

# **Rough Waters:** **Disaster Preparedness, Response, and Recovery for Hurricanes and Floods**

**NGA Solutions: Center for Best Practices  
Homeland Security and Public Safety  
In collaboration with the  
Centers for Disease Control and Prevention  
and the American Bar Association**

**September 26, 2019**



# Agenda and Speakers



## Welcome

Moderator:

Gregory Sunshine, JD, Centers for Disease Control and Prevention



## Expert Panel

Darrell Klein, JD, Nebraska Department of Health and Human Services



Max Gakh, JD, MPH, University of Nevada Las Vegas School of Public Health



Lt. Emily Ussery, PhD, Centers for Disease Control and Prevention



## Q&A



## Upcoming Webinars

# Today's Moderator Greg Sunshine, JD

Public Health Analyst  
Public Health Law Program  
Center for State, Tribal, Local, and  
Territorial Support  
Centers for Disease Control and  
Prevention



# Darrell Klein, JD

Deputy Director for Public Health  
Nebraska Department of Health and  
Human Services



# Rough Waters: Disaster Preparedness, Response, and Recovery for Hurricanes and Floods

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Darrell Klein, JD

Deputy Director Public Health Licensure

Division of Public Health

Nebraska Department of Health and Human Services

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# March 20, 2018 “Before”

Landsat Satellite Imagery March 20, 2018



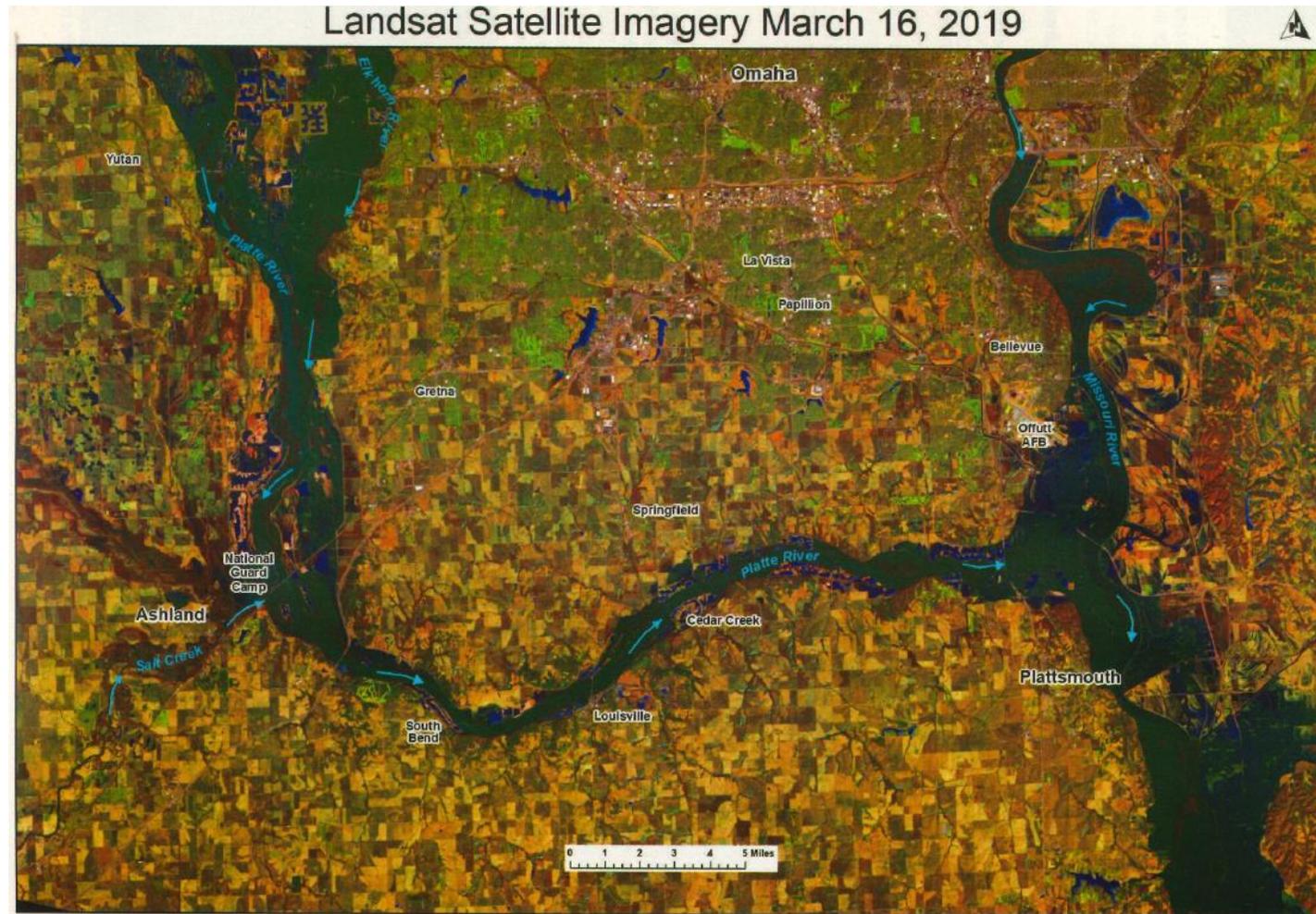
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# March 16, 2019 “After”



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**Current Situation**

Continued flooding across the state. Flood warnings and advisories in effect in the panhandle as well as along the Missouri in the southeastern part of the state. Water levels on the Missouri River continue to decline and are projected to slowly decrease through next week.

President Trump signed the Disaster Declaration on March 21, 2019.

**Lifelines: Impacts and Actions**

**Evacuations (SEOC, 03272019)**

- Active evacuations: Paradise Lake and Sands Trailer Park in Sarpy County Rulo Riverfront and Lewis & Clark Estates in Richardson County
- Portions of Peru (Nemaha County) are open

**Dams & Levees of Concern (USACE 03/27/2019)**

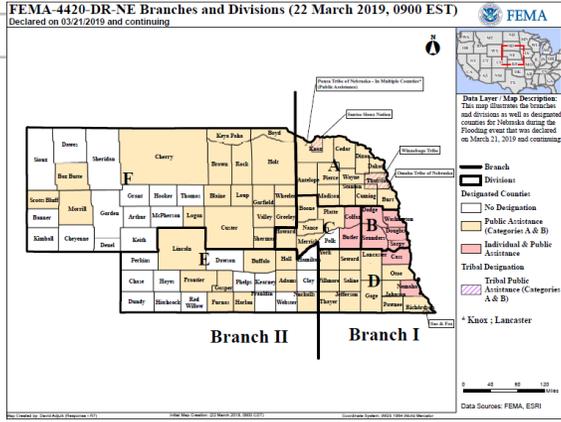
- USACE Notified they will be increasing the release of Gavins Point Dam to **36,000 cfs on 03/28/2019**
- USACE levee breach repairs continue
- North Bend levee repairs continue

**Structures**

- A State Emergency response team of 4 Building inspectors is assigned to assist the City of Fremont through Friday

**Traffic Control Points (TCP) (NSP, 03212019)**

- Troopers stationed at Highway 75 south of Nebraska City due to increase in traffic from I-29 closure



**Lifelines: Impacts and Actions**

**Energy (SEOC, 03/27/2019)**

- Customers in the state that are without power: .02%
- OPPD experiencing some issues; they supply power to the Lincoln well field
- Cooper Nuclear terminated Notice of Unusual Events and returned to normal operations on 03/24/2019

**Fuel (Source, MMDDYYYY)**

- Keystone Pipeline techs followed up on report of possible exposed pipeline; no issues and no exposure of pipeline
- Department of Energy is reaching out to the 23 ethanol plants to check the status of their production and see if they have been impacted.

