

An aerial photograph of Baltimore, Maryland, showing the harbor, city buildings, and a large glass-walled building in the foreground. The image is partially obscured by a dark blue diagonal overlay on the left side.

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BALTIMORE
104th Annual Conference
SEPTEMBER 23-26 **2018**

Rebuilding After Disaster Strikes: Strategies That Work

September 25, 2018

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Rebuilding after Disaster Strikes

Jeff Pomeranz, City Manager,
Cedar Rapids, IA

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2008 Flood Strikes Cedar Rapids

- \$5.4 billion in community-wide damage
- \$1.064 billion paid over 10 years for City recovery
- More than 10 square miles inundated by floodwaters
- 14% of the City and 1,126 city blocks impacted
- 41,771 tons of flood debris removed



People First

- 423 boat rescues performed by Cedar Rapids Firefighters
- 18,623 people living in flood-impacted area
- 10,000 residents displaced by flood
- 1,360 jobs lost
- 45 registered day-care providers damaged, displacing 1,547 children
- 1,800 elementary students displaced



Property Damaged

- 7,749 total parcels flooded
- 5,900 residential properties
- 486 property tax-exempt facilities damaged (government, schools, churches, non-profits)

Services Impacted

- 310 City facilities flooded
- 6 major City buildings destroyed
 - City Hall
 - Central Fire Station
 - Public Works
 - Ground Transportation Center
 - Public Library
 - Animal Control Facility
- 3 of 4 City collector wells and 46 vertical wells disabled
- Water Pollution Control Facility disabled
- Cedar Rapids Community School District offices and elementary school flooded
- 8 iconic cultural assets displaced and destroyed, including museums, theatres, and cultural centers



Housing

- 1,400 properties voluntarily acquired at 107% of pre-flood value
- Funded through CDBG and HMGP for \$128M
- 1,900 structures demolished
- 900 new homes constructed with incentives provided to homebuyers
- 2,400 homes repaired and rehabilitated



Business Recovery

- Five year Business Retention:
 - National Average: 55%
 - Cedar Rapids: 82%
- More than \$86 Million in assistance provided to over 600 Businesses for Rent, Equipment, Loan Interest supplements, Flood Insurance
 - Jumpstart Program -- \$19 Million
 - Expanded Programs -- \$55.6 Million
- Steam Buy Down/Conversion -- \$11.5 Million



City Facilities

With more than 310 City facilities flooded, a number of remarkable building recoveries were made.

- Central Fire Station: \$20 Million
- Paramount Theatre: \$36 Million
- City Services Center: \$36 Million



- Public Library: \$45 Million
- Historic City Hall: \$10 Million
- Animal Care & Control: \$5 Million

Permanent Flood Control

Cedar Rapids Flood Control System

- \$550 Million total project cost
- \$117 Million – Federal US Army Corps of Engineers
- \$267 Million – State of Iowa/Sales Tax Growth

Designed to convey the same water volume as the Flood of 2008, reducing flood risk throughout Cedar Rapids. Consists of a series of floodwalls, levees, gates, and removable walls on both the east and west sides of the river. Community amenities such as trails and greenway space are key components of the system.



Disaster Recovery

Christine Hurley, AICP

Monroe County Assistant County Administrator

ICMA Conference Presenter



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Christine Hurley, AICP

Monroe County Assistant County Administrator

- Leading Florida Keys Recovery, after Hurricane Irma hit in September, 2017
- Over 4000 homes majorly damaged, with 1500 destroyed
- Learn how the Keys are approaching rebuilding through a recovery process

