FEBRUARY 24-26, 2020 | MIAMI, FL

Housing Opportunity Conference
Living with Water

Katharine Burgess
Urban Land Institute
Moderator

Nicholas Iselin
Lendlease

Jacqueline Gonzalez
Touzet
Touzet Studio

Laurie Schoeman
Enterprise Community Partners, Inc.

Thomas Mooney
Planning Department for the City of Miami Beach

Katharine Burgess
Urban Land Institute
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LIVING WITH WATER
GROVE FEATURES

Grove Central will feature a large rooftop solar array, capable of powering the entire development. It will incorporate a large micro-gold battery that will provide silent, stable power without toxic gas emissions. Very importantly, Grove Central Station has been designed to be a stable hub of normalcy during natural disturbances. Resilient design will allow Grove Central to continue to deliver people to their jobs, provide key goods and services shortly after any storm event, and power residences and businesses. Grove Central Station exemplifies cutting-edge and smart development for 21st century Miami.
SHEPHERD ECO, WYNWOOD
Living with Water
Housing Opportunity Conference
Enterprise Community Partners
Urban Land Institute
February 25th, 2020
“People who are already vulnerable, including lower-income and other marginalized communities, have lower capacity to prepare for and cope with extreme weather and climate-related events and are expected to experience greater impacts”
-National Climate Assessment 2019
An aerial view of the destruction left by Hurricane Michael in Mexico Beach, Florida.
To all Tenants of the Sea Horse RV Park:

We regret to inform you due to the severity of damage done by Hurricane Irma we must close the RV Park. We have a number of potential life safety issues and it is not safe to stay at the park.

Please remove all your belongings that have not been damaged by the hurricane and seek housing off the grounds. We recommend you contact FEMA using these contact numbers and websites, they can help you with temporary housing and financial assistance.

Call: 1-800-621-3362 FEMA – Federal Emergency Management Agency
By computer: DisasterAssistance.gov

Electricity service and water supply will not be returned to the park as the damage is too severe to allow it to be connected. Within the next week we will be removing damaged trailers and disassembling any hook-ups. If you own the trailer and it is capable of being moved, you must have it removed. If you have placed it in storage, please remove it. If you do not own it, we will take it to the dump.
Strategies for Multifamily Housing
Resilience
A Penthouse for a Boiler, 334 East 8th Street Lower East Side, NYC
NY Times 2018
MANTÉNGASE SEGUNO
UNA GUÍA PARA EL DISEÑO DE VIVIENDAS RESILIENTES EN COMUNIDADES ISLEÑAS

KEEP SAFE
A GUIDE FOR RESILIENT HOUSING DESIGN IN ISLAND COMMUNITIES
KEEPSAFE CHAPTERS

Introduction
Chapter 1: A Safer Site
Chapter 2: Building Protection
Chapter 3: Passive Habitability
Chapter 4: Energy Generation
Chapter 5: Water Management
Chapter 6: Household Preparedness
Chapter 7: Community Engagement
Faces of Resilience

- **People**: The extent of personal discomfort, harm, injury, or loss of life.
- **Physical Assets**: Loss or damage to structural and architectural building components, MEP and IT equipment, utilities, landscaping, contents.
- **Operations**: Disruption to building operations and functionality, occupancy, egress/ingress, critical systems, or lab activities.
- **Revenue**: Loss of revenue due to business interruption, specifically in relation to tenants.
- **Reputation**: Negative media attention or impact on industry reputation in the aftermath of an impactful shock or stress.
“The house is the place where both planning and community development impact upon the family and individual. Planning for housing should consider the social, economic and psychological needs of the individuals and families who will occupy the housing. And housing must be considered within the community context.”