**Wireless/ Wireline (Source, MMDDYYYY)**

- Department of Labor submitted request to change their IDR to allow clients to call in for disaster unemployment insurance claims
- DHHS requested more laptops for users in the field
- NEMA requested three new shared e-mail boxes
- No updates to US cellular tower in Dannebrog that is possibly not functioning

**Emergency Communications (Source, MMDDYYYY)**

- Motorola will provide extra radios if needed
- All 911 Call Centers are fully operational

**State Highways (NDOT, 03232019)**

- Closed: 258 miles
- Reopened: 1,309 miles
- Inspection teams moving out into the counties (36 of the 69 affected counties have federal aid routes)

**Bridges (NDOT, 03222019)**

- Damaged: 15
- Working on temporary bridge in Knox County

**Wastewater (Source, MMDDYYYY)**

- Omaha was able to get foot traffic into Papio Creek facility yesterday, some of the pumps and motors that were expected to be underwater were not and raw sewage pumps were submerged, still assessing impacts
- Plattsmouth facility is still significantly under water, will take time before plant can be accessed

**Hazardous Materials (Department of Agriculture, 03/20/2019)**

- Kansas and Oklahoma are beginning their seasonal grass burn, which could impact recovery efforts
- 94 animal feeding operations discharged
- Many inquiries received for carcass disposal, renderers are unable to get to some sites and cannot keep up with all of the requests.
- Farming operations are in need of fencing material.

**Shelters (ARC, 03/23/2019)**

- Shelters open: 5 (-1), pop. 147 (-27). Locations: Bristow, Bellevue, Fremont, Snyder, Albion, Omaha
- Discussing consolidating shelters and examine long term housing options

**Feeding (ARC, 03/23/2019)**

- Meals: total of 18,885 (+2,933) served to date by ARC
- NPP: Starting to survey each county to identify their specific unmet needs – 45+ organizations ready to assist with the identified needs
- World Kitchen, Southern Baptist, Operation BBQ have served an estimated 4,000 meals to date

**Water (DHS, 03/25/2019)**

- Four water systems currently down (Peru, Boyd, Lynch, Spencer)
- Working with EPA for mobile water testing sites in Vedigre, Norfolk
- DEQ advised to ensure the correct water test kits (issued by DHHS) are being used
- Lincoln Water System is intact; water restriction lifted

**Resources (ARC, 03/25/2019)**

- Statewide: 46,000 items distributed to date (clean up kits and other supplies)
- Volunteer reception center set up in Fremont – Also 2 warehouses open in Fremont
- [CERT] team to Fremont: assess damage to [structures] & plan rebuilding.
- VOADs providing laundry services, clean up kits, and mobile kitchens

**Facilities (NE DHHS, 03242019)**

- Lynch Hospital (Boyd County) is operational with limited capacity. ER, X-ray, CT are open, next closest hospital is in O'Neill
- Nursing homes evacuated: Premier Estates of Pierce (40), Schuyler Care & Rehabilitation Center, Birchwood Manor in North Bend (47), Madison House in Norfolk, and Good Samaritan of Wood River
- Residents of Valhaven in Valley (46 on 3/22), Genoa Nursing Home, Edgewood Vista in Norfolk were returned to original locations

**Concerns (NE DHHS, 03242019)**

- Scotia Rescue, Santee Sioux Rescue, and Niobrara Volunteer Rescue have been divided with modified service delivery and are being monitored
- Joint Information Center did establish a separate phone line for mental health assistance

**Resources (NE DHHS, 03242019)**

- Behavioral health on-call through Friday, 3-29

**Key Updates**

**Closures**

- County Governments Closed: None

**Activations**

- SEOC Activation Level: 3 (0700-1500)
  - FEMA Region VII RRCC: 3 (0600-1800)
  - Activated since March 9, 2019

**Personnel**

- NEMA: 37
- NENG: 171 on State Active Duty, 221 total
- FEMA: 240
- SBA: 30

# March Flooding

## Dams & Levees of Concern (USACE 03/27/2019)

- USACE Notified they will be increasing the release of Gavins Point Dam to **36,000 cfs on 03/28/2019**
- **USACE levee breach repairs continue**
- **North Bend levee repairs continue**

## Water (DHHS, 03/25/2019)

Four water systems currently down (Peru, Boyd, Lynch, Spencer)

Working with EPA for mobile water testing sites in Vedigre, Norfolk

DEQ advised to ensure the correct water test kits (issued by DHHS) are being used [for lab testing].

**Lincoln Water System is intact; water restriction lifted**

## Shelters (ARC, 03/23/2019)

Shelters open: **5 (-1)**, **pop. 147 (-27)**. Locations: Bristow, Bellevue, Fremont, Snyder, Albion, Omaha

Discussing consolidating shelters and examine long term housing options

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Residents of Valhaven in Valley (46 on 3/22), Genoa Nursing Home, Edgewood Vista in Norfolk were returned to original locations

## Concerns (NE DHHS, 03242019) [EMS]

Scotia Rescue, Santee Sioux Rescue, and Niobrara Volunteer Rescue have been divided with modified service delivery and are being monitored

[JIC] established a separate phone line for mental health assistance

## Resources (NE DHHS, 03242019)

Behavioral health on-call through Friday, 3-29

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# Health Care Facilities

DHHS Long Term Care staff called every Long-Term Care and Assisted Living Facility in the state

Generally great cooperation and coordination, with facilities (some previously closed) accepting evacuees from flood-threatened facilities

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# The Exception

**Friday March 15, 2019 after 2:00 PM** Administrator called DHHS: they were evacuating the last few residents from [facility] by airboats. She was panicked and needed to be reminded to transport medications, blankets and food for the residents. Administrator stated “I don’t think we will need food, we won’t be there that long”

**Friday March 15, 2019 at 6:57**

Received an email from Owner with list of 14 Residents who were evacuated to facility A.

**Saturday March 16, 2019 at 1:58 PM** notified that facility A had accepted 15 residents. Remainder of residents are in a ballroom emergency shelter in another town. DHHS received several calls from Administrator wanting to return to [facility] even though the area was still under a flood warning and there was no fresh water or sewage systems available.

**Sunday March 17, 2019 at 2:18 PM**

Administrator adamant that they would take the residents from the ballroom back to [facility] even though the Nursing Home does not have freshwater or sewage service. After several phone calls the Emergency Management staff in town considered shutting off gas to the NH and told the Administrator it is not safe to return to the NH and he needed to place the residents other than the Snyder ballroom. DHHS helped identify available receiving facilities. Administrator stated intention to evacuate residents from the ballroom to Facility B.

**Sunday March 17, 2019 at 2:45 PM**

Facilities C and D offered to assist with staff and residents from [facility].

# The Exception, continued

[Facility] Administrator told DHHS he had been told [by EM] he needed to emergently transfer the remaining residents from the Snyder ballroom to facility E as there is no fresh water or sewage services at [facility] and the city is shutting off gas to the facility. Administrator asked DHHS to intercede and call Emergency Management to inform them this is beyond their authority. DHHS advised him to listen to his emergency management team and determine what is best for the health, safety and wellbeing of his residents bearing in mind the city/county has responsibility for emergency management and the utilities and assistance with evacuations.

Administrator stated he will evacuate ballroom shelter residents to Facility E and notify DHHS when completed.

