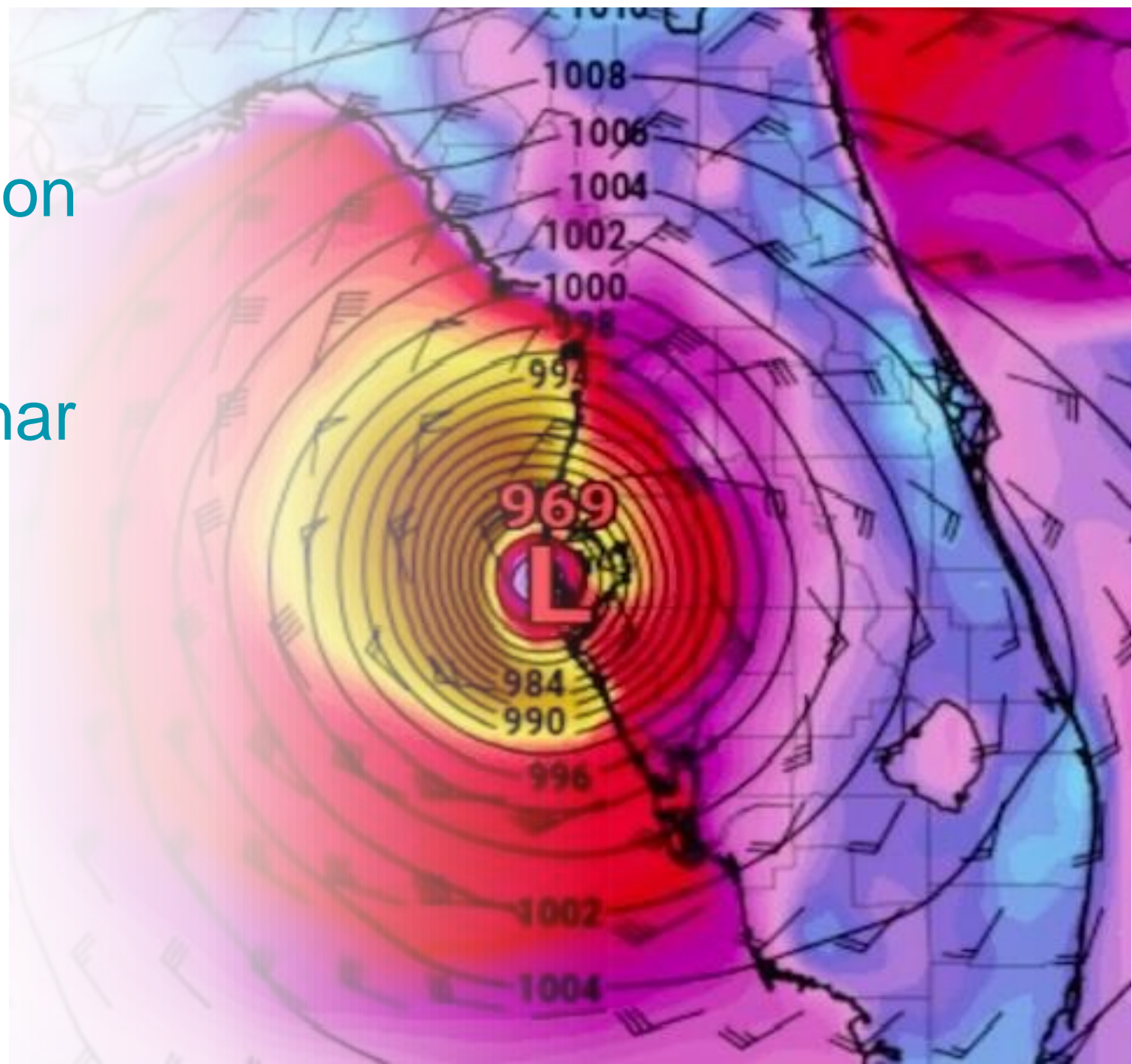

Florida Housing Coalition Hurricane and Climate Resilience Member Update Webinar

August 11, 2023
Sponsored by Fannie Mae



TODAY'S AGENDA

- Welcome – Please put name and org in chat
- Adapting Affordable Housing to Extreme Heat: Vulnerable Populations
 - Dr. Catherine Toms, Senior Advisor, Health Care Without Harm; Director, Green Cars for Kids
 - Lauren Thornberg, Technical Advisor, Disaster Recovery and Resilience
- Upcoming Webinars



Heat as a Hazard: Shock AND Stressor

Florida summers are always hot, but extreme heat is increasing in frequency and intensity

Record-crushing heat is blasting Florida, with no clear end

More record highs and heat indexes approaching 110 degrees are ahead

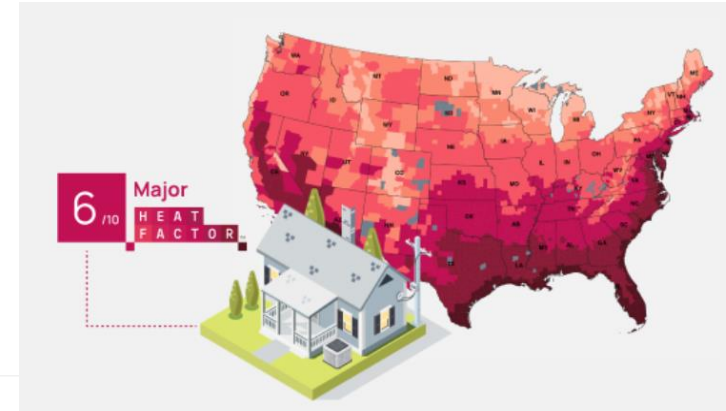


By Ian Livingston

July 6, 2023 at 1:03 p.m. EDT

Florida heat wave: New excessive heat watch issued for Central Florida with heat index to soar above 113 again

Excessive heat remains into next week



For Florida's Hurricane Ian survivors, extreme heat is a 'second disaster'

The state's record-breaking weather shows how compound climate events hurt the most vulnerable

Pressure builds for FEMA to declare deadly heat events as disasters

Proponents say a federal disaster designation could save lives by providing vital services and reimbursing states for being proactive



Fannie



Florida Housing Coalition

Developing a new Climate Resilient Affordable Housing initiative:

Technical assistance, training on planning and strategies

- Reduce impacts to housed and unhoused residents -- vulnerable low-moderate income populations,
- Reduce energy burden and increase energy efficiency
- Weatherization, mitigation and retrofits that make a difference
- Designs for single family and multi-family
- Integrated disaster preparedness

Developing new partnerships



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Understanding The Heat Index

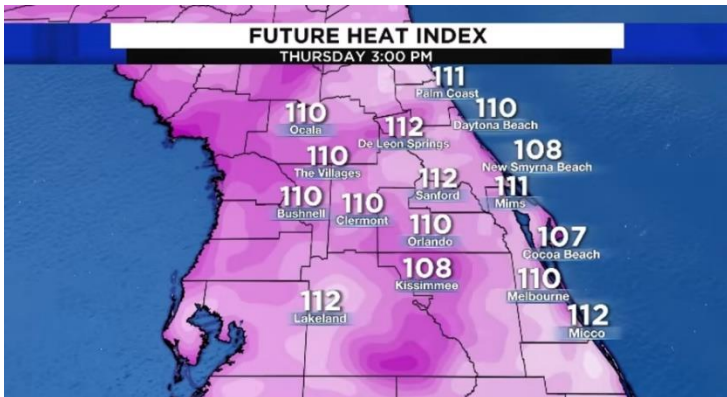
NOAA's National Weather Service

Example:

high temp of 94F with
humidity at 72% = 114

Heat Index
Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										



Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution

Extreme Caution

Danger

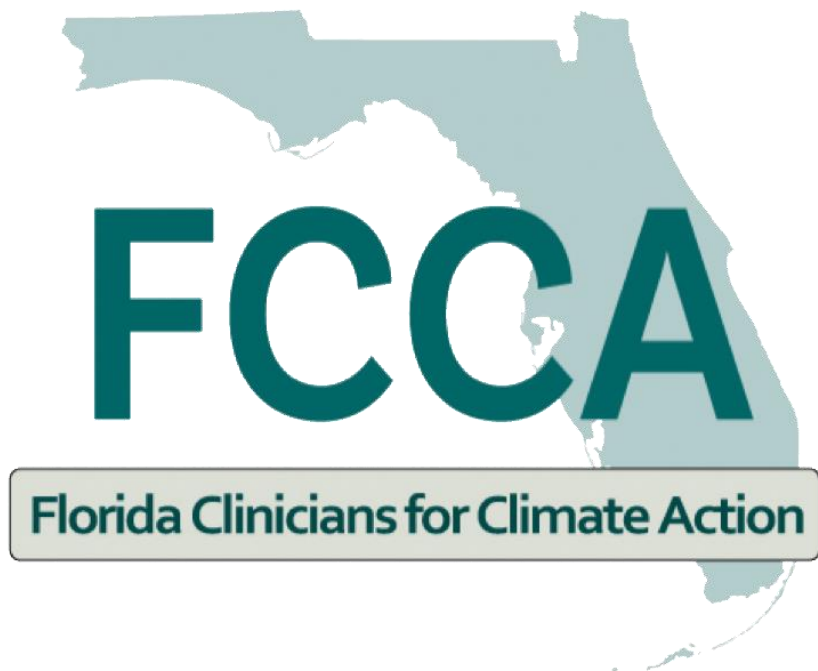
Extreme Danger



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Catherine Toms, M.D., Ph.D.