Lucilla Fuller Marvel
• Barrio Toro Negro Inc., Ciales
• Casa Pueblo, Adjuntas
• Centro Comunitario de Caimito, San Juan
• Centro de Adiestramiento para Personas con Impedimentos (CAPI Inc.)
• Comunidad Corcovada, Añasco
• Daguao, Naguabo
• Enlace, San Juan
• Ferdinando Abreu Y Casa Ausente, Dorado
• Heart 911, New York City
• Hogar Alberque Para Niños
• Jaquita Baya/ La Comedería, Miramar, San Juan
• PECES, Punta Santiago, Humacao
• Plenitud, Las Marías
• Resilient Power Puerto Rico, San Juan
• Rio Chiquito, Ponce
• Rosalina Abreu y Susana Sanabria,
• Asociación Recreativa Educativa y Comunal Barrio Mariana, INC. (ARECMA), Humacao
• San Juan Bay Estuary, San Juan
• Taller Salud, Loíza
Systems of a Community Resilience Center

COMMUNICATIONS
- **WiFi**: for internet and remote operations.
- **Cellular phone**: for direct communication.
- **Radio**: for emergency communications.
- **Solar power**: for off-grid emergency operations.
- **Battery backup**: for power outages.

COMMUNICATIONS

ENERGY STORAGE
- **Battery**: for storage of energy, ensuring that basic needs—like lighting, heating, and cooling—are met.

ENERGY GENERATOR
- **Backup generator**: for emergencies.

WATER COLLECTION
- **Rainwater collection system**: for sustainable water use, such as irrigation, flushing toilets, and cleaning. It can provide water for emergency use.

WATER STORAGE TANK
- **Rainwater storage tank**: can be placed on the roof or underground.

SOLAR POWER
- **Solar panels**: with batteries, providing power to the grid and storing power for emergencies.

SOLAR THERMAL HEATER
- **Thermal energy**: for heating or cooling.

OPENINGS
- **Operable windows and doors**: for natural ventilation.

VENTILATION
- **Design**: for ventilation systems that reduce energy consumption.

YARD PLANTING
- **Landscaping**: to improve air quality and reduce energy costs.

If necessary, a hydroponic system can be installed to provide fresh water and vegetables.
OUR OPPORTUNITY

• FEMA-BRIC and HGMP
• HUD- CDBG, CDBG-DR, CDBG-MIT
• Community Reinvestment Act
THOMAS MOODY
Planning Dept., City of Miami Beach
Living With Water – Policy Innovation on Miami Beach

www.mbrisingabove.com

Thomas R. Mooney, AICP
Planning Director
City of Miami Beach Planning Department

Thomas R. Mooney, AICP
Planning Director
Planning Department
1700 Convention Center Drive – 2nd Floor, Miami Beach, FL 33139
Tel: 305-673-7000 x6191 / tmooney@miamibeachfl.gov
www.miamibeachfl.gov
Miami Beach’s Physical Typology
Hurricane Irma 2.8ft (Sept 10)

2017 KING TIDES
2.3ft (Oct 5)

7 tides over old road

1.7ft old crown road
## Regulations for New Construction to Mitigate Sea Level Rise

<table>
<thead>
<tr>
<th></th>
<th>Old Requirements</th>
<th>New Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Flood Elevation (BFE)</strong></td>
<td>5.44 Feet NAVD (7 Feet NGVD)</td>
<td>6.44 Feet NAVD (8 Feet NGVD)</td>
</tr>
<tr>
<td><strong>Freeboard</strong></td>
<td>0 feet above BFE</td>
<td>+1 to +5 feet above BFE</td>
</tr>
<tr>
<td><strong>Seawall Elevation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Private)</td>
<td>3.2 FT NAVD</td>
<td>4 to 5.7 FT NAVD</td>
</tr>
<tr>
<td></td>
<td>4.76 FT NGVD</td>
<td>5.56 to 7.26 FT NGVD</td>
</tr>
<tr>
<td><strong>Seawall</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Public)</td>
<td>3.2 FT NAVD</td>
<td>5.7 FT NAVD</td>
</tr>
<tr>
<td></td>
<td>4.76 FT NGVD</td>
<td>7.26 FT NGVD</td>
</tr>
<tr>
<td><strong>Minimum required yard</strong></td>
<td>No minimum required</td>
<td>5.0 Feet NAVD (6.56 Feet NGVD)</td>
</tr>
</tbody>
</table>
5th and Alton – Unified Development Site
Miami Beach Historic Districts

14 Local Historic Districts and 4 National Register Districts

2,611 Buildings located in ALL districts

1,890 Contributing Buildings located in ALL districts - 72%
LIVING WITH WATER
Urban Resilience program at ULI

resilience@uli.org
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