**Sunday March 17 at approximately 8:00 PM** 2 employees from [facility] went to facility A and tried to retrieve residents. Refused.

DHHS was informed the owner wants to move 37 residents back to the nursing home against the advice of emergency management officials. Reports show no fresh water or functional sewage system at the facility (nor in the entire town) DHHS contacted NEMA to contact local emergency officials in town to confirm the condition of the facility. NEMA and DHHS sought input from local law enforcement.

DHHS would inspect, but access to town is cut off.

Owner told DHHS that they have a fire suppression system but do not have fresh water and that the gas was never shut off. They have bath-in-a-bag for bathing and disposable wipes for peri care/toileting. They do not have an operating sewage system, they plan to utilize bed side commodes and double bag waste for residents and portable toilets for staff. They do not have fresh drinking water and will use bottled water for drinking and cooking.

Against advice and direction, owner returns residents to facility in darkness and flooded conditions night of March 17. Next day, owner promises to evacuate residents to alternate facilities. Does not. DHHS closes facility and evacuates residents with help to alternate facilities.

# Training Flooding

Planned: Full Scale Exercise May 6-10 across the state. Actual: Blizzard and Flooding disaster & recovery.



- ▶ The HCCs and LPHDs provided invaluable feedback in public health, hospital, facility, and mass care operations.
- ▶ The DHHS divisions and units who collaborated with our ESF #8 desk, NEMA and key leaders have recognized continued roles.
- ▶ Incident Command Structure and training will become a higher priority for key leaders and staff who work outside of Emergency Preparedness and Operations
- ▶ Volunteers who heeded the call were in abundance once activated, with further training and development work being planned in this area for organization capacity and bench strength
- ▶ Knowledge Center Training

# Flooding



- ▶ Emergency declarations for 104 cities, 81 counties, 5 Tribes, 13 other government entities. Presidential declaration
- ▶ SEOC ESF-8; Special meds for shelters, helicopter transport of blood test, drinking water delivery
- ▶ Nursing Home and ALF Evacuations
- ▶ Cooperation and Coordination with EM, local authorities and colleague facilities
- ▶ Public Water Supplies and Private Well Testing

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# Flooding, CERT and Populism

THIS SIGN SHOULD BE PREPARED ON RED CARD STOCK WITH BLACK LETTERING.

# UNSAFE

DO NOT ENTER OR OCCUPY

**Warning:**  
This structure has been seriously damaged and is unsafe. Do not enter. Entry may result in death or injury.

Date \_\_\_\_\_  
Time \_\_\_\_\_

Comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This facility was inspected under emergency conditions for:  
\_\_\_\_\_  
(Jurisdiction)  
on the date and time noted.

Facility Name and Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Inspector ID/Agency:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ATC-20

**Do Not Remove this Placard until Authorized by Governing Authority.**

- ▶ Folks returned to “tagged” housing
- ▶ Emergency Management contacted Public Health and letters were sent.

# The Town Exception



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# Max Gakh, JD, MPH

Assistant Professor  
Las Vegas School of Public Health  
University of Nevada



# **Use of Gubernatorial Executive Orders & Emergency Declarations to Respond to Hurricanes**

*Rough Waters:*

*Disaster Preparedness, Response, and Recovery for Hurricanes and Floods Webinar*

September 26, 2019

Max Gakh, JD, MPH

University of Nevada, Las Vegas, School of Public Health

# Background

- Hurricanes can have detrimental health consequences<sup>1,2</sup>
- Laws are important for preparedness and response<sup>3,4</sup>
- Governors can exercise their authority by declaring emergencies and facilitating response<sup>5</sup>
- How have governors used orders, proclamations, and declarations to respond to hurricanes?

# Collect orders

- Policy surveillance<sup>6</sup>
- Search for orders & declarations
  - *Westlaw* – Netscan Executive Orders database
  - *Lexis Advance* – Statutes & legislation, Administrative codes & regulations databases
- Screen orders for inclusion

## Inclusion criteria

Executive orders, proclamations or administrative orders

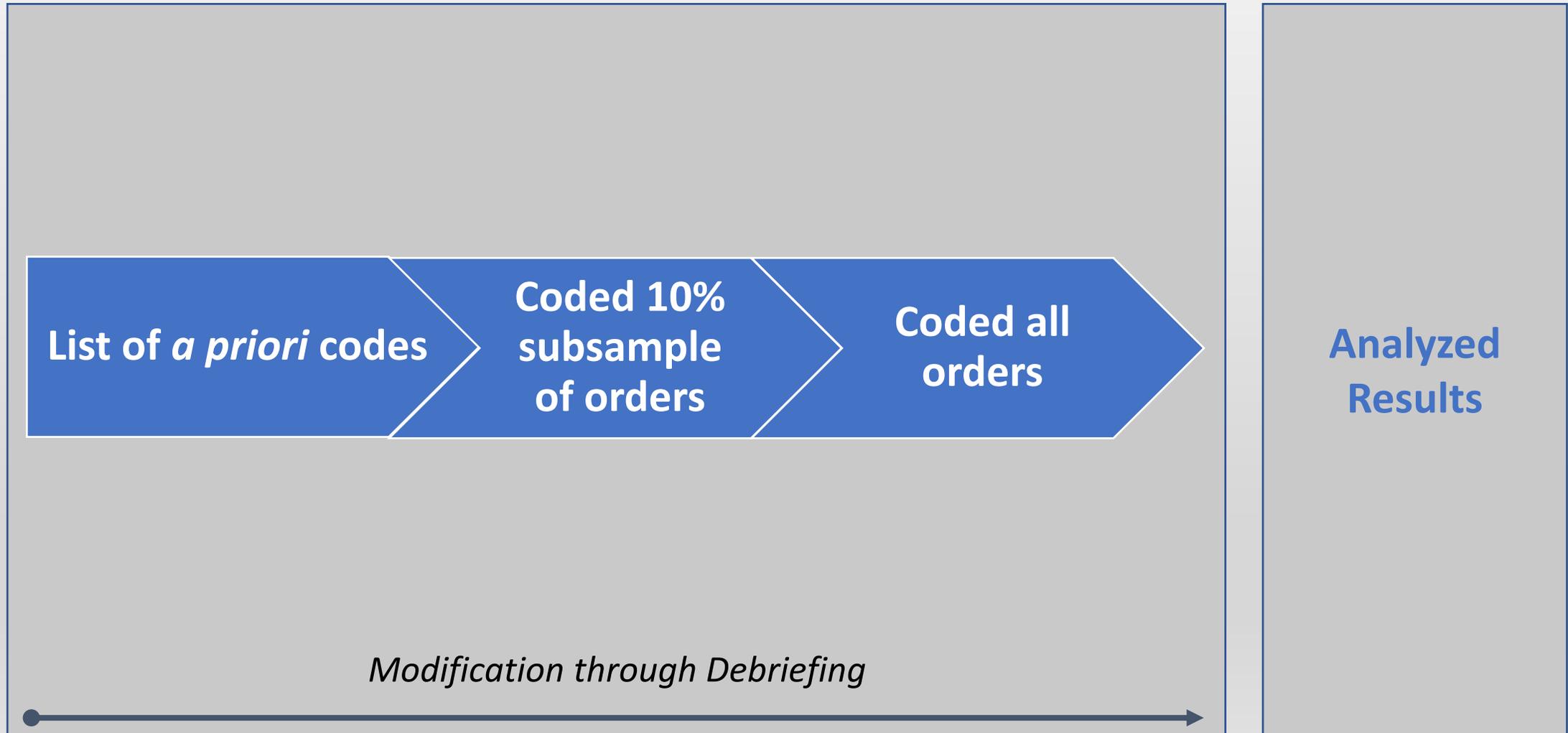
Issued by governors

In response to a hurricane (or tropical storm that becomes a hurricane)