Steering Committee Member, Florida Clinicians for Climate Action; Senior Advisor, Health Care Without Harm; Director, Green Cars for Kids

ctoms@greencars4kids.org

Phone: 561-400-9835



THE FLORIDA HOUSING COALITION

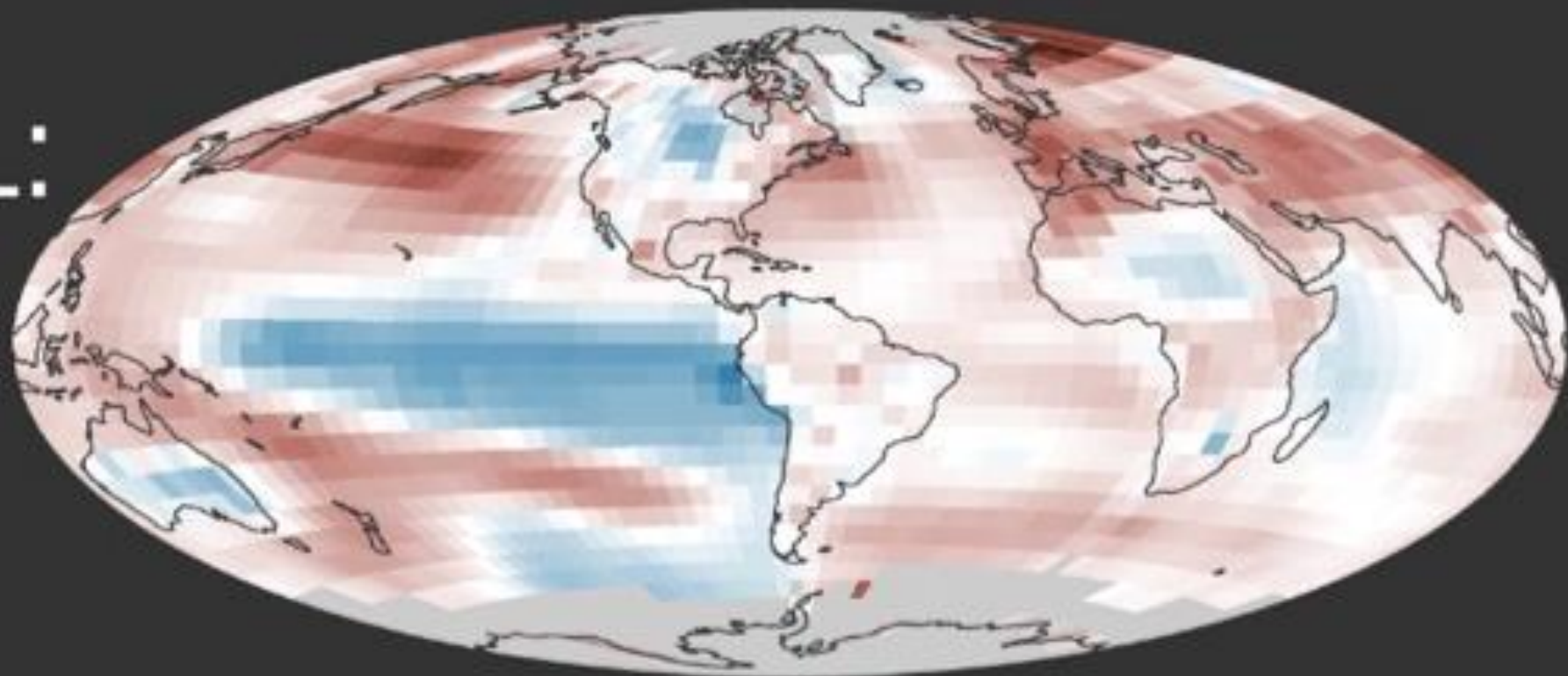


Rising Temperatures in Florida

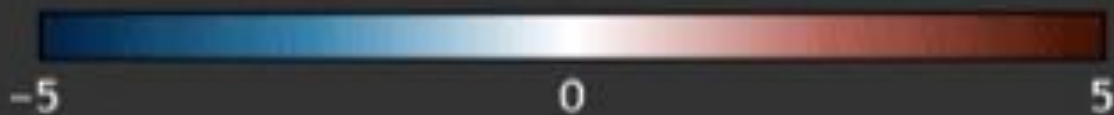
- **What**
- **When**
- **Where**
- **How**
- **Who**

IT'S OFFICIAL:

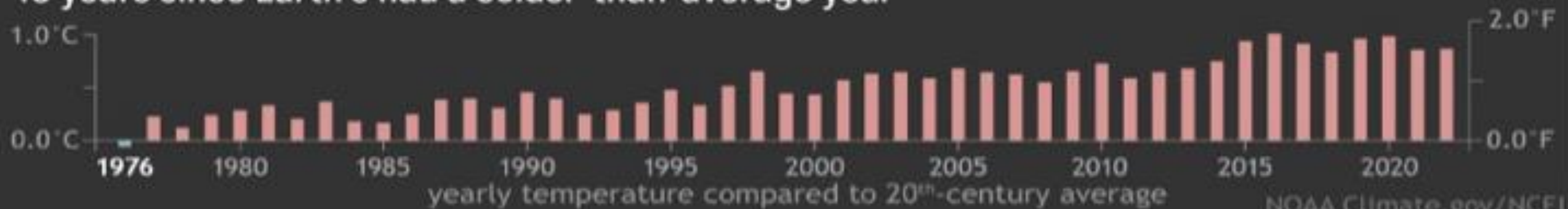
2022 WAS WORLD'S 6th-WARMEST YEAR ON RECORD [1880-2022]