Hurricane Irma Damage

| PRELIMINARY DAMAGE ASSESSMENT (SUMMARY W PARK INFO) - THRU 11/26/17 | | | | | |
|---|-------------|--------------|-------------|-------------|-------------|
| KEY NAME | UNAFFECTED | AFFECTED | MINOR | MAJOR | DESTROYED |
| KEY LARGO | 2581 | 3992 | 326 | 75 | 46 |
| VILLAGE OF ISLAMORADA | 0 | 468 | 427 | 47 | 34 |
| FIESTA KEY | 0 | 0 | 0 | 257 | 0 |
| CRAIG KEY | 0 | 1 | 0 | 0 | 0 |
| CITY OF LAYTON | 4 | 0 | 160 | 15 | 0 |
| LONG KEY | 304 | 86 | 14 | 0 | 1 |
| CONCH KEY | 0 | 78 | 13 | 4 | 10 |
| DUCK KEY | 292 | 361 | 83 | 7 | 0 |
| CITY OF KEY COLONY BEACH | 0 | 462 | 888 | 206 | 1 |
| CITY OF MARATHON | 0 | 4018 | 829 | 1402 | 394 |
| OHIO KEY | 0 | 0 | 0 | 397 | 0 |
| BAHIA HONDA KEY | 6 | 9 | 6 | 0 | 0 |
| BIG PINE KEY | 264 | 1538 | 663 | 299 | 473 |
| LITTLE TORCH KEY | 389 | 300 | 80 | 25 | 37 |
| MIDDLE TORCH KEY | 3 | 0 | 12 | 0 | 0 |
| BIG TORCH KEY | 11 | 4 | 37 | 1 | 0 |
| RAMROD KEY | 31 | 20 | 493 | 12 | 19 |
| SUMMERLAND KEY | 1 | 706 | 20 | 10 | 1 |
| CUDJOE KEY | 134 | 914 | 624 | 52 | 81 |
| SUGARLOAF KEY | 125 | 995 | 207 | 103 | 19 |
| UPPER SUGARLOAF KEY | 175 | 0 | 0 | 0 | 0 |
| LOWER SUGARLOAF KEY | 6 | 161 | 110 | 0 | 0 |
| SADDLEBUNCH KEYS | 82 | 0 | 0 | 0 | 0 |
| SHARK KEY | 0 | 39 | 0 | 0 | 0 |
| BIG COPPITT KEY | 122 | 538 | 63 | 4 | 6 |
| GEIGER KEY | 41 | 252 | 0 | 7 | 12 |
| ROCKLAND KEY | 1 | 60 | 31 | 0 | 5 |
| KEY HAVEN | 0 | 457 | 1 | 0 | 0 |
| STOCK ISLAND | 895 | 565 | 22 | 15 | 17 |
| CITY OF KEY WEST | 0 | 11625 | 282 | 39 | 23 |
| Grand Total | 5467 | 27649 | 5391 | 2977 | 1179 |

The Florida Keys – Rising above Recovery

GOAL: Rebuilding a stronger Florida Keys

Promote public health, safety and general welfare;

Advance adaptation to coastal flooding, storm surge and other hazards;

Protect property, residences and businesses from storm impacts and minimize damages;

Minimize public and private losses due to storms;

Preservation of economy during and after disaster, including business viability and workforce housing;

Preserve and protect the environment including natural and historic resources; and enhance resiliency.

County/City Strategy: To address the unique challenges and diverse needs in our long term recovery

Develop programs to:

- Wind retrofitting of residential structures – provide funding options to harden existing housing units
- Installation of hurricane shutters or impact-windows; metal roofs, reinforced trusses and reinforced garage doors
- Provide funding to elevate existing private residences above BFE (base flood elevation)
- Provide funding to demolish and replace private residences to meet or exceed Building Code and Floodplain requirements (Demolish and Rebuild of Mitigated Building Envelope)
- Develop and increase the supply of workforce housing & choice of rental housing opportunities – identify areas of damaged properties or areas of less damaged properties to more easily and more quickly rebuild safe, energy-efficient and cost effective housing units (Community Workforce Housing Programs)
- Purchase scattered sites for single family homes; purchase parks and redevelop multi-family housing, purchase less vulnerable sites for workforce housing
- Provide funding to rebuild and repair resilient existing housing units as safe, energy-efficient and cost effective housing units (New construction or rehabilitating residences damaged by the storm)
- Identify areas to purchase and not rebuild that area (provide financial incentives to purchase areas in dangerous or high-risk zones)
- Provide funding to purchase developed properties in V-zone with existing residences to create additional open space and natural buffers and rebuild housing outside of V-zone
- Relocate and rebuild other less vulnerable location – safe, durable, physically accessible, energy-efficient and cost effective housing units (Purchase & Rehab assistance)
- Provide funding to purchase abandoned/damaged structures and demolish unsafe structures
- Provide funding to improve infrastructure for drainage at housing units – lessen flooding vulnerability
- Develop infrastructure for improved mass transit – improve mobility & access to services/ jobs
- Provide funding to repair and flood-proof commercial structures and add housing units over the commercial structure to improve local economic conditions, particularly the continued availability of workforce housing & jobs (Flood-proofing of Non-residential Structures)
- Identify/explore cost effectiveness of different types of factory-built housing to replace manufactured housing units.

