

FlaWARN and Operators Without Borders Update

Southeast Florida Utility Council

August 14, 2023; Virtual Meeting

Kevin Carter

FlaWARN Steering Committee Chair

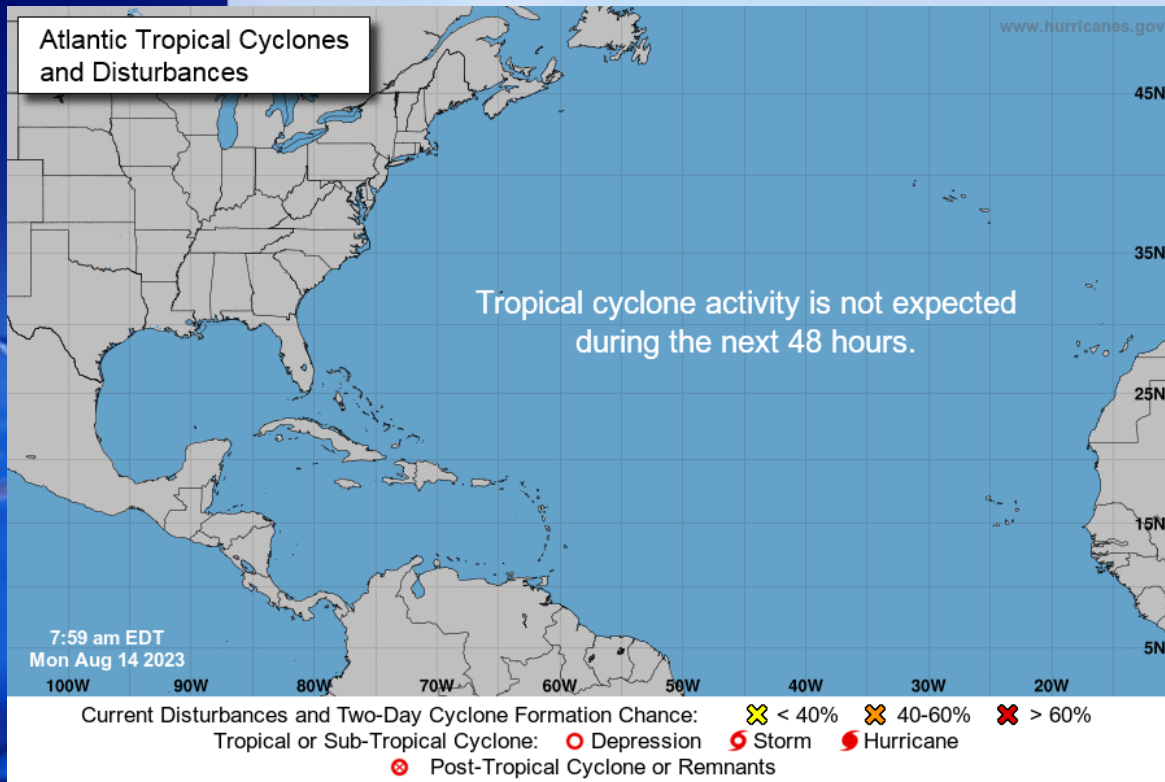
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2023 has been relatively quiet so far but let's break out NOAA's 'Crystal Ball'



Present Conditions



<https://www.nhc.noaa.gov/>

The Future?

Ocean heat is off the charts, so where are the hurricanes? Forecasters warn a change is coming

By Mary Gilbert, CNN Meteorologist
Updated 3:52 PM EDT, Thu August 10, 2023

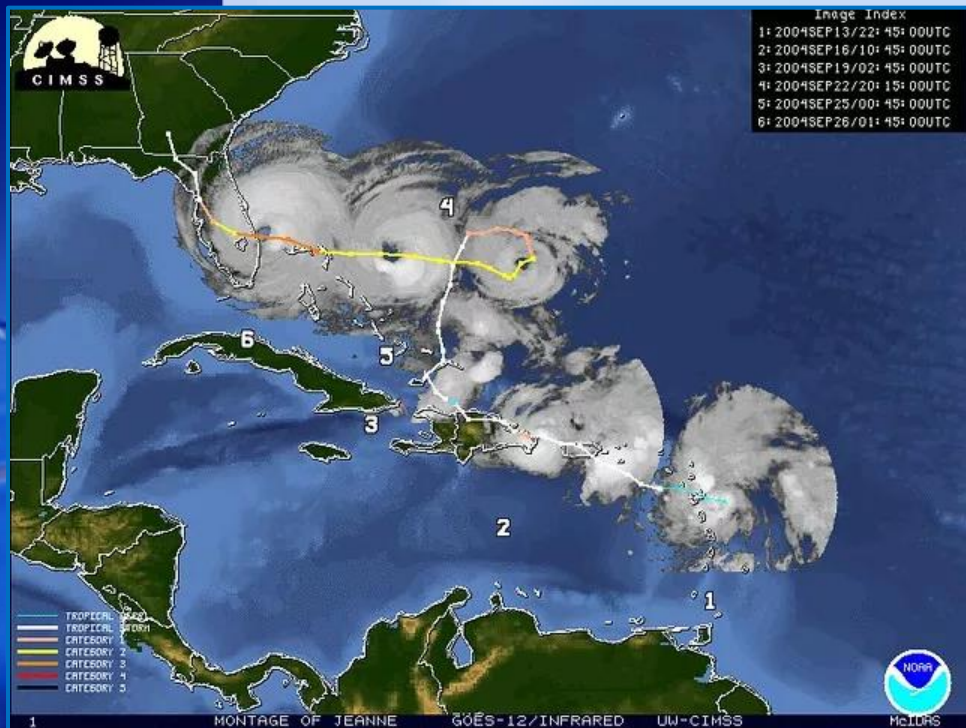
NOAA Atlantic hurricane forecast 2023

	Issue Date May 25	Issue Date August 10	Average (1991-2020)
Named Storms	12-17	14-21	14
Hurricanes	5-9	6-11	7
Major Hurricanes	1-4	2-5	3

SOURCE: NOAA

<https://www.cnn.com/2023/08/10/weather/hurricane-season-ocean-temperatures-climate/index.html>

How do Florida's Water and Wastewater Utilities respond to Florida emergencies?