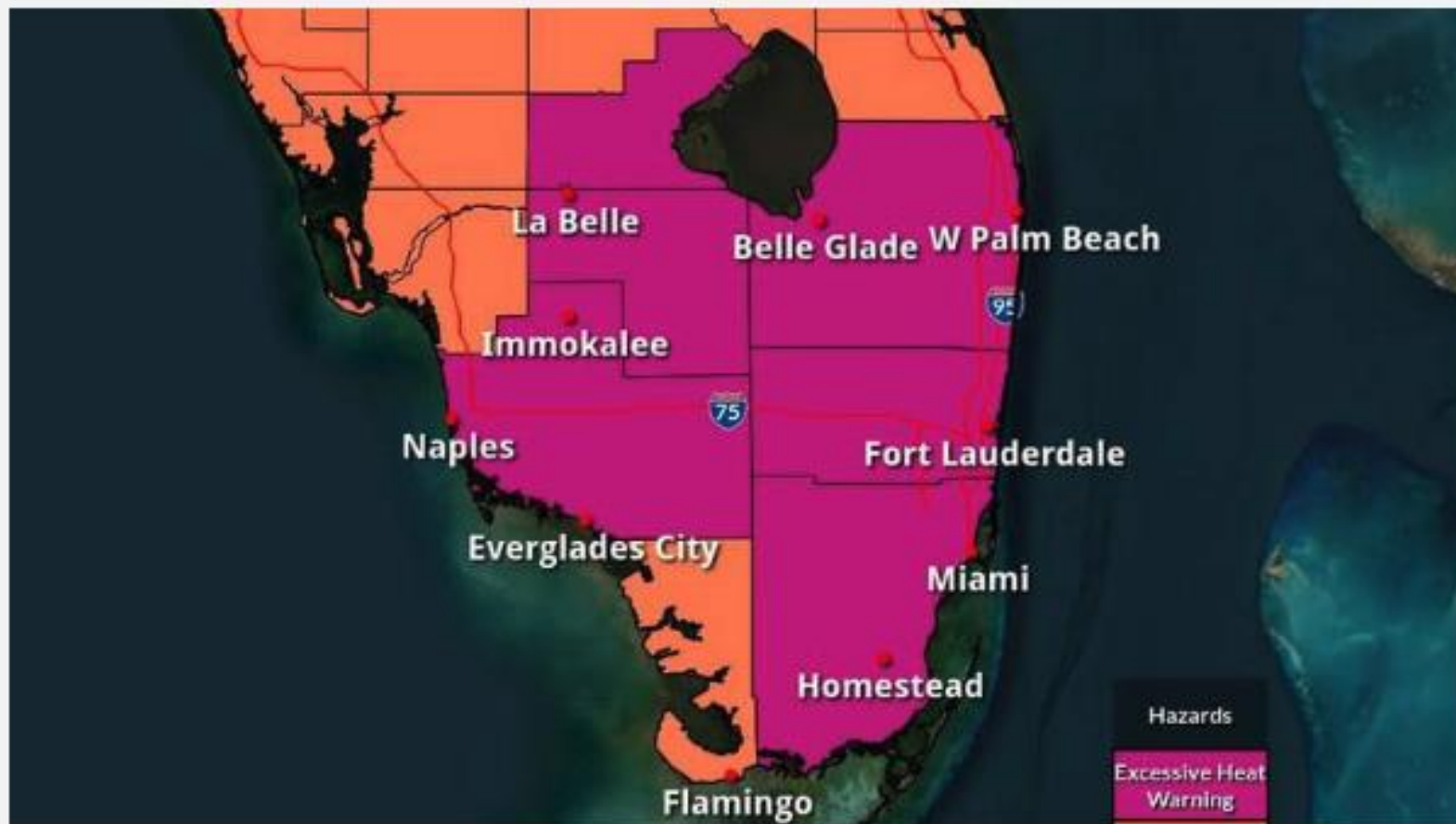


Difference from 1991-2020 average (°F)



46 years since Earth's had a colder-than-average year





WEATHER NEWS

Weather alert: 'Excessive heat warning' issued for South Florida — may feel like 115

What to know about the forecast.

Hazardous Weather Outlook for Excessive Heat – A period of excessive heat is possible within the next 3 to 5 days. A heat advisory or Excessive Heat Warning may eventually be needed. Stay informed and be prepared by following the preparedness information on this website in the event excessive heat occurs.

Heat Advisory – Take Action. A period of excessive heat is expected. The combination of hot temperatures and high humidity will create a situation in which heat related illnesses are possible. A Heat Advisory is issued when heat indices are expected to reach at least 100 degrees, except at least 105 degrees over Delmarva and far southern New Jersey (Salem, Cumberland, Cape May, and Atlantic Counties). The aforementioned heat index values must be reached for at least two hours; typically a single day event.

Excessive Heat Watch – Be Prepared. A prolonged period of dangerous excessive heat is possible within about 48 hours.

Excessive Heat Warning – Take Action. A prolonged period of dangerous excessive heat is expected within about 24 hours. The combination of hot temperatures and high humidity will create a dangerous situation in which heat related illnesses are likely. An Excessive Heat Warning is issued when heat indices are expected to reach at least 105 degrees, except at least 110 degrees over Delmarva and far southern New Jersey (Salem, Cumberland, Cape May, and Atlantic Counties). The aforementioned heat index values must be reached for at least two hours per day; typically for a multi-day event.

Heat Advisory

In Effect 11AM to 7PM Friday

Weather Forecast Office
Miami/South Florida

Issued Aug 11, 2023 3:33 AM EDT



La Belle

Belle Glade W Palm Beach

Immokalee

Naples

Fort Lauderdale

Everglades City

Miami

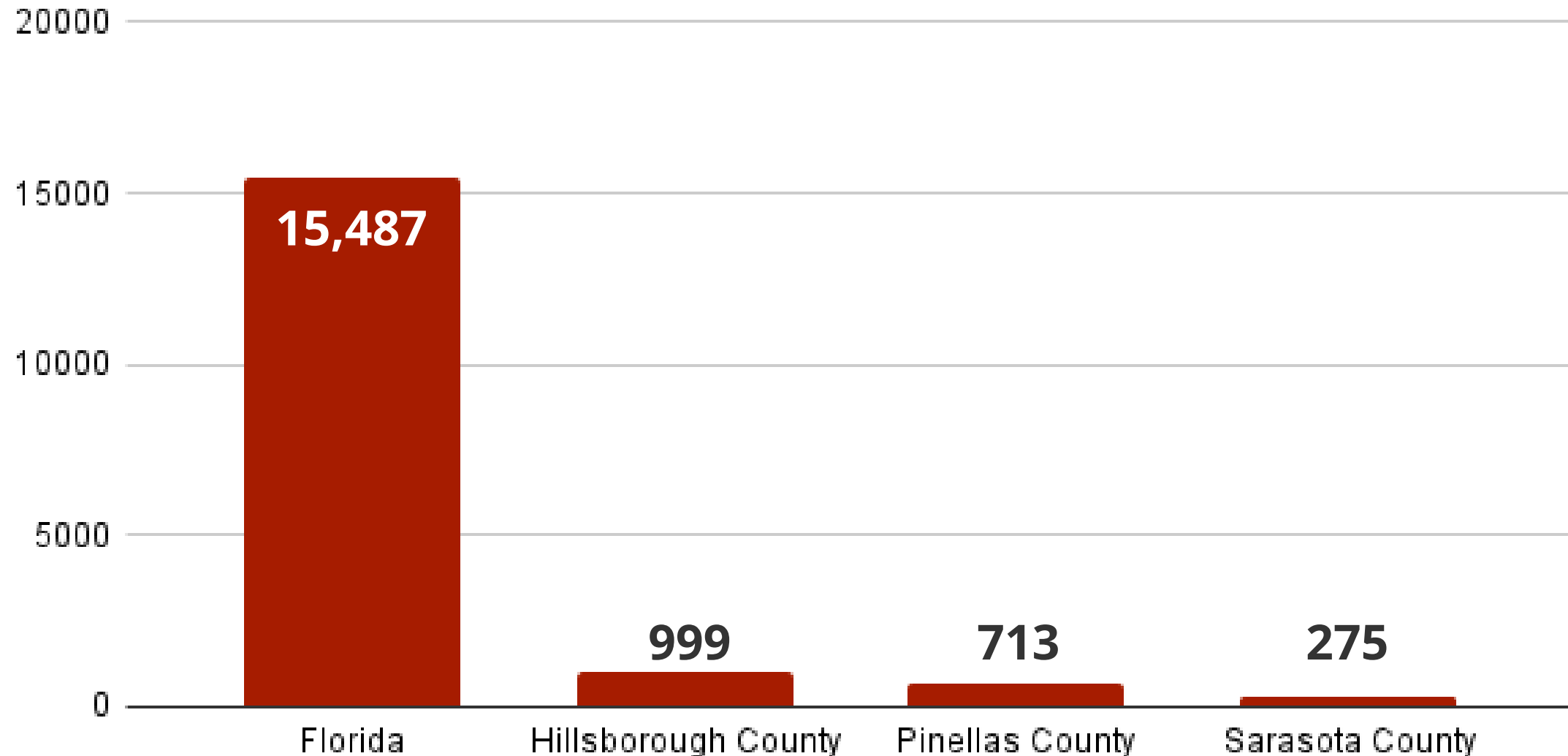
Homestead

Flamingo

Hazards

Heat Advisory

Number of Heat-related emergency department visits during summer months for 2019-2021



Source: FDOH: <https://www.floridatracking.com>

TYPE IN YOUR LOCATION (CITY OR COUNTY) 

CHOOSE HOW HOT 

🔍 Tampa-St. Petersburg, FL

Above 90° ▼

GO

WHERE WE ARE NOW

Historically

1971-2000 average

140

DAYS PER YEAR

WHERE WE ARE CURRENTLY HEADED 

Midcentury

2036-2065 average

177

DAYS PER YEAR

Late Century

2070-2099 average

194

DAYS PER YEAR

WITH BOLD ACTION 

Extreme Heat
Limited to

173

DAYS PER YEAR

Courtesy of the Union of Concerned Scientists: <https://www.ucsusa.org/resources/killer-heat-interactive-tool?location=tampa-st--petersburg--fl&heat=above-90>