After the 2005 hurricane season and before 12/31/2018

Contained in searched databases

# Code orders & analyze results



# Number of orders & proclamations

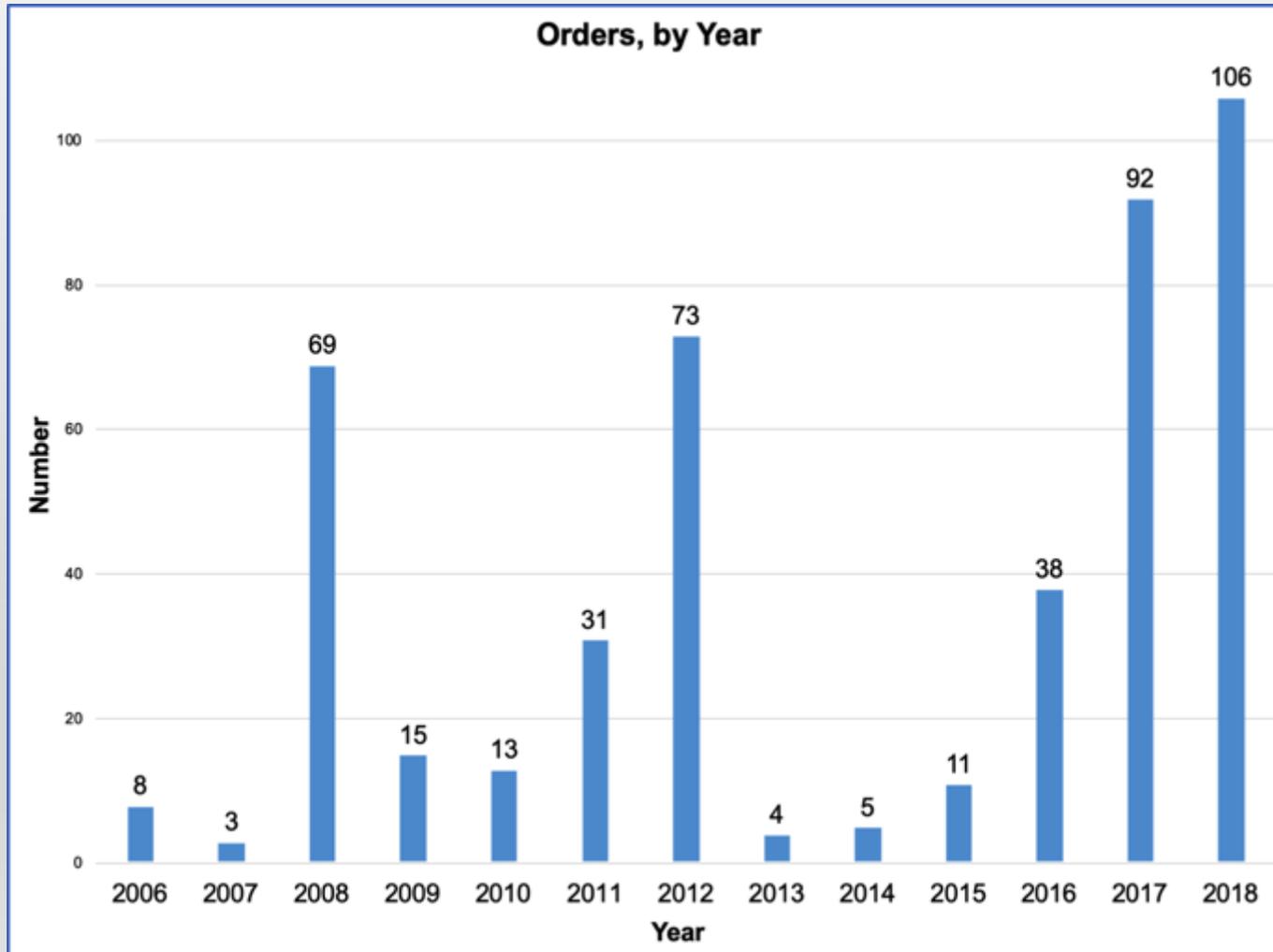


Image by Rob Gutro: NASA's Goddard Space Flight Center, Greenbelt, Md. [Hurricane Sandy \(Atlantic Ocean\)](#)  
Hurricane Sandy's cloud extent.  
CDC Public Health Image Library. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=15178>.

Total coded	468
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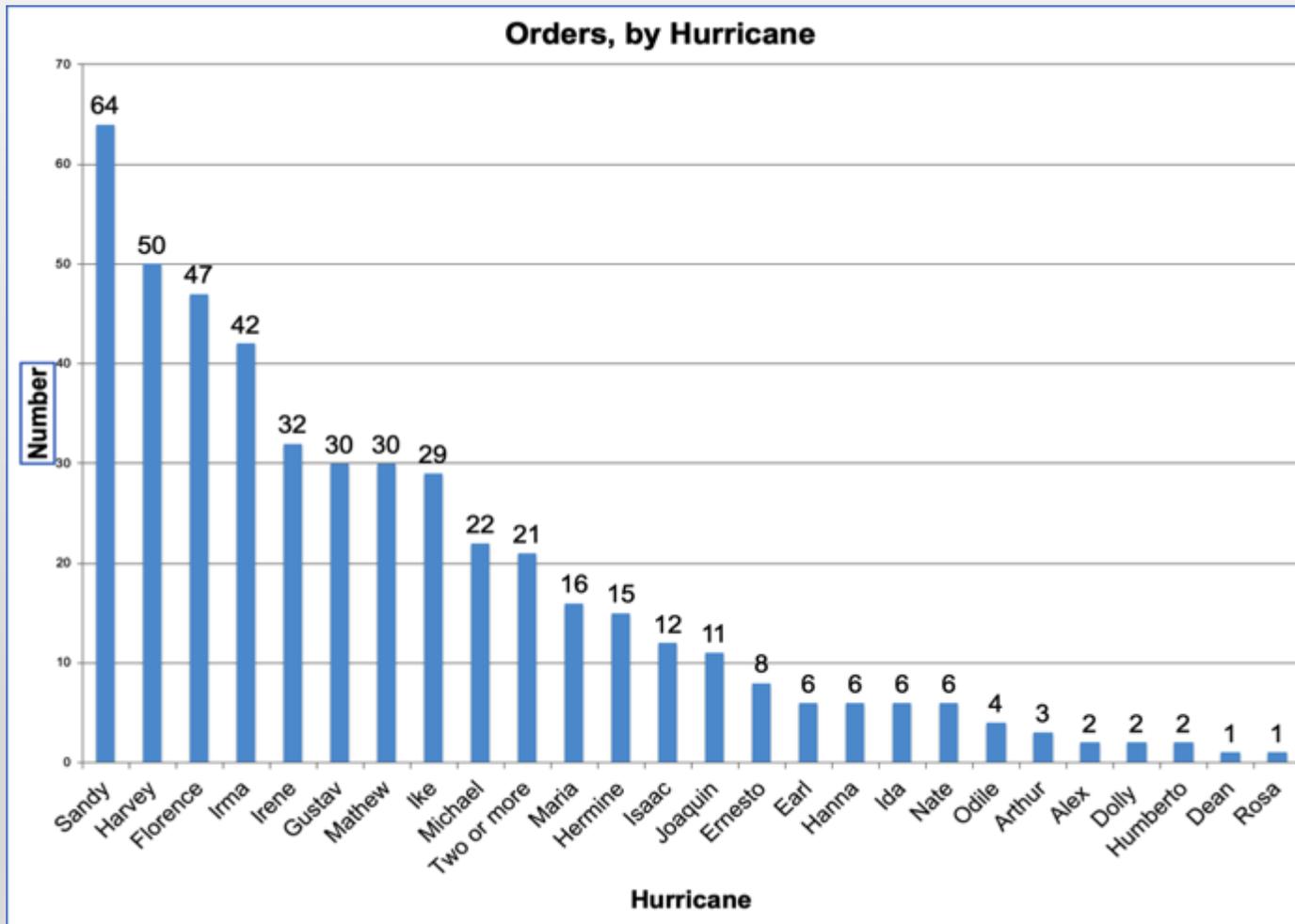