Hurricane Jeanne's track in 2004

<https://www.nesdis.noaa.gov/news/the-2004-atlantic-hurricane-season-look-back-above>

- The Florida Water/Wastewater Agency Response Network (FlaWARN) is the primary way water sector responds to emergencies and recently global supply chain issues.
- Formalized mutual aid response utility network.
- When part of the state is impacted, other areas in state respond with aid, “Utilities helping Utilities, Friends helping Friends.”
- Created in April 2005 as a result of the devastating impact that Hurricanes Charlie, Frances, Jeanne, and Ivan had in 2004.

FlaWARN's Purpose



The City of Pompano Beach Hurricane Ian response team onsite and bringing back water to the community.

Slide adapted from Andy Campbell's (FlaWARN Administrator) slides from FSAWWA Conference (November 2022)

- Coordinate initial communication between member utilities to ensure the responding utility sends the appropriate personnel with the tools and equipment necessary to both assess and assist the impacted utility.
- Create events in WATER Tracker (online software platform) to facilitate the free flow of information during a crisis.
- Coordinate with State (especially Florida DEP) and Federal Agencies during the response to provide additional resources as available.
- FlaWARN is part of a national WARN system.

Mutual Aid Agreements (MAAs):



The Miami-Dade County Hurricane Ian response team ready to roll!

- Mutual aid agreements establish the terms under which assistance is provided between utilities:
 - Designates points of contacts with authority to provide crisis response.
 - Provides procedures for matching resources to meet the requesting utilities' needs.
 - Delineates span of control for supervision of personnel and equipment.
 - Reimbursement provisions – Federal Emergency Management Agency (FEMA) standard or otherwise agreed upon rates.
 - Liability and worker's compensation provisions.

PLEASE DON'T LET THIS BE YOUR MAA SIGNING CEREMONY LOCATION!