Evaporative cooling of the skin



Heart rate increases



Blood vessels dilate



Sweat glands produce

sweat

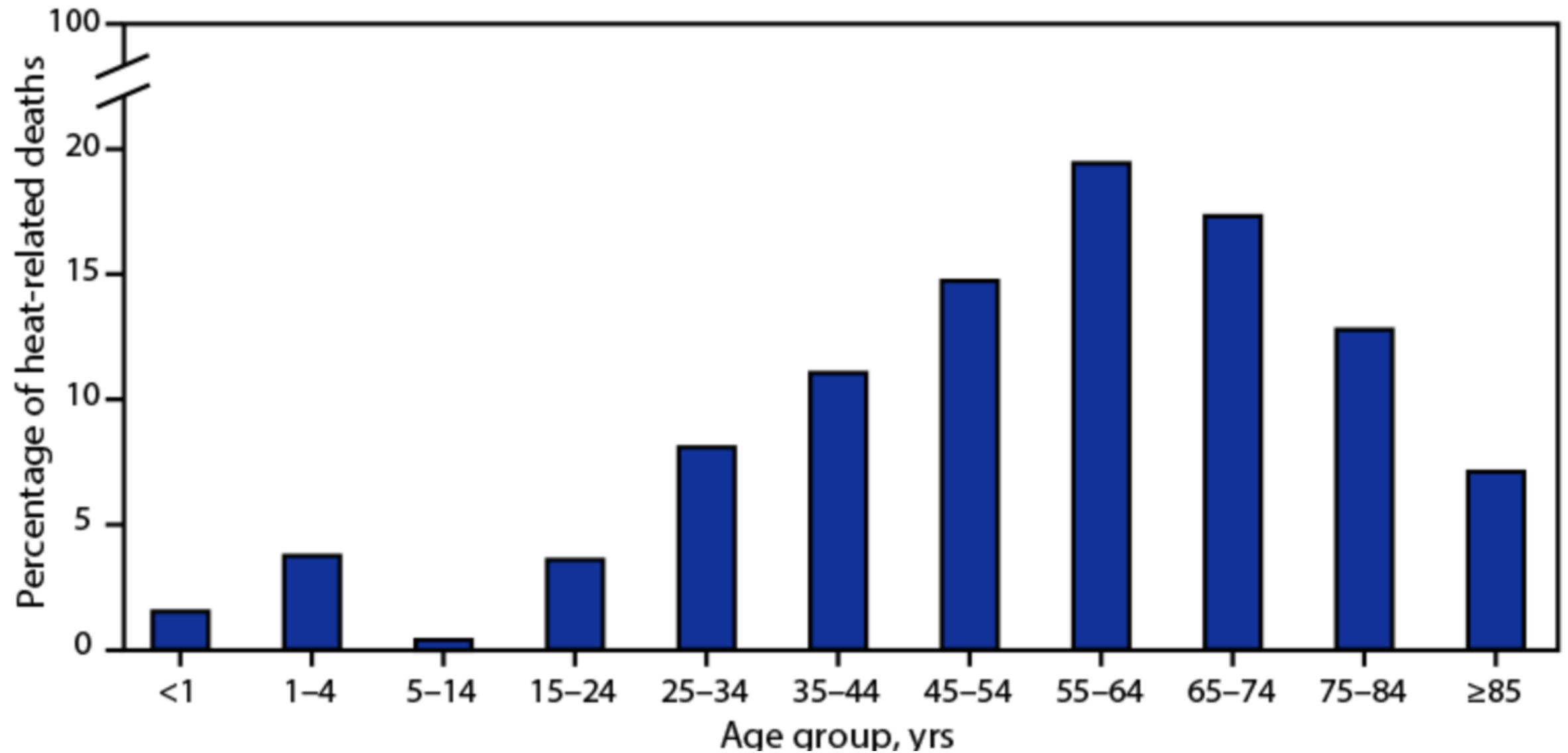


Cooling &
constant core temperature
are maintained



At-risk Groups

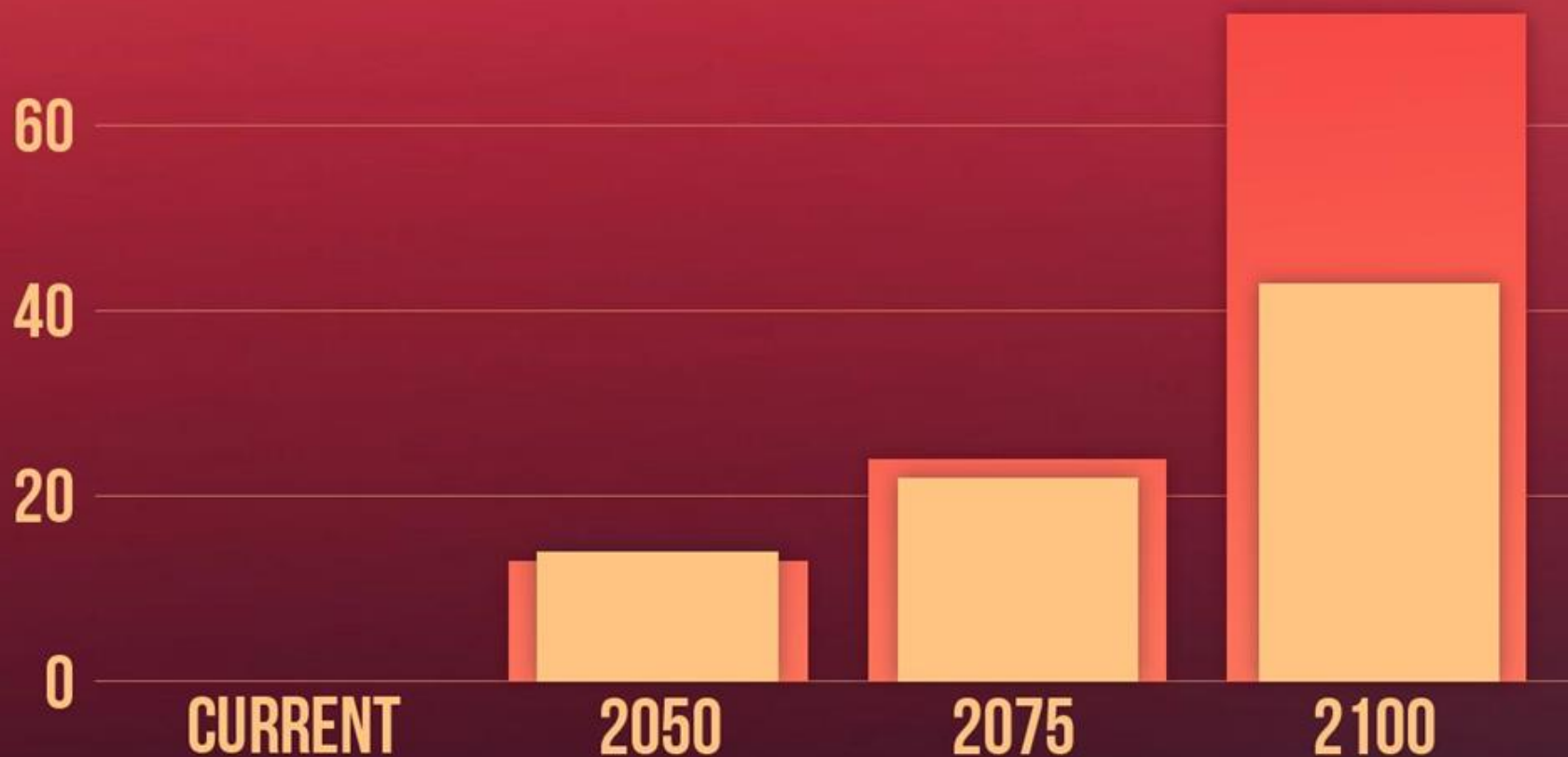
- Older adults
- Children, especially infants
- Low income families
- Homeless
- People with pre-existing illnesses
- People with mental illness
- People with disabilities
- Frontline & communities of color
- People who work or play outdoors
- Pregnant People



QuickStats: Percentage Distribution of Heat-Related Deaths, by Age Group — National Vital Statistics System, United States, 2018–2020. MMWR Morb Mortal Wkly Rep 2022;71:808. DOI: <http://dx.doi.org/10.15585/mmwr.mm7124a6>

MIAMI FUTURE DAYS ABOVE 95°

■ Current emission trends ■ Moderate emission cuts



Projections based on an ensemble of CMIP5 climate models (20-yr average)
Current values are the 1997-2016 averages from Daymet (ORNL)

Heat Wave + Blackout= More Heat Exhaustion & Heat Stroke



Stone, B., et al., *Environmental Science & Technology* 2021 55 (10), 6957-6964

Heat is an all-of-society problem



PEOPLE

Heat exacerbates risks of:

Social inequity;
Illness and death

Requiring action from:

Public health;
labour; social
sectors; physiology;
medicine; sports;
etc.