Florida Keys Community Land Trust Formation

- Formation: A non-profit organization established after Hurricane Irma by Maggie Whitcomb
- Mission: To construct energy efficient and resilient Keys Cottages to be offered as rentals to low income households in perpetuity
- Design: 200 mph wind loads, above BFE, panelized SIPs construction, 2/3 bedroom homes (760 sq. ft./ 1092 sq. ft)

Affordablekeys.org



4 Tiny Resilient Prototype Homes

- Soliciting vendor proposals to design and build 4 different resilient, code compliant prototype homes to lay the foundation for affordable and resilient replacement dwellings for homes destroyed by Hurricane Irma.
- The four customized, lot specific single-family home designs will be scored based upon:
 - Innovation
 - Resilience
 - Price
 - Construction components that can be mass produced

The goal is to identify unique approaches to minimize wind and flood risk, while providing safe, functional, and economical solutions.



Mobile Home Park Acquisition / Reconstruction Community Development Block Grant – Disaster Recovery Funding \$10 Million for Acquisition and \$20 million New Construction

| PARK | COST | UNITS |
|------|---------|----------------------|
| 1 | 808,500 | 13 |
| 2 | 907,500 | 12, plus 5 transient |

County Land Authority will seek these funds to purchase two high-risk destroyed mobile home parks, which would be owned and managed by the Board of County Commissioners and/or the Monroe County Housing Authority. Existing, substandard housing currently below base flood elevation will be demolished and reconstructed as workforce rental housing.

Demolition/Reconstruction/Elevation:
\$50 Million – Community Development Block Grant – Disaster
Recovery (CDBG-DR) Funding
\$3.5 Million – Hazard Mitigation Grant Program (HMGP) Funding



Housing Repair / Weatherization

\$2 Million in Florida State Housing Initiatives Partnership-Disaster Recovery (SHIP-DR) Funding



- Funding of up to \$35,000, per housing unit for repair to eligible owners, providing less risk to Federal, State, and local resources in the future.
- Low Income homeowners or renters may receive up to \$5,000 to improve energy efficiency
- Grant funds for contractors to:
 - replace non-compliant windows or add shutters,
 - add insulation and weatherstripping around doors and windows,
 - replace non-efficient old appliances
 - replace incandescent light bulbs with fluorescent bulbs,
 - replace toilets and shower heads with low flow units.
- Combine with SHIP rehabilitation funds to maximize weatherization services to the home.

Long Term Recovery Group

- Formation: This non-profit organization established in early 2018 creates a network of nonprofit and faith-based organizations
- Mission: To provide recovery services to individuals and families affected by disasters through a coordinated effort
- Activities: Convene recovery support organization to identify community unmet needs, prioritize resources and deliver spiritual, emotional, physical and financial resources to disaster survivors.



Lessons Learned:

- Lack of resources for Recovery, including staff, funding, knowledge of programs
- Demolition not allowed
- Locations for temporary housing – pre-determined/code flexibility
- Procurement under Federal regulations
- Long Term Recovery Group formations to link survivors with case management and assistance
- Substantial Damage and floodplain regulations
- Insurance (wind & flood)
 - Promotion to homeowners before a storm
 - Knowledge of Increased Cost of Compliance (ICC)
 - Liaison between County and insurance companies