MUTUAL AID AGREEMENT FOR WATER/WASTEWATER

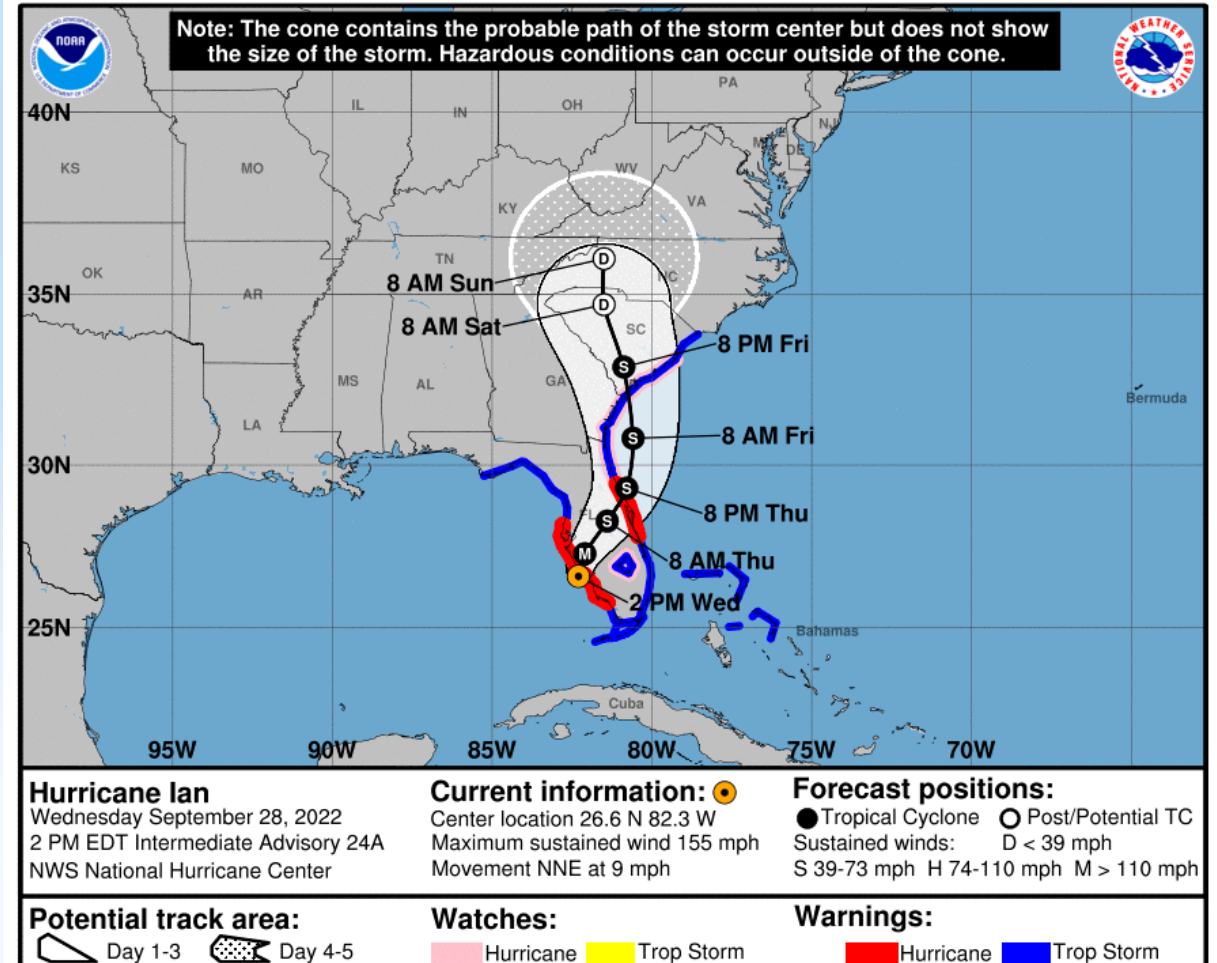
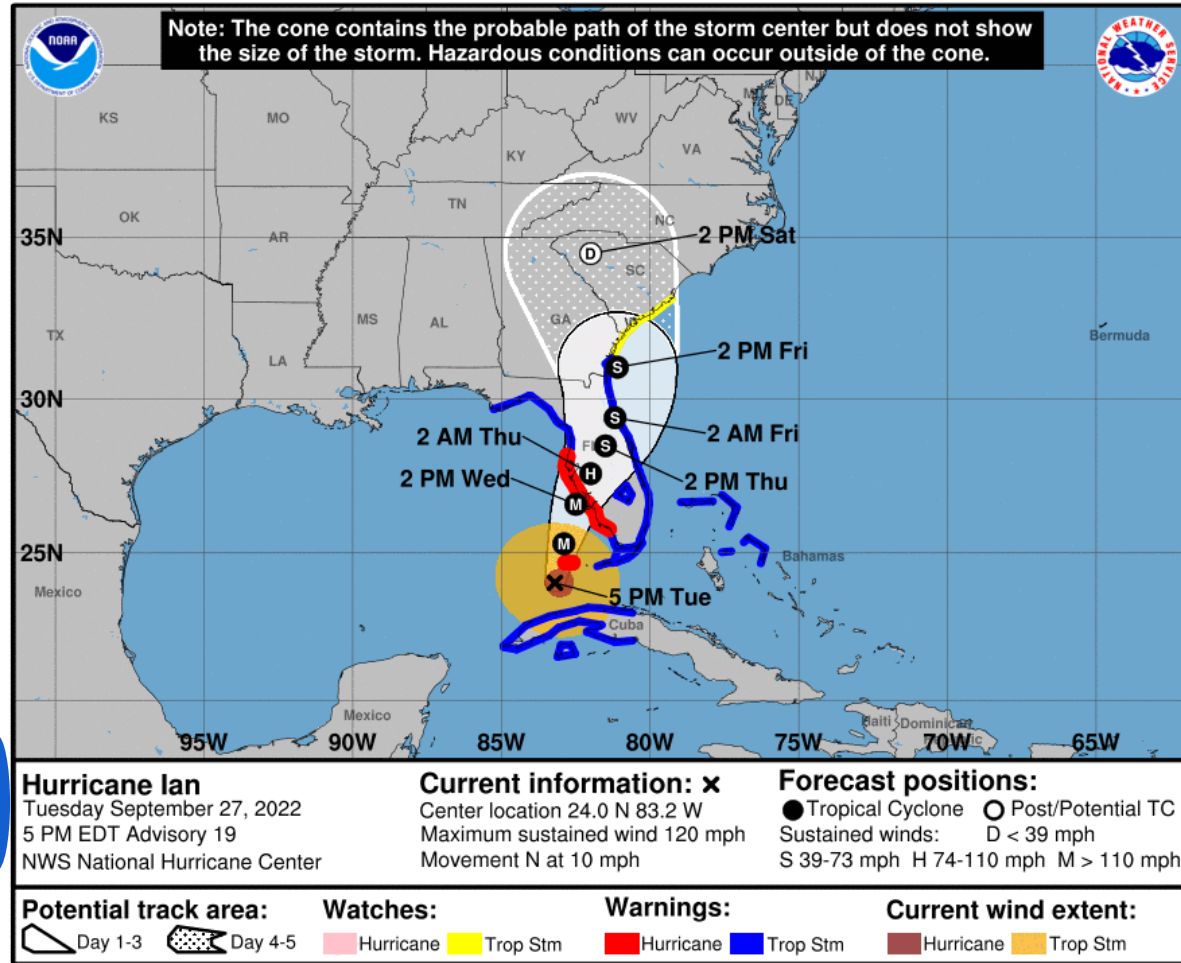
ARTICLE I. PURPOSE

The Water/Wastewater Mutual Aid Program was established to provide a method whereby water/wastewater utilities sustaining physical damage from natural or man made disasters could obtain emergency assistance, in the form of personnel, equipment, and materials and other associated services necessary, from other water/wastewater utilities. The purpose of this Agreement is to formally document such program.