ENVIRONMENT

Heat exacerbates risks of:

Fires; poor air quality;
water scarcity and
drought; cyclones;
UV radiation

Requiring action from:

Environment;
meteorology;
climatology; etc.



INFRASTRUCTURE

Heat exacerbates risks of:

Urban heat islands;
emergency and power
service disruptions;
poor quality housing

Requiring action from:

Architecture,
engineering,
urban planning; etc.

Prevention of Heat-Related Illness

Stay **Cool**



Stay **Hydrated**



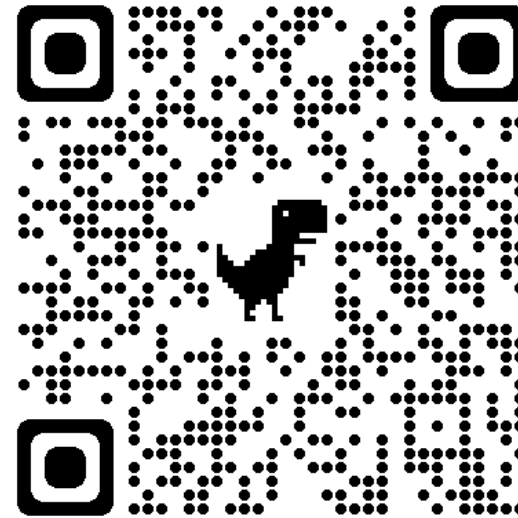
Stay **Informed**



-CDC



OSHA-NIOSH Heat Safety Tool



Inequitable Impact of Urban Heat Island Effect

Increased Energy
Consumption

Increase Air
Pollution

Negative Health
Impacts

Impaired Water
Quality

Individual and Community Resilience to Extreme Heat

Urban Heat Island Mitigation Strategies

Increased Energy Consumption

Increase Air Pollution

Negative Health Impacts

Impaired Water Quality

Trees and Vegetation

Green Roofs

Cool Roofs

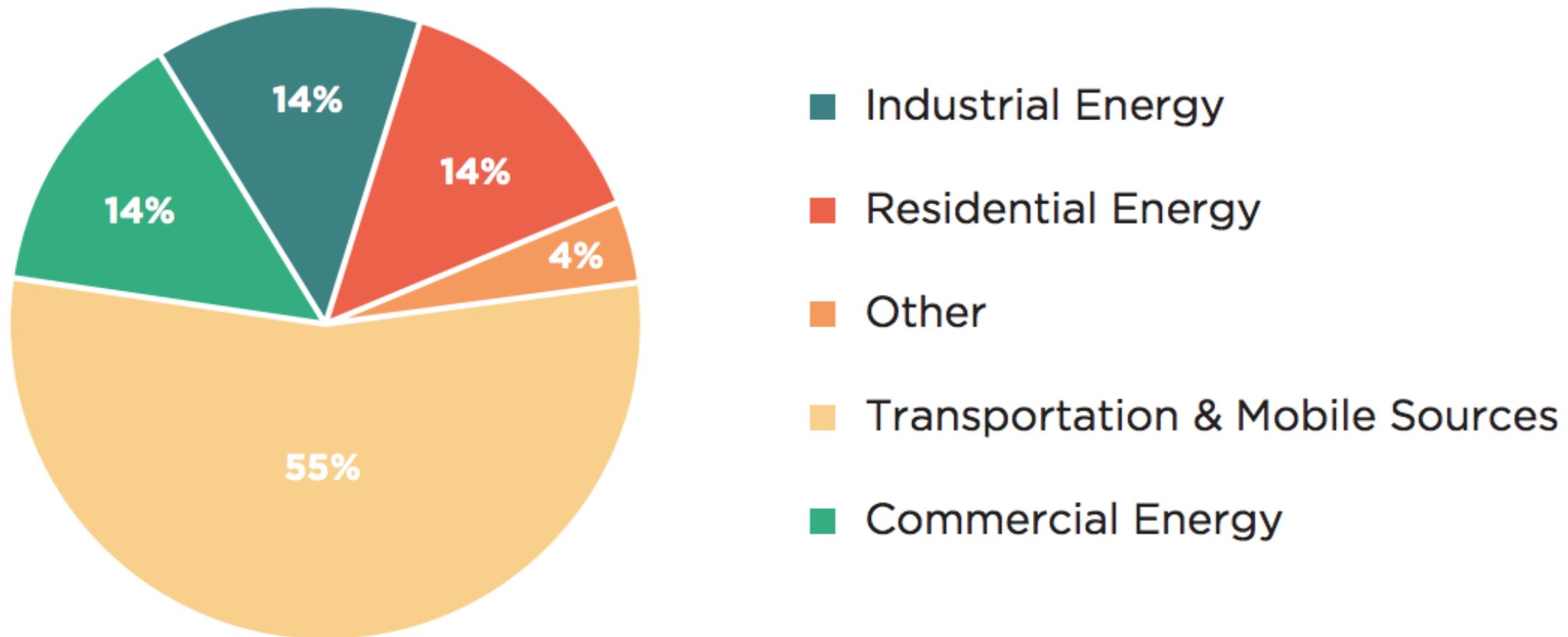
Cool Pavements

Smart Growth

Individual and Community Resilience to Extreme Heat

Miami-Dade County Community Scale Emissions

2019 Community-Scale Inventory by Sector

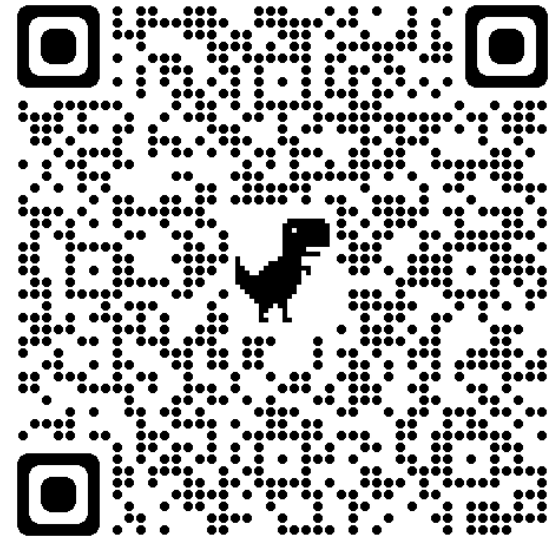


The Intersection of Healthcare & Energy Efficiency



Energy Solutions

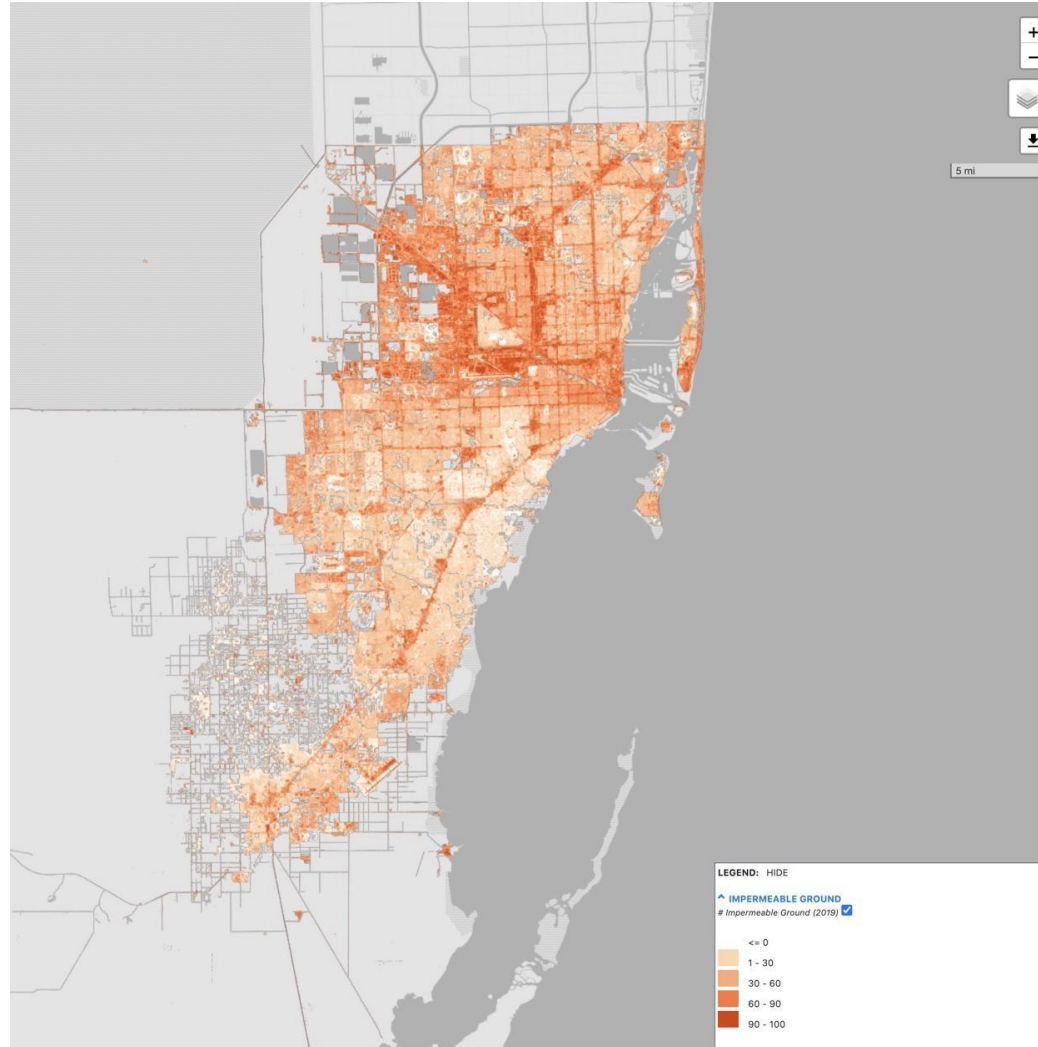
**CHP and Project Partners Launch Healthy
Homes Pilot Program in Northern Virginia**