# Use across years



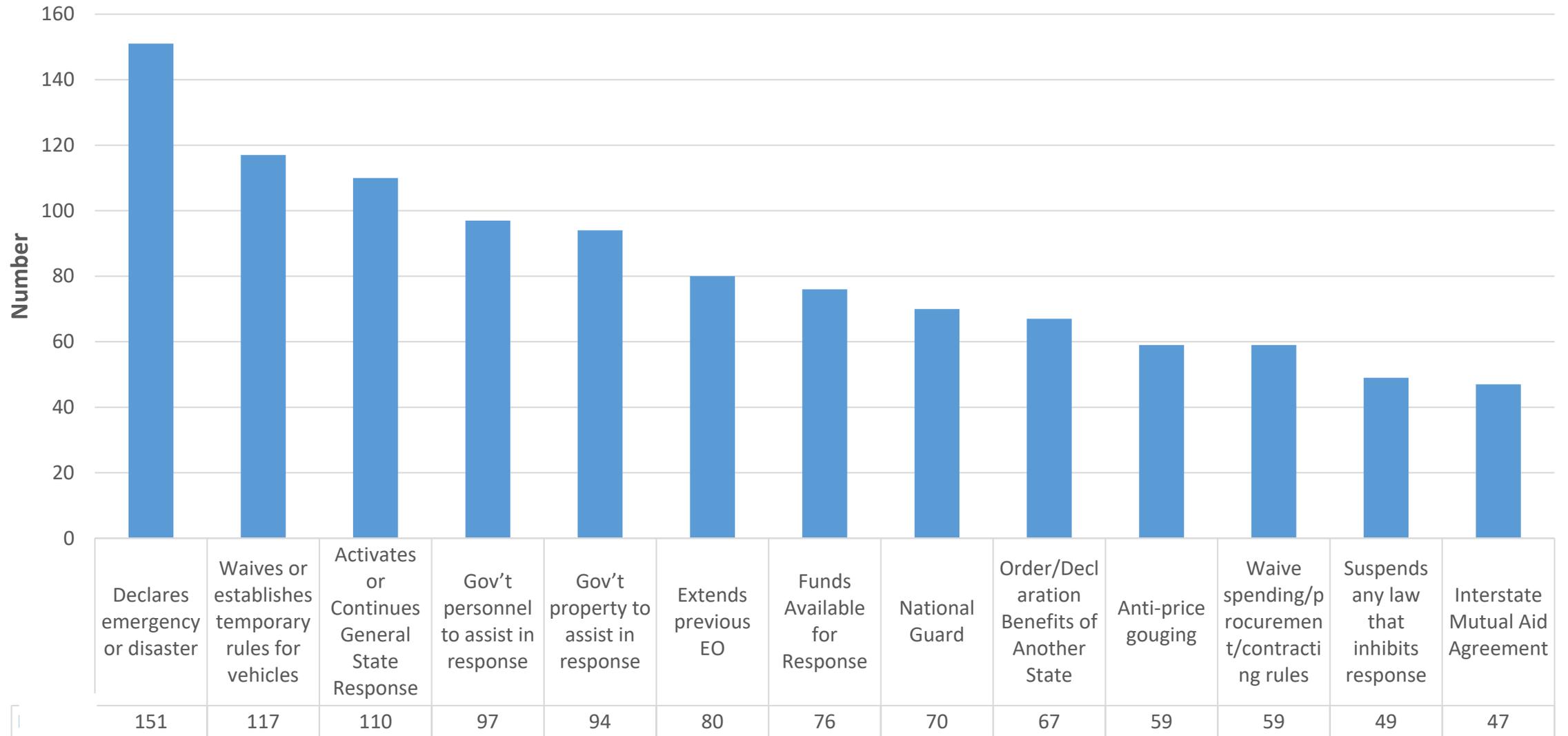
- Most issued in 2018
- Fewest issued in 2007
- Notable upticks

# Use across hurricanes



- Sandy: 13.7%
- Harvey: 10.7%
- Florence: 10.0%
- 2+: 71.4% (of 21)  
involved Gustav or Ike

# Most prevalent codes



# Example: Ga. Exec. Order No. 229 (Sept. 10, 2017)

- Hurricane Irma
- Declares emergency
- Government personnel
- Government property
- Activates or continues general state response

**ORDERED:** That a State of Emergency exists in all Georgia counties.

**IT IS FURTHER**

**ORDERED:** That all resources of the State of Georgia be made available to assist in preparation, response and recovery activities, and the Georgia Emergency Management and Homeland Security Agency activate the Georgia Emergency Operations Plan.

This Executive Order shall be valid for a period of seven (7) days, beginning on September 10, 2017, and ending at 11:59 p.m. on September 17, 2017.

# Other prevalent codes



# Example: Fla. Exec. Order No. 18-276 (Oct. 7, 2018)

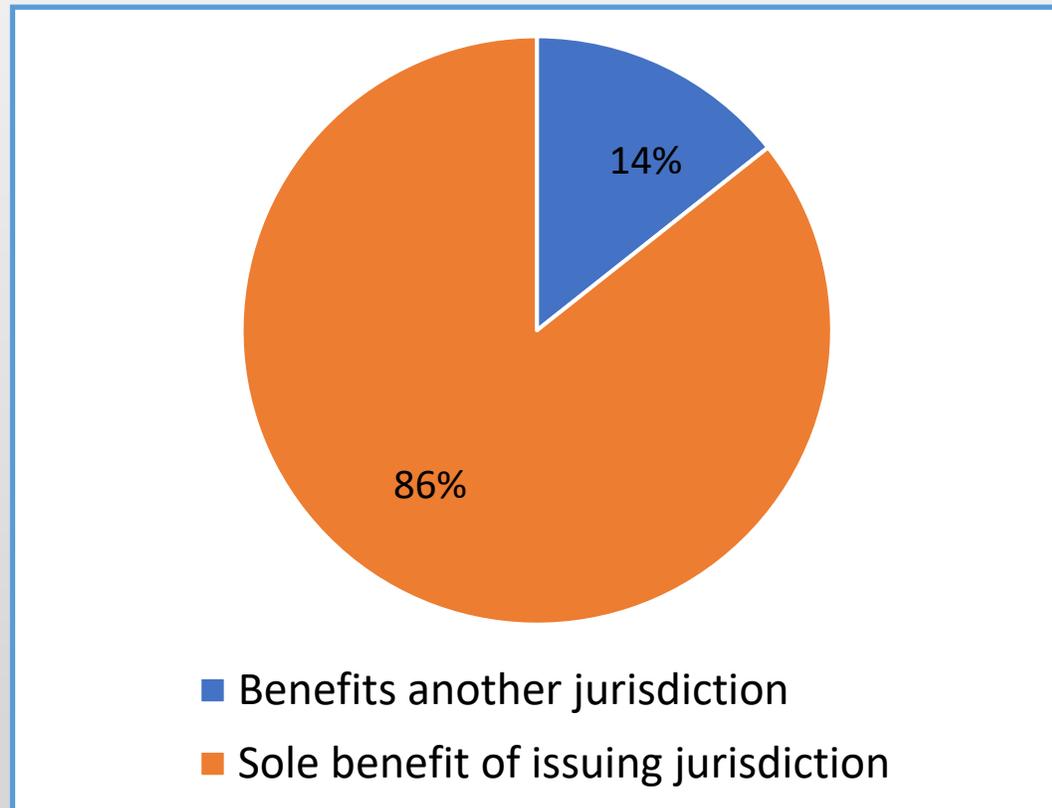
Section 8. Medical professionals and workers, social workers, and counselors with good and valid professional licenses issued by states other than the State of Florida may render such services in Florida during this emergency for persons affected by this emergency with the condition that such services be rendered to such persons free of charge, and with the further condition that such services be rendered under the auspices of the American Red Cross or the Florida Department of Health.