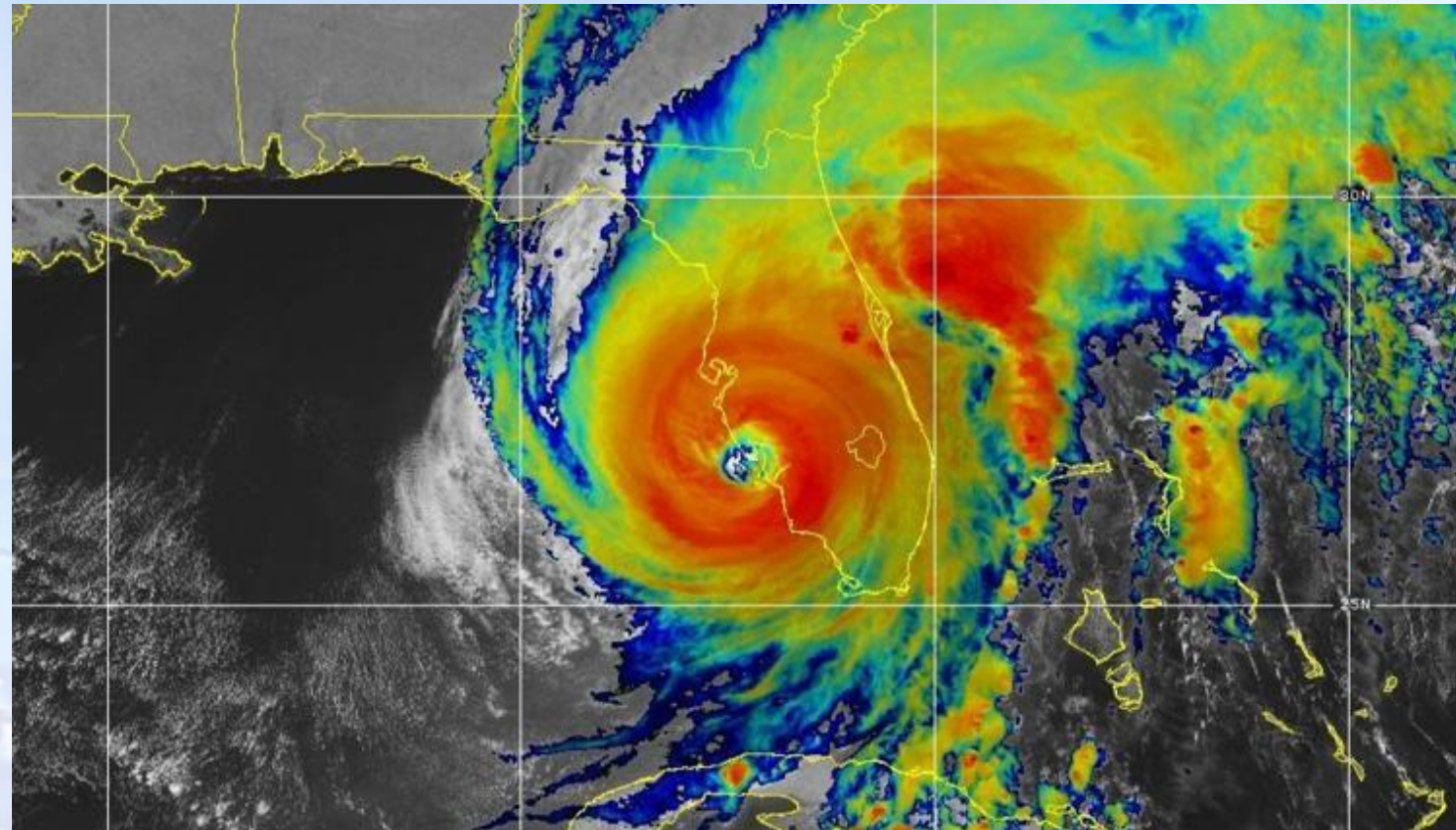
Please ...
SIGN HERE

- Signing a MAA on the bed of a pickup truck at midnight is not the optimal process.
- Please consider signing one today if your utility has not.
- FlaWARN currently on MAA Outreach Campaign.

FlaWARN Response: Hurricane Ian (note the track)



Hurricane Ian Landfall: September 28, 2022



Hurricane Ian Devastation



2022 Hurricane Ian FlaWARN Responding Utilities; Over 300 personnel!

GA, AL, MS, and KY Rural Water Associations*

Regional Utilities

South Walton Utility Co.