Climate and Equity Mapping Platform (CAMP)


& Extreme Heat Policy Toolkit



Miami-Dade County Heat Season Campaign + Toolkit

MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY & ECONOMIC RESOURCES

Protect yourself from
EXTREME HEAT





Who is Most at Risk?

- People who work or are active outdoors
- Anyone who does not have access to air conditioning
- Infants and children
- Pregnant women
- Adults 65 and older
- People with chronic illnesses

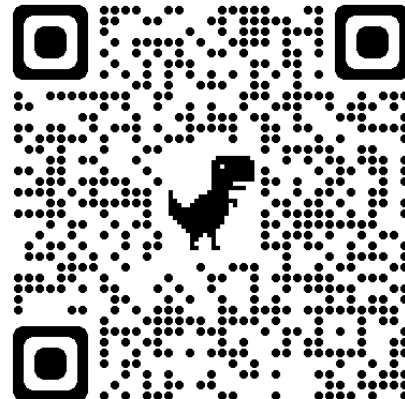
HEAT CHECK
What Can You Do?

- STAY COOL**
 - If you don't have air conditioning, go somewhere that does a few hours each day.
 - Wear light-colored, light-weight clothing that breathes.
 - Take cool showers.
 - Avoid direct sun.
- STAY HYDRATED**
 - Drink more than usual. Water is best!
 - On regular days, drink 8 glasses, and more when it's hot.
- CHECK ON NEIGHBORS AND FRIENDS**
 - Create a buddy system.
 - Focus on people at high risk.
 - Check on the elderly and anyone who doesn't have AC.
- STAY INFORMED**
 - Check local news and weather reports.
 - Be alert on extreme heat days that "feel like" 100 degrees or more.
 - Learn the warning signs of heat illness, including: heavy sweating, clammy skin, cramps, tiredness, dizziness, headaches, nausea, confusion, high body temperature