Section 13. All actions taken by the Director of the Division of Emergency Management with respect to this emergency before the issuance of this Executive Order are ratified. This Executive Order shall expire sixty days from this date unless extended.

G. In accordance with section 465.0275, Florida Statutes, pharmacists may dispense up to a 30-day emergency prescription refill of maintenance medication to persons who reside in an area or county covered under this Executive Order and to emergency personnel who have been activated by their state and local agency but who do not reside in an area or county covered by this Executive Order.

- Hurricane Michael
- Suspends licensure or credentialing laws for healthcare providers
- Ratifies response
- Suspends laws governing storage, distribution, dispensing or documentation of prescription of medication

# Benefiting another state



Benefits another jurisdiction

66

## Example: Okla. Exec. Order No. 2017-26 (Sept. 15, 2017)

1. Due to Hurricane Harvey, which has caused an emergency of national magnitude and which continues to directly affect the Gulf Coast states including Texas and Louisiana, there is hereby declared a disaster emergency in the State of Oklahoma so that state, county, and local governments can adequately respond to the mutual aid requests and needs of the Gulf Coast states.
2. It may be necessary to provide for the rendering of mutual assistance among the State and political subdivisions of the State with respect to carrying out disaster emergency functions during the continuance of the State emergency pursuant to the provisions of the Oklahoma Emergency Management Act of 2003.
3. State agencies, in responding to this disaster emergency, may make necessary emergency acquisitions to fulfill the purposes of this proclamation without regard to limitations or bidding requirements on such acquisitions.
4. The State Emergency Operations Plan has been activated and resources of all State departments and agencies available to meet this emergency are hereby committed to the reasonable extent necessary to protect lives and to prevent, minimize, and repair injury and damage. These efforts shall be coordinated by the Director of the Department of Emergency Management with comparable functions of the federal government and political subdivisions of the State.

# Interesting themes\*

## **Manage resources**

- *Funds available for response*
- *Seek external funding*
- *Waive spending, procurement, contracting rules*
- *Gov't personnel to assist in response*
- *Gov't property to assist in response*
- *Rules for vehicles*
- *Interstate mutual aid*
- *Intrastate mutual aid*

## **Implement gov't response**

- *Activates or continues state response*
- *Ratifies response actions*
- *Interagency coordination or cooperation*
- *National Guard*
- *Requires distribution of order*
- *Extends previous order*
- *Rescinds or terminates previous order*

# More interesting themes\*

## Healthcare-related

- *Suspends licensure or credentialing requirements for healthcare providers*
- *Suspends healthcare facility limits*
- *Suspends prescription drug requirements*
- *Suspends laboratory permitting requirements*
- *Evacuation or reduction in number of healthcare facility patients*
- *Suspends student immunization or health assessment requirements*

## Affect private parties

- *Evacuation*
- *Monetary relief for private persons*
- *Enumerates penalties*
- *Modifies deadlines for legal proceedings, benefits, fines, fees or taxes*
- *Anti-price gouging*
- *Elections/voting*
- *Seizure of private property*

# Even more interesting themes\*

## **Suspends, waives or modifies**

- *Suspends any laws that inhibit response*
- *Waives spending, procurement, contracting rules*
- *Modifies deadlines for legal proceedings, benefits, fines, fees or taxes*
- *Suspends laws governing sales of goods*

Example: Fla. Exec. Order No. 18-276 (Oct. 7, 2018)

E. Suspend the effect of any statute, rule, or order that would in any way prevent, hinder, or delay any mitigation, response, or recovery action necessary to cope with this emergency.

Fla. Exec. Order No. 18-276 (Oct. 7, 2018). Retrieved from [https://www.flgov.com/wp-content/uploads/2018/10/SKM\\_C36818100714280.pdf](https://www.flgov.com/wp-content/uploads/2018/10/SKM_C36818100714280.pdf).

\* Non-exhaustive list of non-exclusive themes

# Some limitations

- Not all relevant documents may have been in the databases
- Focused on a specific time-period – trends at other times might be of interest
- Included both “orders” and “authorizations”
- Focused on language of the documents

# Conclusions

- State orders issued in response to hurricanes are geographically varied
- They call for different actions, some with more frequency
- They can attempt to access or manage resources, implement response actions, suspend existing requirements, and modify healthcare delivery rules
- Planning to determine how to utilize orders may be an important, jurisdiction-specific preparedness strategy

# References

1. Bourque, L. B., Siegel, J. M., Kano, M., & Wood, M. M. (2006). Weathering the storm: The impact of hurricanes on physical and mental health. *The Annals of the American Academy of Political and Social Science*, 604(1), 129-151.
2. Brunkard, J., Namulanda, G., & Ratard, R. (2008). Hurricane Katrina deaths, Louisiana, 2005. *Disaster medicine and public health preparedness*, 2(4), 215-223.
3. Hodge Jr, J. G., & Anderson, E. D. (2008). Principles and practice of legal triage during public health emergencies. *New York University Annual Survey of American Law.*, 64, 249-291.
4. U.S. Const. art. I & amend. X.
5. Sunshine, G., Thompson, K., Menon, A. N., Anderson, N., Penn, M., & Koonin, L. M. (2019). An Assessment of State Laws Providing Gubernatorial Authority to Remove Legal Barriers to Emergency Response. *Health Security*, 17(2), 156-161.
6. Burris, S., Hitchcock, L., Ibrahim, J., Penn, M., & Ramanathan, T. (2016). Policy surveillance: a vital public health practice comes of age. *Journal of Health Politics, Policy and Law*, 41(6), 1151-1173.