Florida Rural Water Association

City of Ocala

US Water Corp

Tarpon Springs H2O System

Pinellas County

City of St. Petersburg

Major impacted area on SW Coast

Bonita Springs Utilities

Northeast District

JEA

Clay County Utility Authority

Central District

South District

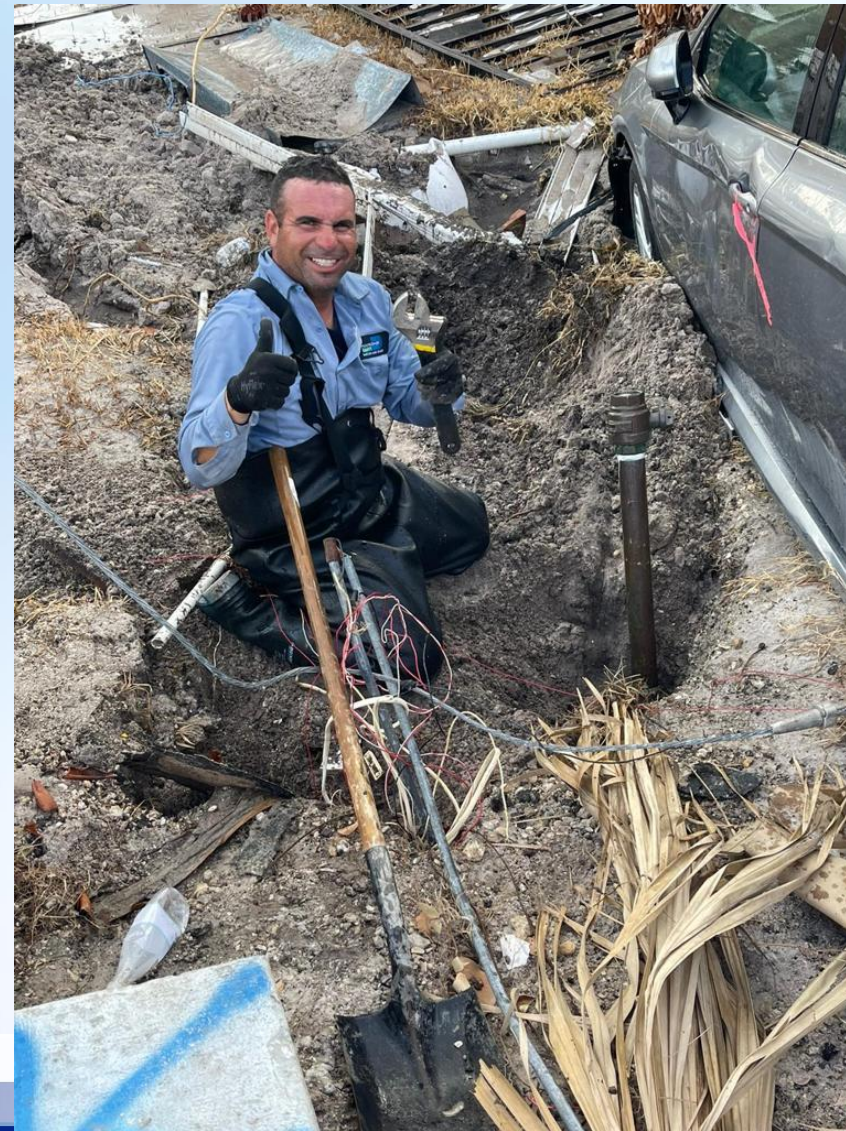
Southeast District

- Seacoast Utility Authority
- Loxahatchee River District
- Town of Jupiter
- City of West Palm Beach
- Palm Beach County
- City of Lake Worth Beach
- City of Boynton Beach
- City of Boca Raton
- City of Deerfield Beach
- Broward County
- City of Pompano Beach
- City of North Lauderdale
- City of Oakland Park
- City of Plantation
- City of Hallandale Beach
- Miami-Dade County

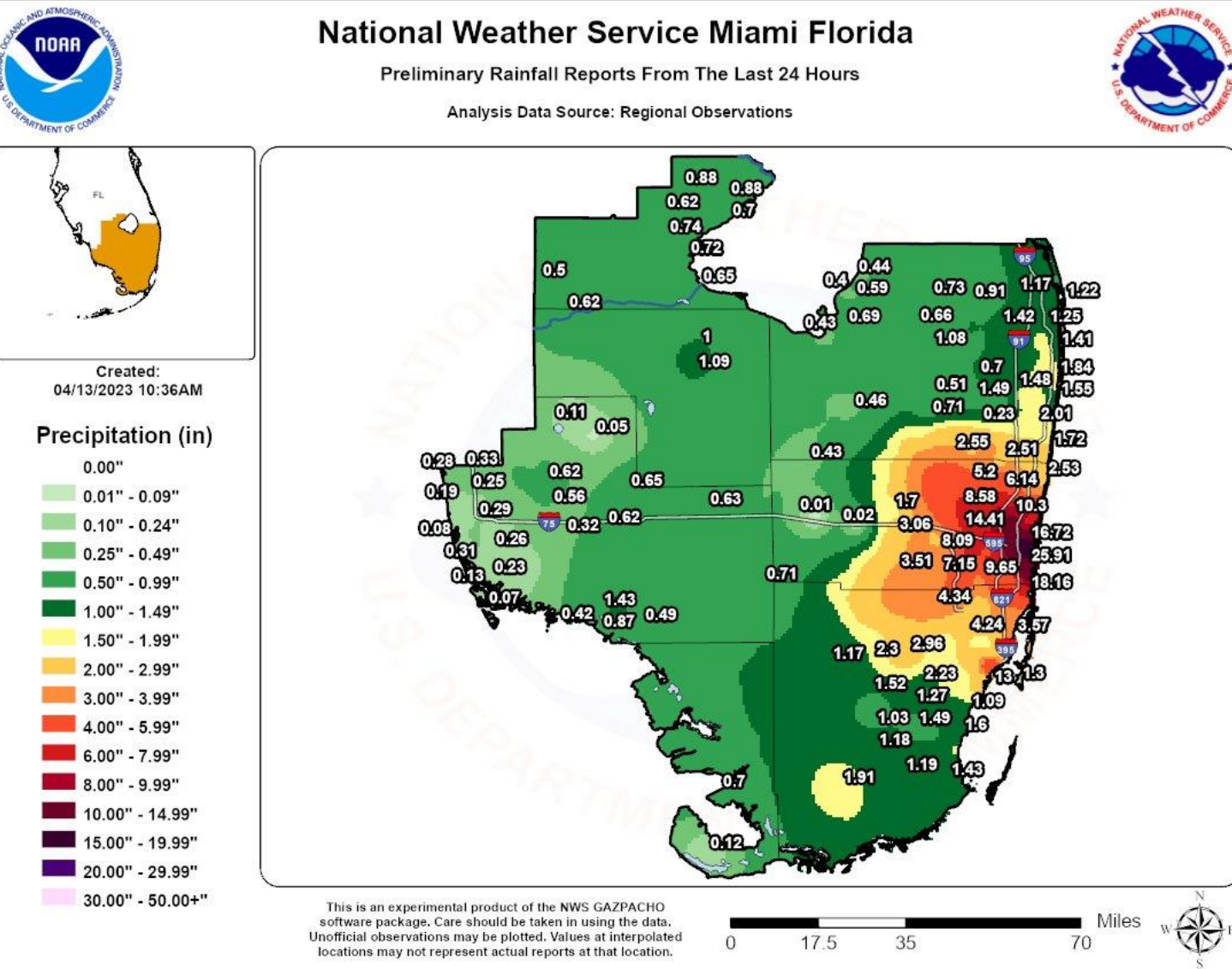
*
GA = Georgia
AL = Alabama
MS = Mississippi
KY = Kentucky

Map from <https://floridadep.gov/districts>

Hurricane Ian Response Success!

