elects to clean certain stormwater treatment systems more frequently, as needed. Stormwater treatment systems connected to higher trafficked drainage basins in tourism areas are cleaned once per week to ensure they are preventing as much pollution from entering the receiving water body, as well as operating as designed.

Outcome: Increase awareness of being safe before, during and after a flood event

Success Measures	2016	2017	2018	2019	2020	2021
	Actual	Actual	Actual	Actual	Actual	Actual
Household is prepared with food/water/supplies for an emergency (percent of strongly agree and agree)	58%	N/A	N/A	66%	N/A	N/A

I know where to get information during an emergency (percent of strongly agree and agree)	65%	N/A	N/A	71%	N/A	N/A
I'm comfortable with my building(s) flood risk protections (new 2019 measure)	N/A	N/A	N/A	43%	N/A	N/A

Increasing awareness of being safe before, during and a after a flood event is important to ensure residents have the information needed to remain safe and protect their property during extreme weather events. The Resident Survey measures emergency preparedness and awareness as it relates to weather events and emergencies. Results in both areas increased. The survey is conducted to measure residents' satisfaction with city services and perceptions about various issues. The most recent survey was conducted in the Spring of 2019.

Outcome: Reduce preventable accidents and damage from flood waters

Success Measures	2009	2012	2014	2016	2017	2018	2019	2020	2021
	Actual								
Percent of residents observing increased flooding	N/A*	N/A*	N/A*	74%	N/A*	N/A*	40%	N/A*	N/A*
Resident satisfaction with efforts to address stormwater and drainage (rating of excellent or good)	44%	37%	25%	46%	N/A*	N/A*	50%	N/A*	N/A*

*Resident Survey data not available.

In order to understand if residents are experiencing issues with flooding and drainage, survey questions related to these areas are provided to households in Miami Beach. In addition, data related to the satisfaction with stormwater program is provided above.

- The percent of residents observing flooding decreased by 34% since 2016.
- Satisfaction with efforts to address stormwater and drainage improved by 4% since 2016. This issue ranked also as a top priority item for respondents.

Outcome: Increase insurance coverage for 2-4 units and non-residential units

Success Measures	2017	2018
	Actual	Actual
% of units with NFIP insurance policies in AE and X areas*	84%	80%
% of units with NFIP insurance policies in AE areas*	86%	81%
Percent of units with NFIP insurance policies in X areas*	58%	63%
Percent of 2-4 units with NFIP insurance policies*	46%	47%
Percent of non-residential units with NFIP insurance policies*	17%	15%

*Data accuracy is affected by various factors explained below. The flood insurance coverage assessment is required every five years for CRS credit.

Property data was obtained from the Miami-Dade County Property Appraiser. National Flood Insurance Coverage data was obtained from FEMA National Flood Insurance Program. The assessment was not conducted in 2019, 2020 or 2021, as it's only required every five years.

Ninety-three percent of Miami Beach's buildings are located in the Special Flood Hazard Area (SFHA) AE Flood Zone. Location in the AE flood zone means that insurance is required for units with federally backed mortgages. The remaining buildings, 7%, are located in Zone X. Buildings in the X zone, adjacent to the AE flood zone, are not required to carry insurance, however, they are vulnerable to flooding and they are encouraged to purchase insurance. The committee examined the flood insurance coverage in Miami Beach in both 2017 and 2018 to identify where coverage can be improved. Specifically, the committee focused on 2-4 units and non-residential units due to a lower rate of coverage. These properties were actively targeted to increase insurance coverage.

Miami Beach has an overall high rate of flood insurance coverage. In 2020 and 2021, there was a focus on understanding and communicating the changes occurring in local FEMA

maps, in addition to the national changes happening with Risk Rating 2.0. The information is provided on the website, has been highlighted on MB Magazine which is mailed to all residents, has been provided to elected officials via a Letter to Commission, and has been promoted through different community meetings and presentations. It is important that the community remain informed and that the city provides as much information as possible to encourage all property owners to purchase insurance. The insurance coverage rate has remained stable in the last three years with minor changes in percent of units covered. The table above shows:

- The overall % of units with NFIP Insurance Policies in AE and X areas slightly decreased to 80% in 2018 from 84% in 2017.
- The percent of units with NFIP Insurance Policies in AE areas decreased from 86% in 2017 to 81% in 2018. From 2017 to 2018, there was an increase of approximately 1,634 units in the AE area. The spike in units from one year to the next one affects the percent of units insured in 2018, as this percent is calculated as number of policies over number of units. This was further impacted by 1,323 fewer policies for this area.
- The percent of units with NFIP Insurance Policies in X areas increased to 63% in 2018 compared to 58% in 2017. For the X zone, the change in units from 2017 to 2018 was 15 fewer units and the change in policies was 197 more policies in 2018. The decrease of new units in this area resulted in a higher percent for the measure "Percent of units with NFIP Insurance Policies in X areas." The increase in policies also impacted the percent of units covered by flood insurance.
- The percent of 2-4 units with NFIP Insurance Policies increased to 47% in 2018 compared to 46% in 2017.
- The percent of non-residential units with NFIP Insurance Policies decreased to 15% in 2018 from 17% in 2017.

Two factors affecting the accuracy of data were identified in this analysis. First, both data sources, Miami-Dade County Property Appraiser and NFIP, are external to the city. For this reason, the reliability of the data is not within the city's control. Another factor is the number of units obtained for this report which was captured in two different points of time for comparison purposes. Both systems likely have reporting lag times as well. Changing the time frames to account for increase in new units may result in slightly different insurance coverage rates.

The committee also discussed reasons that may be impacting the rate of flood insurance coverage in the city. For example, properties without a federally backed mortgage do not require flood insurance. Homeowners of these properties may decide to drop flood insurance or seek a private insurer. Another reason is that NFIP flood insurance policies in the AE zone are more expensive than in 2017. The flood insurance assessment shows that the average policy for the AE zone costs \$49 more in 2018 than in 2017. This increase may be a reason for homeowners to seek lower rates in the private market. Private insurance coverage for

flooding is not part of this assessment. It is likely that the inclusion of this data may change the coverage rate results.

This analysis also compliments the flood insurance coverage assessment, coverage improvement plan, and coverage implementation plan as part of the CRS Activity 370 Flood Insurance Coverage Improvement Plan.

SUMMARY OF RECOMMENDATIONS FOR IMPROVEMENT

As part of this report, recommendations were developed with the committee to make improvements to the implementation of the plan. The following paragraphs provide a summary of recommendations with their corresponding status.

1. **Focusing on tracking flood insurance** coverage is a lesson the city learned while completing this report for the first time. The city conducted analysis to understand coverage for 2018, however, there are data variables that need to be further analyzed in future years to better understand the rate of flood insurance.

STATUS: ONGOING

Among the recommended actions from 2018 were to connect with private insurance companies to analyze private coverage. As the city and committee members obtain more access to private insurance companies, flood insurance coverage will be further explored.

The city will be updating the flood insurance coverage assessment in 2022 along with the update to the PPI. Updates to the coverage assessment are only required once every 5 years; it was last conducted in 2018. This supports Activity 370.

2. **Continue implementing outreach projects** to reduce flood risk and help reduce the cost of flood insurance premiums.

STATUS: ONGOING

As mentioned above, this year there was a new focus on understanding and communicating the changes occurring in local FEMA maps, in addition to the national changes happening with Risk Rating 2.0. Due to the ongoing health crisis, the city is focused on using the website and online communication methods to continue informing the community about flood risk. The city will continue to provide any updates to the community.

3. **Adopting plans and policies to advance resilience.** Over the last four years, more than 20 land use amendments have been adopted to address sea level rise and a full city Resiliency Code update is underway.

STATUS: ONGOING

The new 2040 Comprehensive Plan incorporates resilience, sea level rise and sustainability (2019). In 2020, Buoyant City and the Urban Forestry Master Plan were completed. Most recently, in 2021 there were several ordinances passed that enhance the city's flood awareness and mitigation efforts: 2 new ordinances—fertilizer and erosion—to manage stormwater quality; dune protection ordinance that provides, among other benefits, protection from storm surge; seawall ordinance that sets minimum height for new seawall construction. These resources are available through: <http://www.mbrisingabove.com>

The new Resiliency Code is expected to be released in 2022 as an entire overhaul of the land development regulations and including climate change and sea level rise planning.