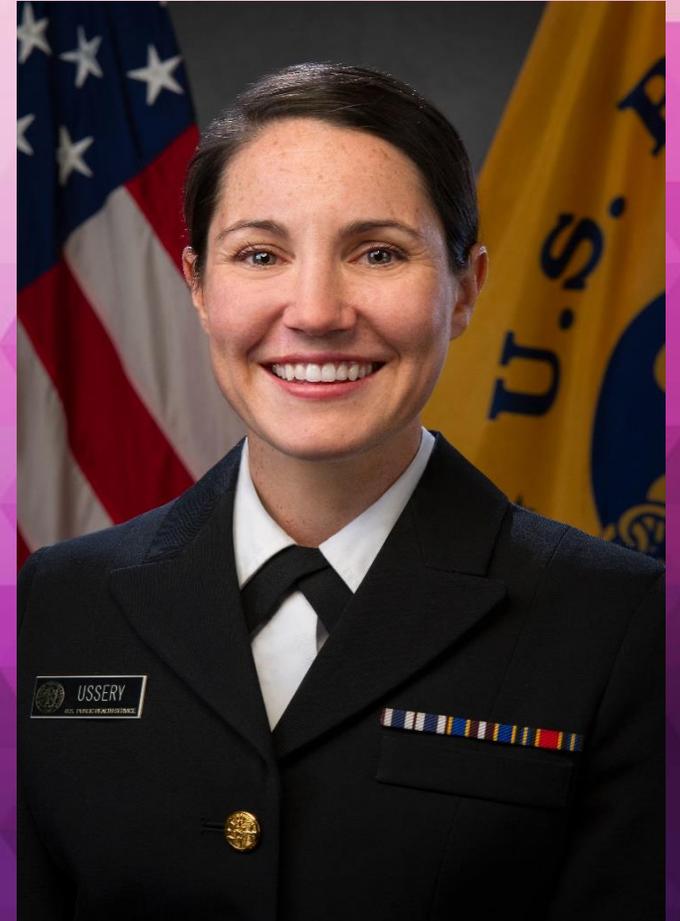
# Thank you!

- ***Questions?***

- maxim.gakh@unlv.edu

# Lt. Emily Ussery, PhD

US Public Health Service  
Epidemiologist  
Physical Activity and Health Branch  
National Center for Chronic Disease  
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Centers for Disease Control and  
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# Promoting Activity-Friendly Communities During Disaster Recovery

## Lessons Learned from the US Virgin Islands

Emily N. Ussery, PhD

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Nutrition, Physical Activity, and Obesity



# Outline

- CDC's Physical Activity and Health Branch
- Activity-friendly communities in the US Virgin Islands
  - Pre-hurricane planning
  - Post-hurricane planning
- Challenges and lessons learned

# CDC's Physical Activity & Health Branch

- Active People, Healthy Nation<sup>SM</sup>, a national initiative to help 27 million Americans become more physically active by 2027
- Provide support and technical assistance to states and territories to create activity-friendly communities where people live, work, and play
- Inform physical activity guidelines and evidence-based recommendations for improving physical activity



# Community Preventive Services Task Force

## Activity-Friendly Routes + Everyday Destinations

### Pedestrian or Bicycle Transportation Systems

- Street connectivity
- Sidewalk & trail infrastructure
- Bicycle infrastructure
- Public transit infrastructure and access



### Land Use and Environmental Design

- Proximity to destinations
- Mixed land use
- Residential density
- Parks and other recreational facilities



# Policy Approaches

- Complete Streets
- Pedestrian-oriented zoning
- Safe Routes to School
- Vision Zero

# Benefits of Walkable Communities

- Increased physical activity
- Reduced risk of some chronic diseases
- Improved mental health
- Improved safety
- Increased social connectedness
- Reduced air pollution
- Improvements to local economy
  
- *Contribute to community resilience*
- *Reduce losses from disasters*



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# Activity-Friendly Communities in the USVI: Pre-Hurricane Planning



# Background

- Chronic diseases and obesity are significant public health concerns in the USVI
- Almost one-third of adults are physically inactive



# TIMELINE



Walkability  
Assessment

May  
2016



# TIMELINE

DOH to Host Town Hall Meeting  
to Discuss Walkability on St. John  
By Tradewinds Staff - August 7, 2017  
1747



Walkability Assessment

May  
2016



Walkability Institute

June  
2017



# TIMELINE



Walkability Assessment

May 2016



Walkability Institute

June 2017



Hurricanes Irma and Maria

Sept 2017

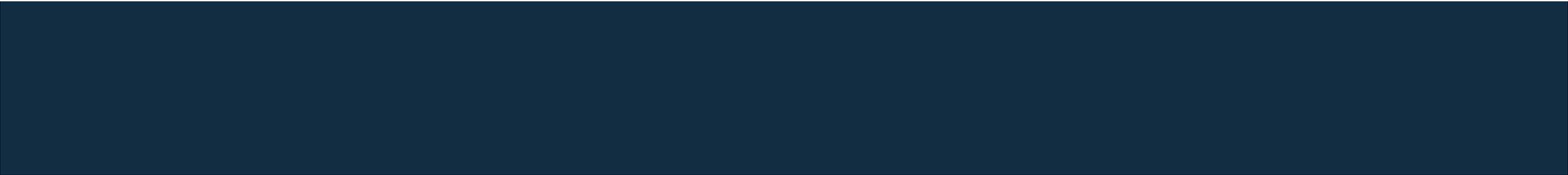
Deployed for hurricane recovery

Feb 2018



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# Activity-Friendly Communities in the USVI: Post-Hurricane Planning



## Stafford Act (1988)

- Provides legal authority for federal government to provide assistance to states (and territories) during declared major disasters and emergencies that overwhelm state capacity
- Presidential declaration enables access to assistance and funds
- FEMA coordinates disaster relief resources