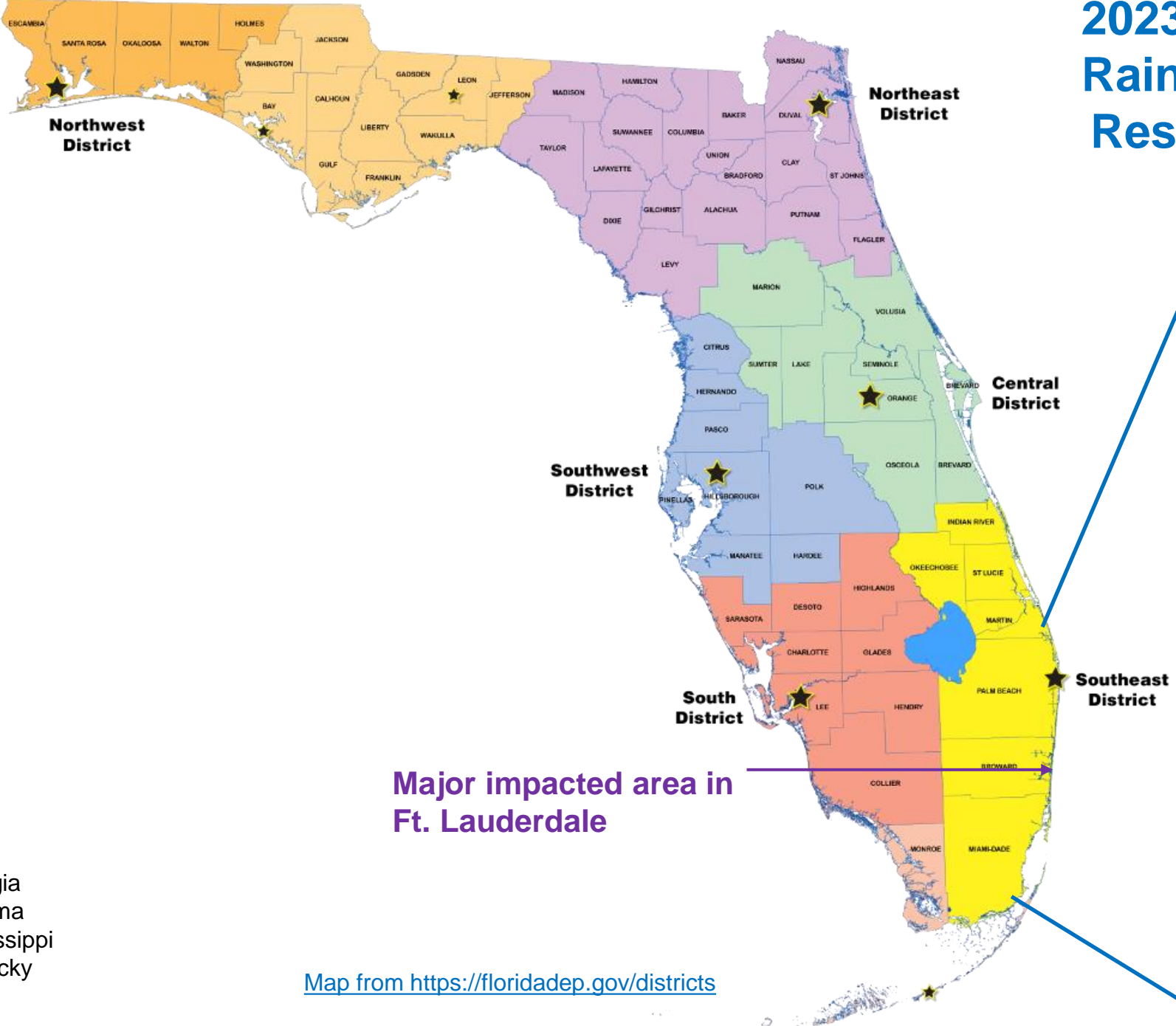


FlaWARN Response: Fort Lauderdale April 2023 'Rain Bomb'



- On April 12, 2023 an unprecedented 26 inches of rain fell on Ft. Lauderdale with 23 inches falling in 6 hours.
- The majority of the rainfall took place during afternoon and early evening rush hour stranding hundreds of motorists.
- Ft. Lauderdale – Hollywood International Airport closed for over 2 days.

2023 Fort Lauderdale Rain Bomb FlaWARN Responding Utilities



- City of Riviera Beach
- Village of Wellington
- City of West Palm Beach
- Palm Beach County
- City of Boynton Beach
- City of Delray Beach
- City of Deerfield Beach
- Broward County
- City of Margate
- City of Tamarac
- City of Oakland Park
- City of Pembroke Pines
- Miami-Dade County
- Bonita Springs Utilities

Major impacted area in Ft. Lauderdale

*
 GA = Georgia
 AL = Alabama
 MS = Mississippi
 KY = Kentucky

Map from <https://floridadep.gov/districts>

Fort Lauderdale April 2023 'Rain Bomb' Success!



Conditions on Saturday April 15th, 3 days after event.



City of Boynton Beach
Team Member

Photos from Poonam Kalkat
and City of Boynton Beach
Team Members

Conditions on Wednesday April 19th, one week after event.