- 4. Implementing flood mitigation/ climate adaptation projects:** Miami Beach is leading the way in South Florida in designing neighborhood projects with an integrated approach to addressing flooding and improving the water and sewer systems in each neighborhood in a holistic way.

STATUS: ONGOING

Neighborhood projects are designed to have multiple co-benefits including the installation of a new and robust drainage system, upgrading aging water and sewer infrastructure, improving mobility with bike lanes and complete streets, lighting, and incorporating native and Florida friendly vegetation and tree canopy to help manage stormwater and improve stormwater quality. Additionally, greater emphasis on aesthetics, particularly regarding the above-ground elements associated with neighborhood projects, is being implemented and will be another significant co-benefit. Sunset Harbour neighborhood and other areas where neighborhood improvements have been completed now experience far less flooding due to king tides and intense rainfalls. Upcoming projects include:

Short-term: Begin construction in West Avenue, start the design of First Street and finalize the construction in Indian Creek.

Mid-term and Long-term: Commence the Neighborhood Improvement Projects based on the Jacob's Engineering neighborhood project prioritization. The City Commission approved the Neighborhood Prioritization on July 24, 2020.

- 5. Launching an inspirational resiliency vision campaign** to envision what Miami Beach will look like in thirty years or longer.

STATUS: ONGOING

The campaign illustrates the city’s resilience efforts, the fight against sea level rise, and the planned mitigation and adaptation measures the city envisions for the future. The city is partnering with Florida International University (FIU) to create conversation with the larger community about Vision 2070—what will Miami Beach look like in 50 years, given the impacts of sea level rise and climate change? FIU architecture students created visions of how our city and its historic buildings will function in 2070, spurring conversations about what kind of future our residents can imagine. A community workshop was held in July 2021 to spur these conversations.

6. **Promote the Private Property Adaptation (PPA) Program** which will promote and support flood mitigation property improvements.

STATUS: ONGOING

The PPA program is currently under development and has been approved \$1.3M for FY 2022. It is intended to provide a 50/50 matching grant funds for private property owners—single family homeowners, multifamily property owners, and commercial property owners—to undertake flood mitigation improvements. The program is split into two phases: the first is an assessment to analyze and risks and possible improvements for each property; the second is the design and construction of improvements. In addition, the program can link to other funding opportunities available in the city or at the federal level, like the FMA program run through FEMA. To apply for the PPA, properties must provide proof of flood insurance and obtain an Elevation Certificate. The application is expected to open in 2022.

7. **Seawall Program:** Make forward progress and conduct outreach and education

STATUS: ONGOING

Seawall Ordinance 2021-4393 establishes construction standards and establishes a minimum elevation of 5.7' NAVD for new construction of seawalls or seawalls undergoing substantial improvement. This ordinance was passed in January 2021. The first year focuses on communication and education, and enforcement will begin in 2022. This helps support Activity 430.

8. **Create new Program for Public Information (PPI) Plan**

STATUS: PENDING

Under the requirements, a new PPI Plan must be produced every five years. The city’s previous PPI Plan was created in 2017, and thus must be updated for 2022. In the next year, this will be a main source of focus.

CONCLUSION & NEXT STEPS

Overall, the Program for Public Information (PPI) Plan's activities were implemented successfully in 2021 despite the challenges of COVID-19 response and recovery. Various outreach projects were completed and continue to be scheduled for upcoming years. New projects have been added with the purpose of using data for better decision-making and more effective communication. In addition, the city is preparing for its annual CRS audit this December by tracking and documenting PPI efforts.

Miami Beach is committed to reducing the cost of flood insurance, reducing flood risk and increasing flood awareness. The efforts complement the stormwater program, land use amendments to reduce flood risk, and the *Miami Beach Strategic Plan Through the Lens of Resilience*.

This Program for Public Information (PPI) Annual Update & Evaluation Report, developed for the National Flood Insurance Program Community Rating System program, opens the doors for increased integration of initiatives that go hand in hand with resilience practices and provides the city with opportunities to improve its programs. The committee and staff will continue to implement the plan, track progress, and make recommended improvements.

For more information, visit MBRisingabove.com, and select the Flood Awareness tab. MBRisingabove.com is the City of Miami Beach's resource for climate change adaptation and mitigation efforts.