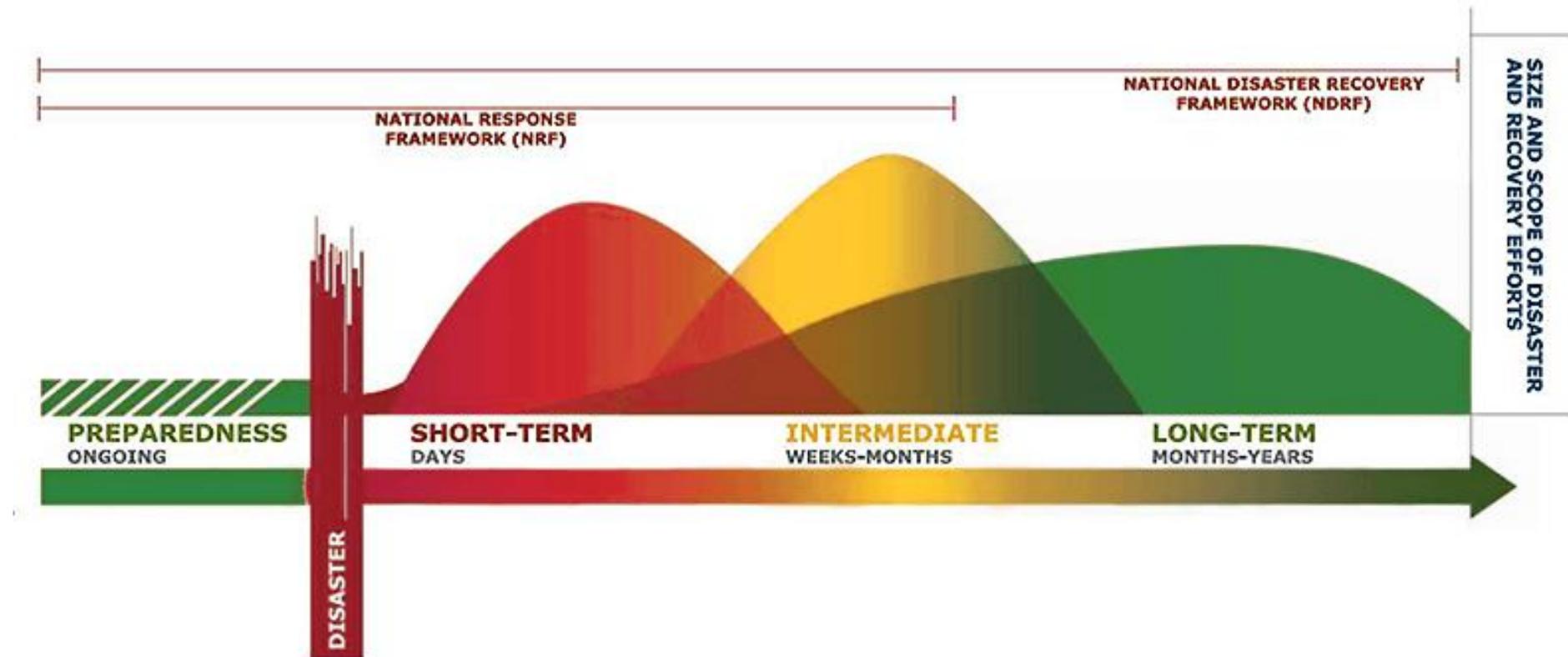
# FEMA Assistance

- Individual Assistance
  - Direct funds to individuals for housing, etc.
- Public Assistance
  - Aid for organizations or government agencies to repair eligible public facilities
- Hazard Mitigation
  - Grants to governments to implement long-term mitigation measures
- Mutual Aid Agreement Reimbursement
  - Allows states to share resources during disasters (e.g. EMAC)

# Other Federal Assistance

- Federal Highway Administration's Emergency Relief (ER) Program
  - Emergency and permanent repairs on federal-aid highways and roads to restore to pre-disaster condition
- HUD's Community Development Block Grant Disaster Recovery (CDBG-DR) Program
  - Flexible grants to help localities recover from disasters, especially in low-income areas

# Disaster Recovery Continuum



Source: <https://www.fema.gov/national-disaster-recovery-framework>

# National Disaster Recovery Framework

Recovery Support Function (RSF)	Lead Coordinating Agency
Community Planning and Capacity Building	FEMA
Economic	Department of Commerce
Health and Social Services	Health and Human Services (HHS)
Housing	Housing and Urban Development (HUD)
Infrastructure Systems	Army Corps of Engineers
Natural and Cultural Resources	Department of Interior

Source: <https://www.fema.gov/national-disaster-recovery-framework>

# Health and Social Services Recovery Support Function

- Key recovery priorities in the USVI:
  - Electronic systems for health information exchange
  - Children and youth in disasters
  - Healthcare workforce development
  - Health and the built environment

# Rationale

- Opportunity to rebuild stronger and healthier

*“The recovery period, with its attendant influx of resources and synchronization of planning processes, presents an important opportunity to redesign physical and social environments ... to improve a community’s long-term health status while reducing its vulnerability to future hazards.”*

*– IOM Committee on Post-Disaster Recovery*

- Activity-friendly communities promote resilience
  - Good mental and physical health, and social connectedness reduce vulnerability to disasters
- Potential hazard mitigation benefits

# Activity-Friendly Design and Hazard Mitigation

Health Benefits	Design Element	Potential Risk Reduction Benefit
Provide opportunities for physical activity, improve mental health, and reduce heat island effects.	<b>Parks and open green space</b>	Used to manage stormwater and mitigate flood impacts.

# Activity-Friendly Design and Hazard Mitigation

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# Activity-Friendly Design and Hazard Mitigation

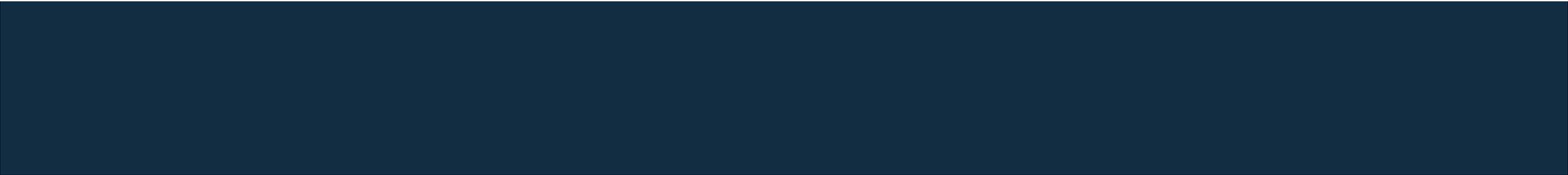
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Locating residences near everyday destinations promotes active modes of travel.	<b>Mixed land use/ Proximity to destinations</b>	Easier to access essential services when auto travel is limited following a disaster.
Provide pedestrian safety benefits due to lower speeds and fewer conflict points.	<b>Roundabouts at intersections</b>	Continuity of service during electricity outages following a disaster.

# Health and Built Environment Working Group

- Weekly meetings with local partners and federal agencies involved in recovery
- Identify needs and available recovery resources
- Expand on projects and priorities identified before the hurricanes
- Ensure that recovery investments in infrastructure, housing, etc. incorporate healthy community design principles

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# WORKING GROUP OUTCOMES



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# Established Guiding Principles

- Developed memo of “guiding principles” for healthy community design in the USVI
  - Endorsed by Commissioners of Health and Public Works
  - Shared with key stakeholders
- Reflected in Governor’s Hurricane Recovery and Resilience Report

*Initiative 12*

**Implement Safe Routes  
to Schools**

*Initiative 11*

**Utilize roundabouts instead of  
street lights at intersections**

*Initiative 13*

**Deploy walkability  
recommendations**

# Hazard Mitigation Grant Program

- Submitted 5 project proposals with activity-friendly design components
- Spring Gut Valley Park and Conservation Project
  - Acquire 50 acres in high flood risk area on St. Croix, and revitalize into a community park with improved stormwater drainage → *Funded for \$2 million*



# Hazard Mitigation Grant Program (cont)

- Schneider Regional Hospital Project
  - Address and mitigate flood impacts by adding green infrastructure
  - Improve pedestrian connectivity, transit access, and public green space
  - Awarded a Community Planning Assistance Team (CPAT) from the American Planning Association for design assistance



# Complete Streets Policy

- Collaborating with AARP to develop a Complete Streets policy specific to the USVI
- Working with Ohio State University to develop street design guidelines for USVI



# Partnership Development



Proposed Christiansted Bypass Bike Lane Route.

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# CHALLENGES AND LESSONS LEARNED



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# Challenges

- Funding restrictions require rebuilding to prior condition
- Limited or no dedicated resources
- Many competing needs and interests
- Significant buy-in and support from multiple partners needed
  - Local coalitions
  - Emergency management agencies
  - Local policymakers
  - Federal agencies
- Constrained timeline requires quick decision-making

# Lessons Learned

- Pre-disaster planning is necessary for success
- Important to identify and engage appropriate partners
- Multi-sector collaboration is key to navigating the complicated disaster recovery process
  - FEMA
  - HUD
  - EPA
  - USDA (rural communities)
  - American Planning Association
  - Smart Growth America

Thank you!

[eussery@cdc.gov](mailto:eussery@cdc.gov)



# Questions?

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## **Emergency Management Assistance Compact: Legal Considerations in 90 Minutes**

- October 17, 2019
- 2:00 pm – 3:30 pm EST

## **Ebola and Beyond: Legal Preparedness for Outbreaks**

- November 21, 2019
- 2:00 pm – 3:30 pm EST

## **Information Sharing 101: Protecting Public Health Data**

- December 12, 2019
- 2:00 pm – 3:30 pm EST

### **Register at:**

<http://www.nga.org/ph-emergency-prep-toolkit/#webinar>



# **Upcoming Webinars in the Series**