FlaWARN: Areas of growth



US Army Corps Generators headed to Guam after Typhoon Mawar

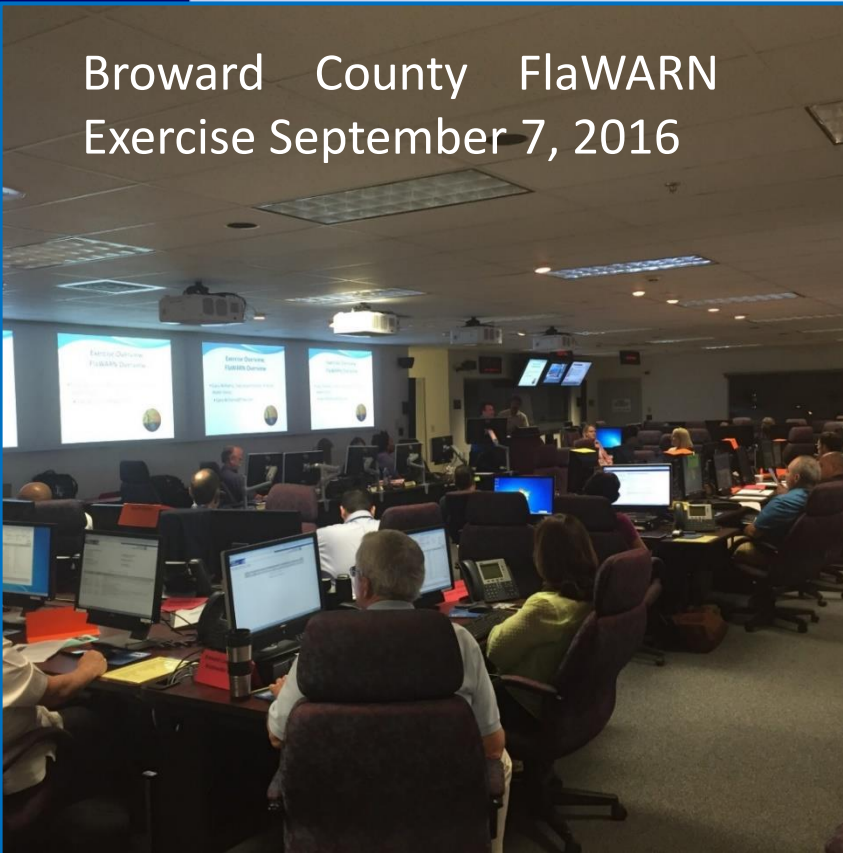
- Are there ways to optimize personnel and/or resource deployment among FlaWARN utilities?
 - Potential to share rental hauling vehicles.
 - Potential for strike team development; still conceptual (thank you Lisa Wilson-Davis, Boca Raton for this idea.)
 - More outreach to non FlaWARN members and utilities with no MAAs.
 - More WATER Tracker* training (**please make sure your information and passwords are up to date**)
 - Time for Regional or Local Exercises?
 - Other training and education opportunities (e.g., ICS)
 - International aid (e.g., Operators Without Borders* example the need in Bahamas post Hurricane Dorian).

* <https://flwatertracker.com/>

Poonam Kalkat, City of Boynton Beach AWWA, Transformative Leadership Academy Capstone Project: FlaWARN Capacity Building



Broward County FlaWARN
Exercise September 7, 2016



- Host annual regional workshops to include tabletop storm simulation exercises.
- Develop a training/mentorship/guidance program with experienced individuals.
- Coordinate with Emergency Operations Centers during blue skies to prepare for dark skies.
- Create utility guidance documents to prepare:
 - Improved emergency plans.
 - To deploy resources to an event.
 - To provide more detailed information on resources available and needed.
 - **To receive resources if impacted.**

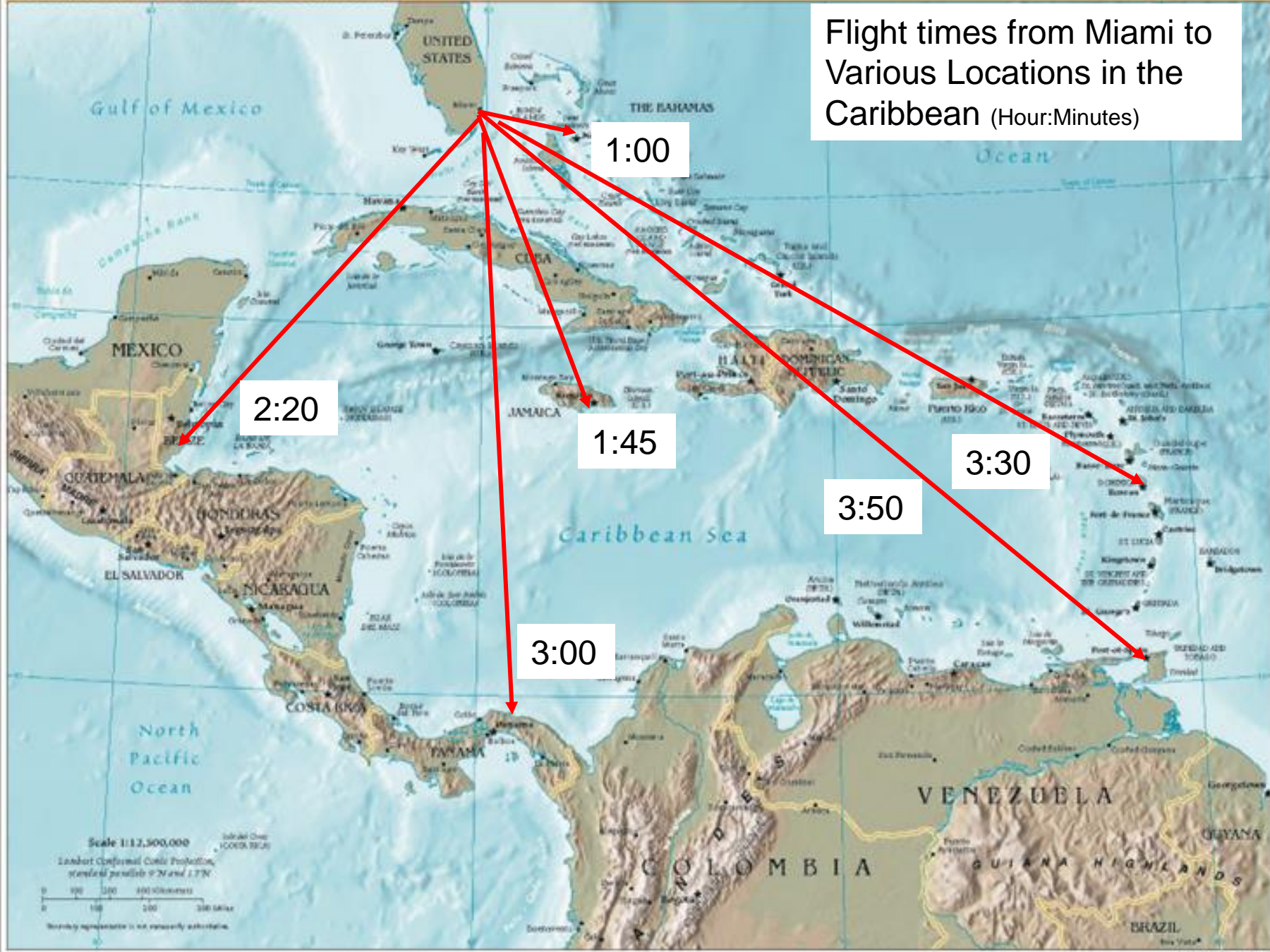
OWB Chair and
Founder
Valerie Jenkinson
addressing SEFLUC
March 2020