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Strategic Disaster Thinking

Kenneth Parker,
Senior Advisor, ICMA, Port Orange, FL

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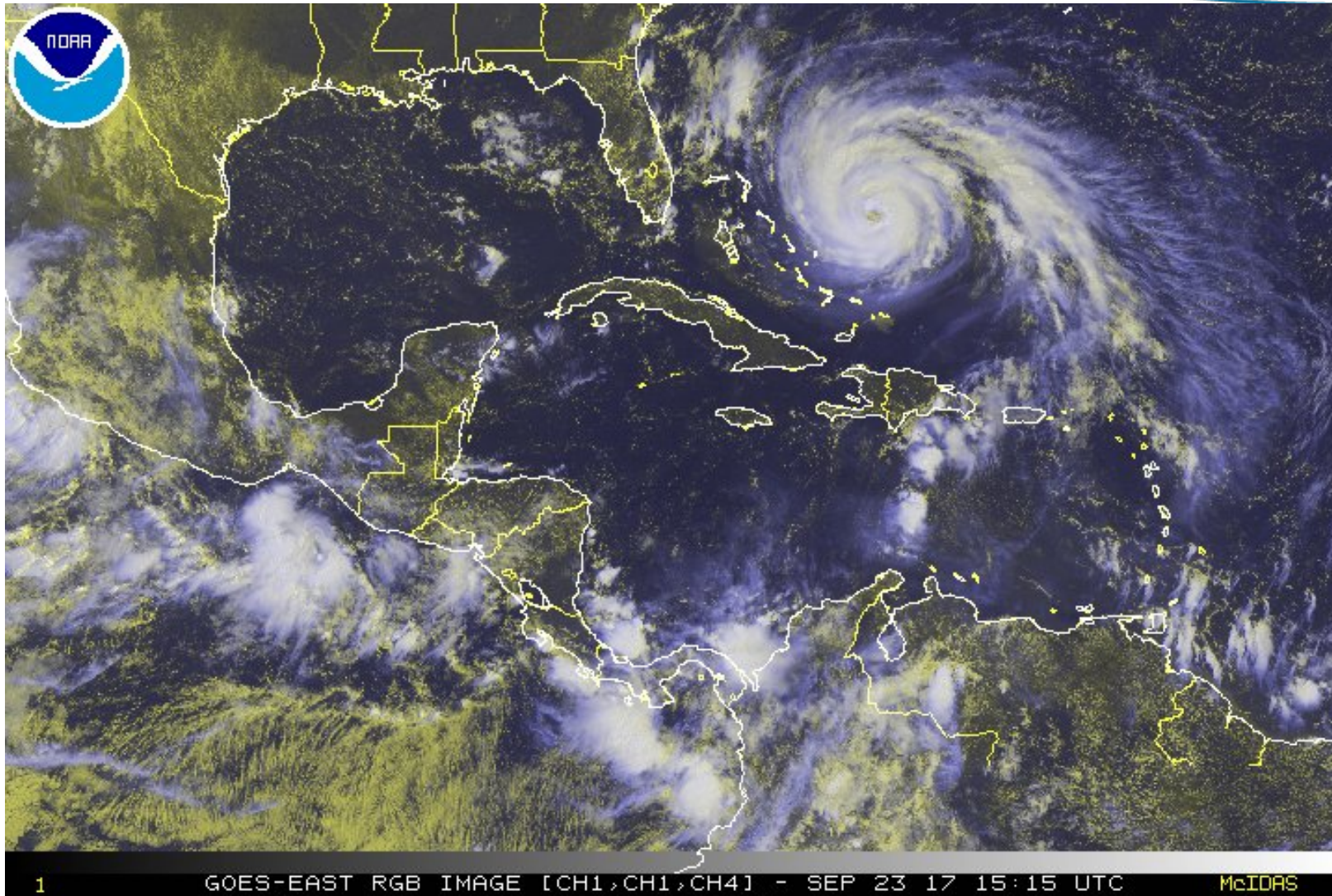
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Disaster Recovery in Puerto Rico

Nydia Rafols, Deputy City Manager,
City of Hallandale Beach, Hallandale Beach, FL

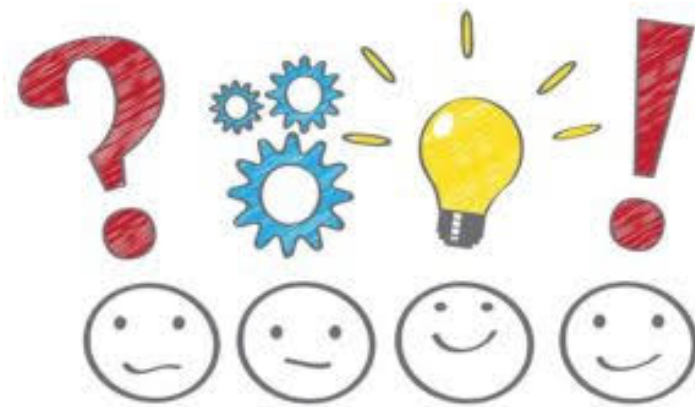
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Hurricane Maria northwest of Puerto Rico, north of the Virgin Islands and east of Florida, 15:15Z, September 23, 2017.

Source: NOAA

QUESTIONS



Thank You!

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An aerial photograph of Baltimore, Maryland, showing the harbor, city buildings, and a marina. A banner is overlaid at the top. The banner has a dark blue section on the left with the ICMA logo and 'conference' in white. The right section is white with 'BALTIMORE' in large red letters, '104th Annual Conference' in smaller black letters, and 'SEPTEMBER 23-26' in black. The year '2018' is in large red letters. At the bottom right, there is a red and white curved graphic with the hashtag '#ICMA2018' in white.

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