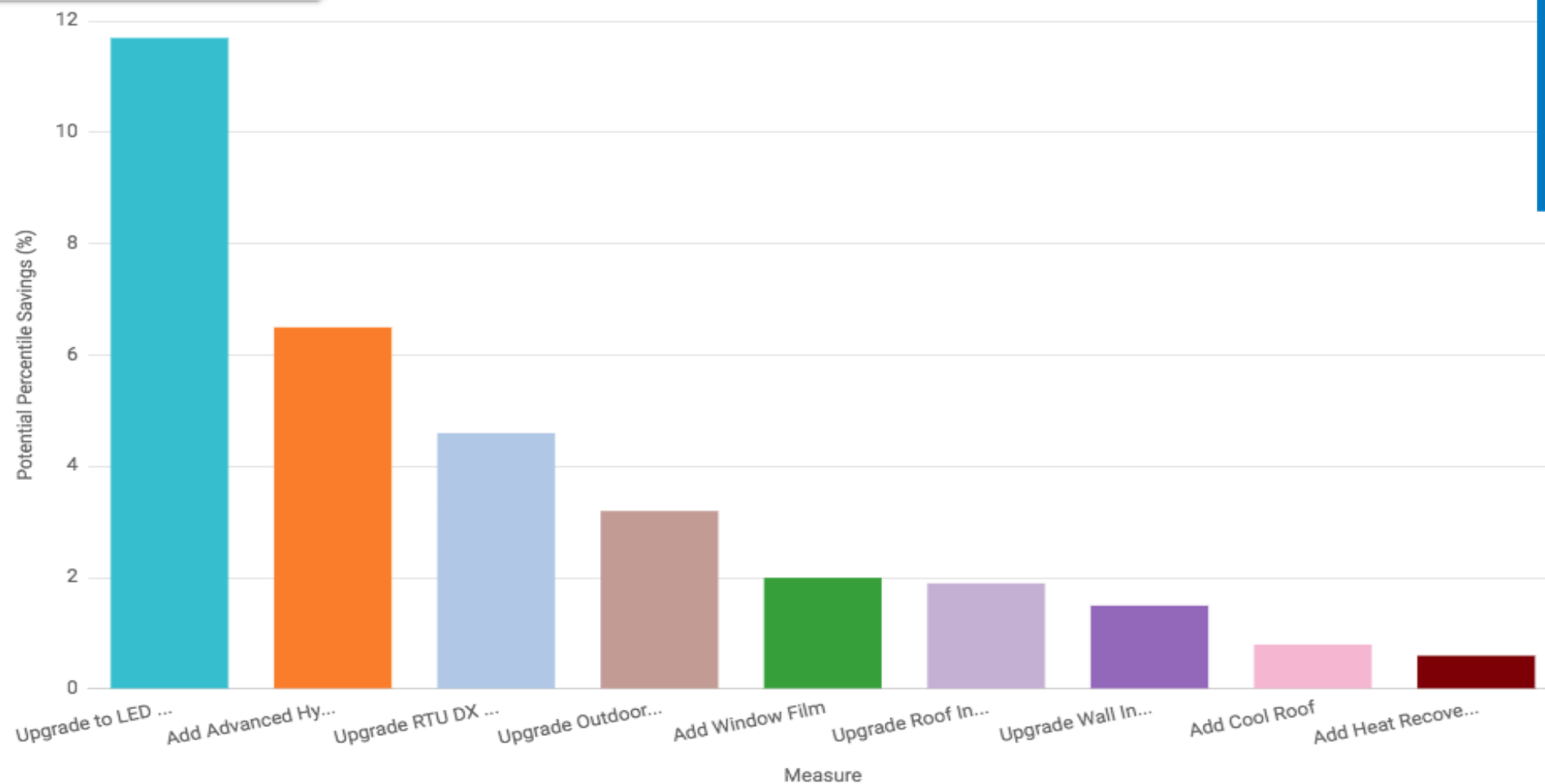
For more information, scan QR Code

305 MIAMI-DADE COUNTY



Top Ten State-Wide Electricity Savings Potential by Measure

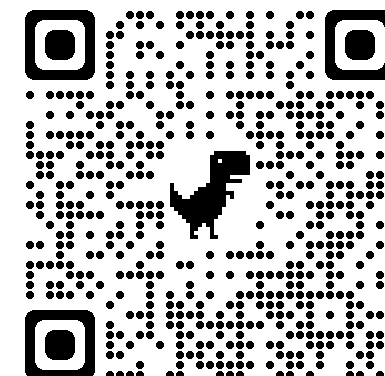
Layer Database



Data Filters ⓘ



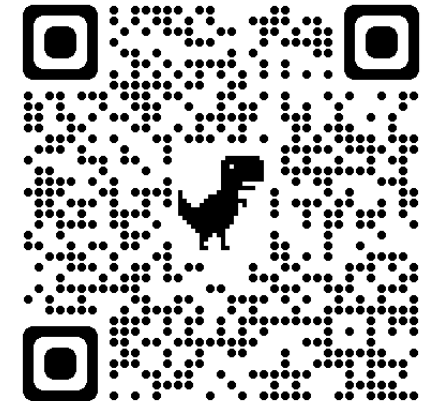
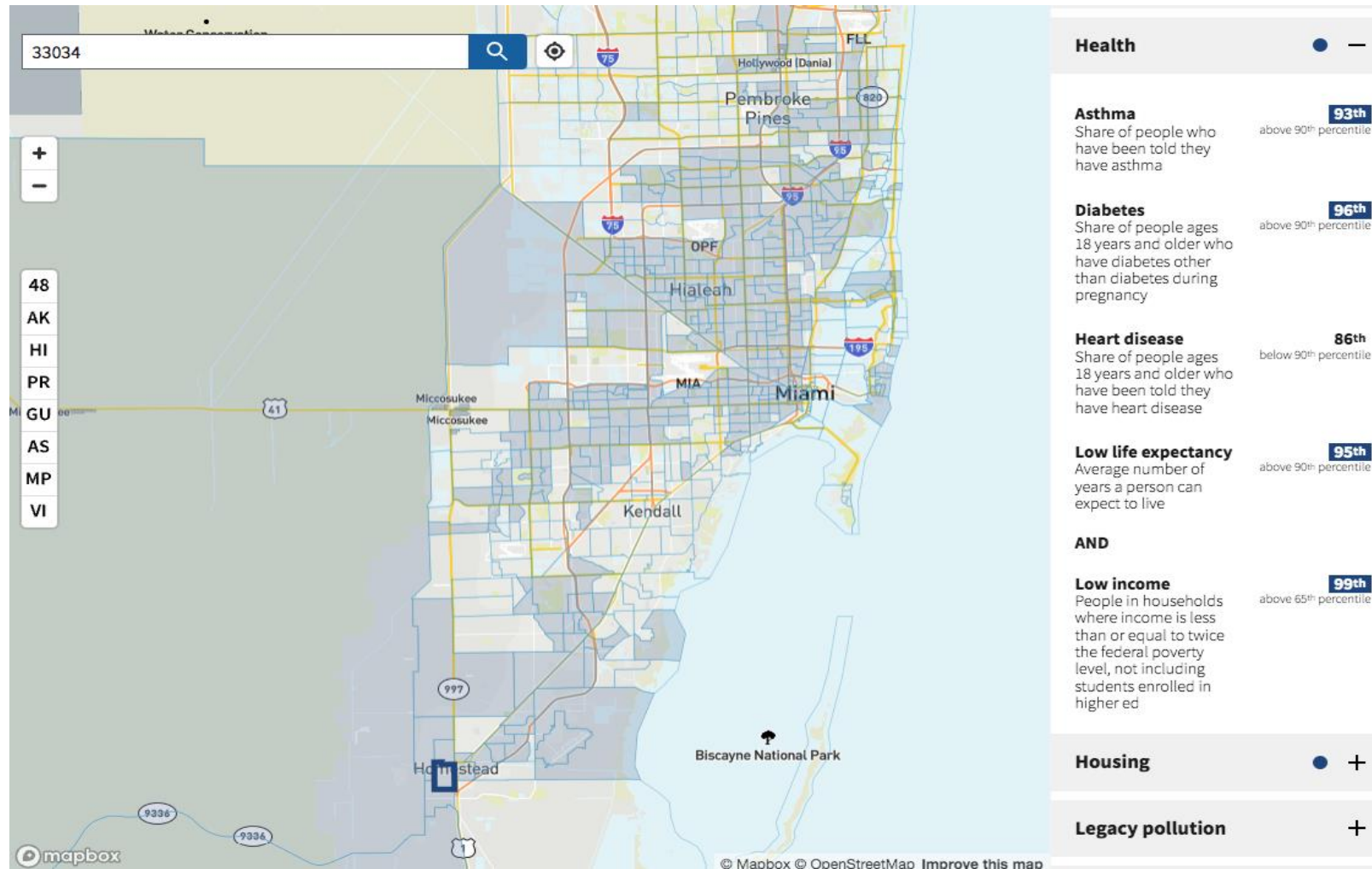
- | | | | |
|--------------------------------|----------------------------------|--|--------------------------------|
| Add Advanced Hybrid RTUs | Add Cool Roof | Add Heat Recovery | Add Window Film |
| Upgrade Boiler (AFUE-94)* | Upgrade Outdoor Lights | Upgrade RTU DX Air Conditioner (IEER-17.0) | Upgrade Roof Insulation (R-30) |
| Upgrade Wall Insulation (R-30) | Upgrade to LED Interior Lighting | | |



Climate and Economic Justice Screening Tool



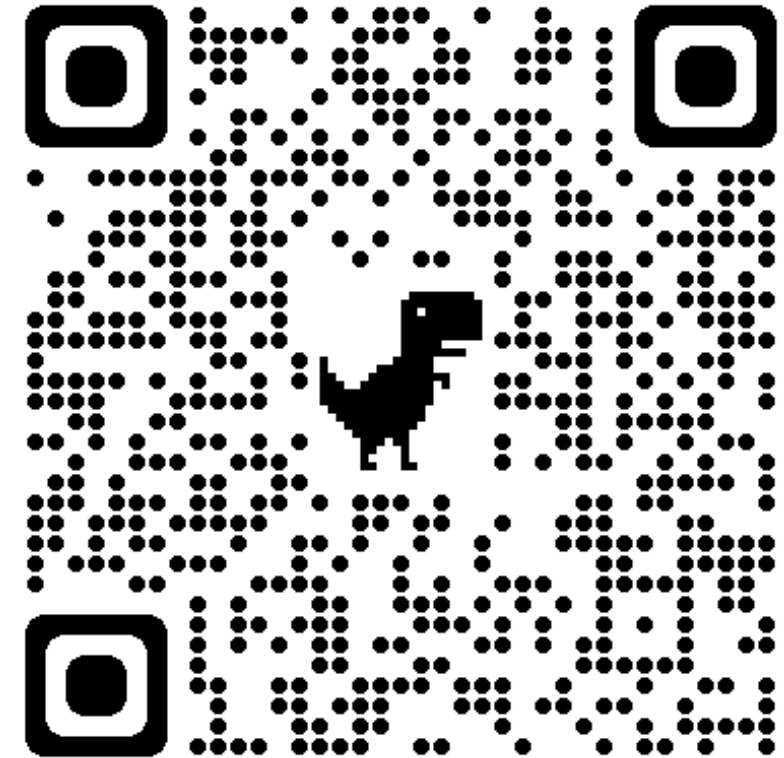
Climate & Economic
Justice
Screening tool



Knowledge Series 031/20

PRIMER FOR COOL CITIES: REDUCING EXCESSIVE URBAN HEAT

WITH A FOCUS ON PASSIVE MEASURES



Even the best programs can't get off the ground without FUNDING:

- Green and Resilient Retrofit Program

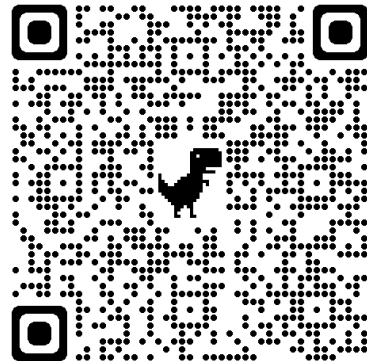
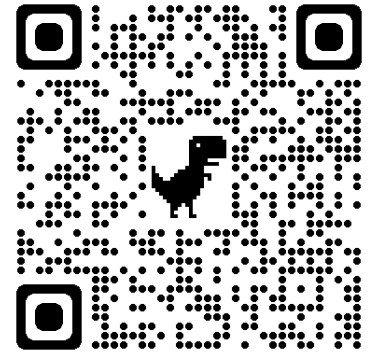
HUD-assisted multifamily properties serving low-income residents

- Almost \$900 million in grant and loans for HUD-assisted multifamily properties serving low-income residents.
- Solar panels, heat pumps, insulation & wind-resistant roofing

- DOE's HOMES Program (Available now)

- EPA Climate and Environmental Justice Community Grant

- RFP coming in September or October 2023
- Community-led air and other pollution monitoring, prevention, remediation, & more





Partner with Us!



FLORIDA HOUSING COALITION

“...all Floridians have a home that is affordable in a suitable living environment.”

DRAWDOWN



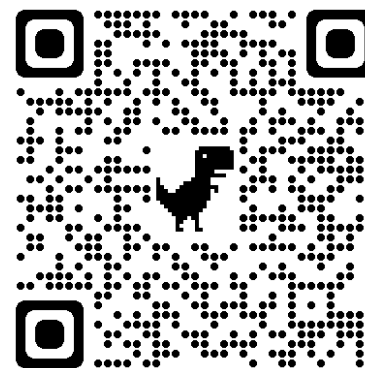
Instagram: Green Cars for Kids





Green Cars for Kids

...driving children to better health
and a brighter future with electric vehicles



Follow us on Instagram:

<https://www.instagram.com/greencars4kids/>

What Does this Mean for Your Organization?