➤ Objective: To assist water and wastewater utilities in developing countries recover from disaster situations and build capacity through training and mentoring water and wastewater operators and other professionals.

- Began in the Caribbean now working globally:
- Europe – Working with colleagues to assist Ukraine
 - Africa – 1st Kenyan certifications
 - South America – Incident Command System (ICS) Training
 - Caribbean – ICS and Water Professionals International (former ABCs) Operator Training
 - Australia – Newest Board member





Flight times from Miami to Various Locations in the Caribbean (Hour:Minutes)

Why Florida and the OWB?

**Location!
Location!
Location!**

➤ While OWB is a global organization, the Caribbean has been and continues to be one of our priority areas.

Miami-Dade Fire Rescue Florida Task Force 1 being sent to Puerto Rico

Author: [CBSMiami](#)

Published: August 27, 2019 Updated: August 27, 2019



Task force returns home from giving helping hand in Fort Myers

Miami-Dade Fire Rescue calls mission a success of time spent in Hurricane Ian hit area

Roy Ramos, Reporter Published: October 11, 2022 at 6:47 PM

[Miami Local 10 News](#)

LOCAL NEWS: Miami-Dade's Task Force One ready to help in earthquake's aftermath (Turkey)

BY CBS MIAMI TEAM FEBRUARY 6, 2023 / 11:13 PM / CBS MIAMI

Example of Miami-Dade County Deployments Hurricanes / Weather Disasters

1988	Gilbert, Jamaica
1989	Hugo, Eastern Caribbean
1992	Andrew, Miami
1995	Luis, Caribbean
1995	Marilyn, Caribbean
1995	Opal, North Florida
2000	Belize
2004	Charley, Charlotte County, Florida
2005	Katrina, New Orleans, Louisiana
2008	Gustav, Texas
2008	Ike, Miami-Dade County, Florida

Why Florida and the OWB?

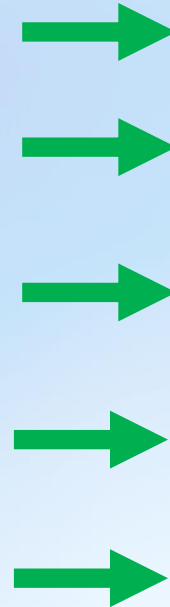
- Florida Task Force Teams Exist for Search/Rescue, Fire, Medical, and Security Response.
- Why not for water sector and OWB?

Challenges for Florida Utilities to Volunteer for OWB



Potential Solutions for Florida Utilities to Volunteer for OWB

- USA utilities use the MAA and FEMA reimbursement process.
- Volunteers don't have enough vacation time to deploy.
- If Utility pays employee salary for deployment what is the risk management scenario?
- Could Florida utilities and/or private sector deploy resources beyond personnel?
- Beyond emergency response, could we develop pool of trainers for water and wastewater certification and ICS training?



- Work with USAID and Caribbean entities (e.g., Caribbean Disaster Emergency Management Agency) to develop MAA type of system.
- Form group within an organization (e.g., SEFLUC) to have a funding pool to deploy.
- Utilities work within own system to manage risk management scenarios if they pay for deployment (OWB has own insurance).
- Groups develop pool of trainers.

Other International Opportunities: Twinning and Conferences/Workshops

Not Just Another Day at Work: The Case for US Water Agency Involvement in International Operator Partnerships



GREATER US WATER
AGENCY INVOLVEMENT
WITH DEVELOPING
COUNTRIES' UTILITIES
CAN INCREASE
GLOBAL ACCESS TO
CLEAN DRINKING
WATER AND IMPROVE
BUSINESS PRACTICES.

* Jerry Brown (Journal of AWWA
2016; Volume 108, Issue 12)

<http://dx.doi.org/10.5942/jawwa.2016.108.0191>

<http://cawasa.org/cawasa/>

<https://cwwa.net/cwwa-conference-2023/>

- Develop twinning relationships between South Florida utilities and Caribbean/Latin America utilities
 - Twinning* is when two utilities trade team visits to each utility to learn from each other and grow information exchange networks.
 - Previous twinning utilities in Caribbean from Germany and California and there are granting agencies interested.
- The Caribbean Water and Sewerage Association will begin weekly Wednesday Webinars (4:00 p.m. AST/EDT) and invites speakers on any topic.
- The Caribbean Water & Wastewater Association is hosting the 32nd Annual Conference and Exhibition in Guyana October 23rd through 27.
- Look for the 3rd Annual FSAWWA Caribbean & Florida H2O Linkup towards end of September.

Conversations Lead to Solutions – Let's Talk! Time For Discussion

Ft. Myers Beach shows their appreciation for Miami-Dade County Hurricane Ian response



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