Vulnerable populations your organization serves have various needs – How can you help?

- Immediate, physical safety
- Assessing populations
- Outreach Education
- Social connection
-And more



What Does this Mean for Your Organization?

How is your organization currently addressing heat?

- Annual programs vs. emergency vs post-disaster preparedness?
- Program timelines:
 - Short-term
 - Mid-term
 - Long-term



Coordinating Organization Efforts

Heat is an increasing hazard, which can be addressed through multiple divisions and departments

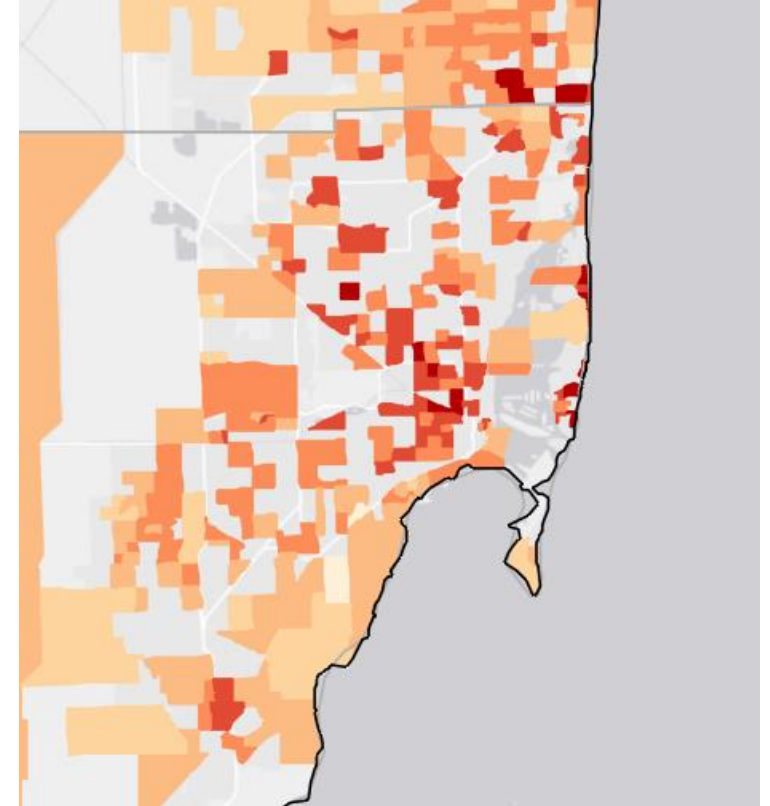
- Create a Heat Action Response Team (HART): human services, housing, EM, infrastructure, GIS, neighborhood outreach, resilience/sustainability
- Review existing programs, plans and short and long-term needs, actions, funding
- Identify a team lead
- Consider a Task Force to elevate attention
- Best practices example: Miami-Dade County:
 - Chief Heat Officer
 - Heat and Health Task Force
 - [Extreme Heat Action Plan](#)



Identifying Your Vulnerable Populations

Who is at most at risk and where do they live....

- Basic heat GIS activities
 - Low-income neighborhoods
 - Layer Census data, social vulnerability – age, income
 - Multi-family assisted housing -- Shimberg Assisted Housing Inventory
 - Mapping – urban heat islands
- Define needs by populations and community areas.



Support Immediate, Physical Safety

Open cooling shelters and relief centers near high-risk communities

- Public and non-profit locations
- Consider staffing for day and night

Covered outdoor spaces, AC, misters, seating, coolers

Reduce barriers to access:

- Provide transportation,
- Address physical mobility issues
- [CDC Guide for Cooling Centers](#)



Unhoused/Homeless Populations

- Coordinated outreach
- Identify encampments and hangouts
- Identify public spaces and vacant commercial buildings for potential shelters
- Future webinars with FHC Ending Homeless Team



THE FLORIDA HOUSING COALITION



Outreach and Education

- Develop materials which support specific populations – not general information
 - Collaborate with organizations and community groups serving key vulnerable populations
 - Translate heat materials into commonly spoken languages
 - Consider literacy levels
 - Implement multi-level outreach strategies – location, events, properties

HAZARD ALERT
CPWR | OSHA

WORKING IN HOT WEATHER



Am I in danger?

OSHA says that each year, thousands of workers get sick from heat exhaustion or heat stroke. **Some even die.**

You are at risk if you:

- ▶ Work in hot and humid conditions;
- ▶ Do heavy physical labor; and
- ▶ Don't drink enough water.

This risk is greater for workers who are not used to the heat.

But you can protect yourself and feel better as you work by dressing for hot conditions and taking frequent breaks for water and shade.

What to look for...

Signs of **Heat Exhaustion**:

- ▶ Weakness and wet skin
- ▶ Headache, dizziness or fainting
- ▶ Nausea or vomiting

Signs of **Heat Stroke**:

- ▶ Confusion or fainting
- ▶ May stop sweating – dry, hot skin
- ▶ Convulsions or seizures

Get help if you or a co-worker has these signs. HEAT STROKE IS A MEDICAL EMERGENCY. IT CAN BE DEADLY. If a co-worker shows signs of heat stroke, **call 911.**



If you think you are in danger:
Contact your supervisor.
Contact your union.
Call OSHA
1-800-321-OSHA

Protect yourself ...

**1 Dress for hot conditions**

Wear clothes that are:

- ▶ Light colored (white, etc.)
- ▶ Loose-fitting
- ▶ Lightweight

Wearing heavy protective clothing or personal protective equipment may increase your risk; you may need more frequent breaks for rest and water.

**2 Drink Water**

Drink water every 15 minutes when working in hot conditions.

DO NOT wait until you are thirsty to drink water.
DO NOT drink alcohol and **AVOID** caffeine.

**3 Take Breaks**

Take frequent rest breaks in shaded, cooled or air-conditioned areas.

If you see a co-worker with symptoms of **Heat Exhaustion**, speak up.

If you see a co-worker with symptoms of **Heat Stroke**, seek medical attention immediately!

Your employer should:

- ▶ Have a heat illness prevention program and emergency plan.
- ▶ Provide training on heat hazards and steps to prevent heat-related illnesses.
- ▶ Provide clean, cool water – about 4 cups (that's two 16-ounce bottles) each hour.
- ▶ Schedule frequent breaks in shaded or cooled areas.
- ▶ Gradually increase workloads for workers new to the heat.

Learn more about heat-related illnesses and how to prevent them at
<http://bit.ly/CPWRHotWeather>
To receive copies of this Hazard Alert and cards on other topics
Call 301-578-8500

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www.cpw.com

THE FLORIDA HOUSING COALITION



Support Increased Social Connection

- Encourage neighborhood and community "buddy systems" heat checks
- Plan additional indoor social events in target neighborhoods
 - Multi-family properties
 - Community centers, places of worship
 - Games, trivia, readings, book clubs
 - Meal and a Movie – potentially later hours



Post-Disaster Heat Safety

- After a disaster, danger from heat increases
 - Single family homes and mobile homes
 - Short and long-term power outages
- Disaster Case management, volunteer groups
- Ask about impacts/access to HV/AC
 - Aggregate data to track and quantify actions: numbers of minor repairs vs. full replacement
 - Coordinate LTRG activities, consider bulk orders
 - Short-term vs longer-term solutions



Heat Program Resources

- [Miami-Dade County Heat Action Plan](#)
- [Census Tract-Level Heat Map](#)
- [CDC Extreme Heat Info](#)
- [Heat.gov](#)

Upcoming Webinars



8/14/2023 2:00-3:30pm

The Rehabilitation and Emergency Repair Process

Rehabilitation process requires housing administrators and staff to work with homeowners, contractors, building inspectors, local officials, and funders.

This webinar will provide information to prevent problems commonly encountered in rehabilitation programs and best practices to improve them.

Topics include contractor selection and removal, scope of work, the bidding process, contract terms and award, inspections, and payments, guarantees and warranties, and long-term compliance and monitoring.

Register:

<https://register.gotowebinar.com/register/3989638846785262685>



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Technical Assistance is Available

Daily Assistance:
1 (800) 677-4548

Options for Further Assistance Include:

Phone and Email consultation
Site Visits

**Register at www.flhousing.org for:
Webinars and Other Events**

And Now...

The Posting of the PowerPoint!

PowerPoint is available in Chat



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