Orange County

Heat Action Plan Updates

The Need

Summer 2024:

Orange County partners and the public felt the stress of the extreme heat season. Orange County reflected on their need to provide extreme heat resources and properly educate the community on extreme heat.

Heat Cohort:

We recognized the need for a plan that centralizes the work already being done throughout Orange County and create a collective vision for the future of heat action.

The Goal

The goal of the heat action plan is to create a multi-jurisdictional plan that outlines the community's mitigation, preparedness, adaptation, and response to extreme heat. By working together, this plan aims to pull all stakeholders together and create a coordinated response throughout the entire community.

Heat Data

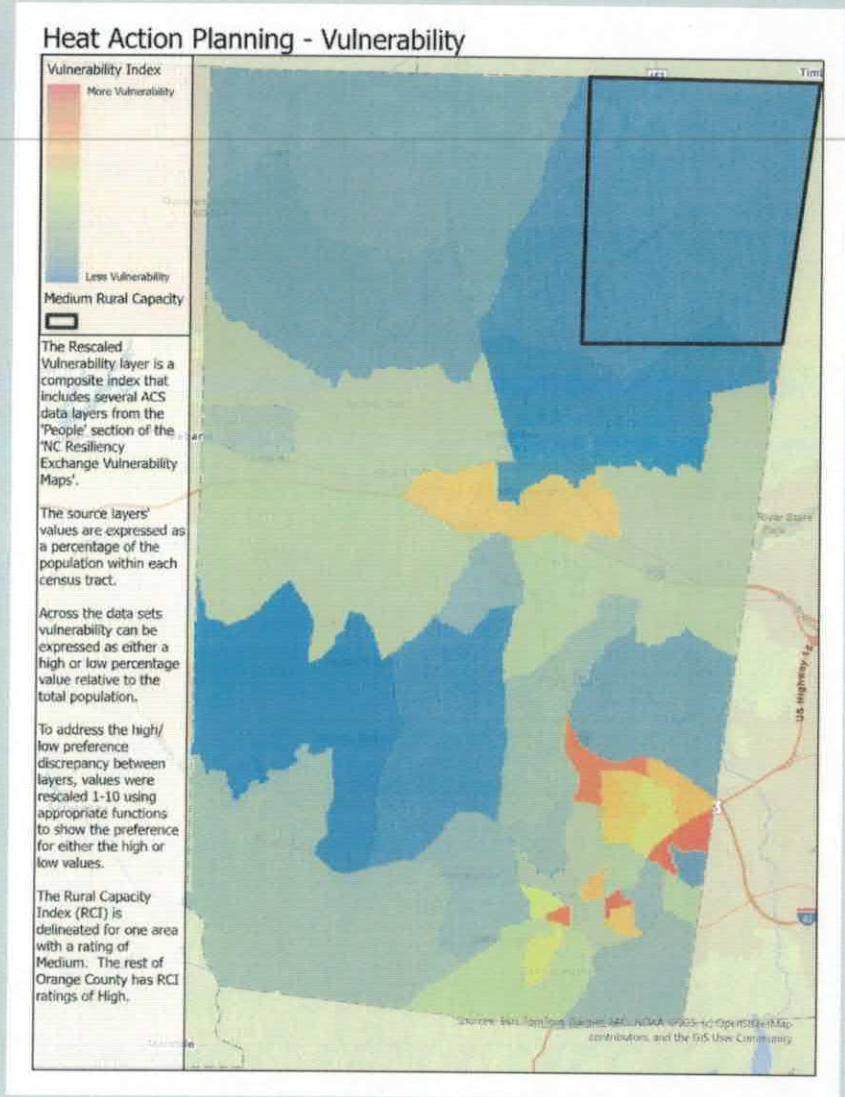
Days with Max Temps Over 95 F	
Between 1983 and 2014, on average, Orange County experienced high temperatures of 95 F for greater: **8 days per year**	By the 2060s, Orange County will experience high temperatures of 95 F for greater: **28 to 41 days per year**
Days with Max Temps Over 90 F	
Between 1983 and 2014, on average, Orange County experienced high temperatures of 90 F for greater: **39 days per year**	By the 2060s, Orange County will experience high temperatures of 90 F for greater: **74 to 88 days per year**
Nights with Max Temps Over 70 F	
Between 1983 and 2014, on average, Orange County experienced low temperatures of 70 F for greater: **17 nights per year**	By the 2060s, Orange County will experience low temperatures of 70 F for greater: **47 to 64 nights per year**

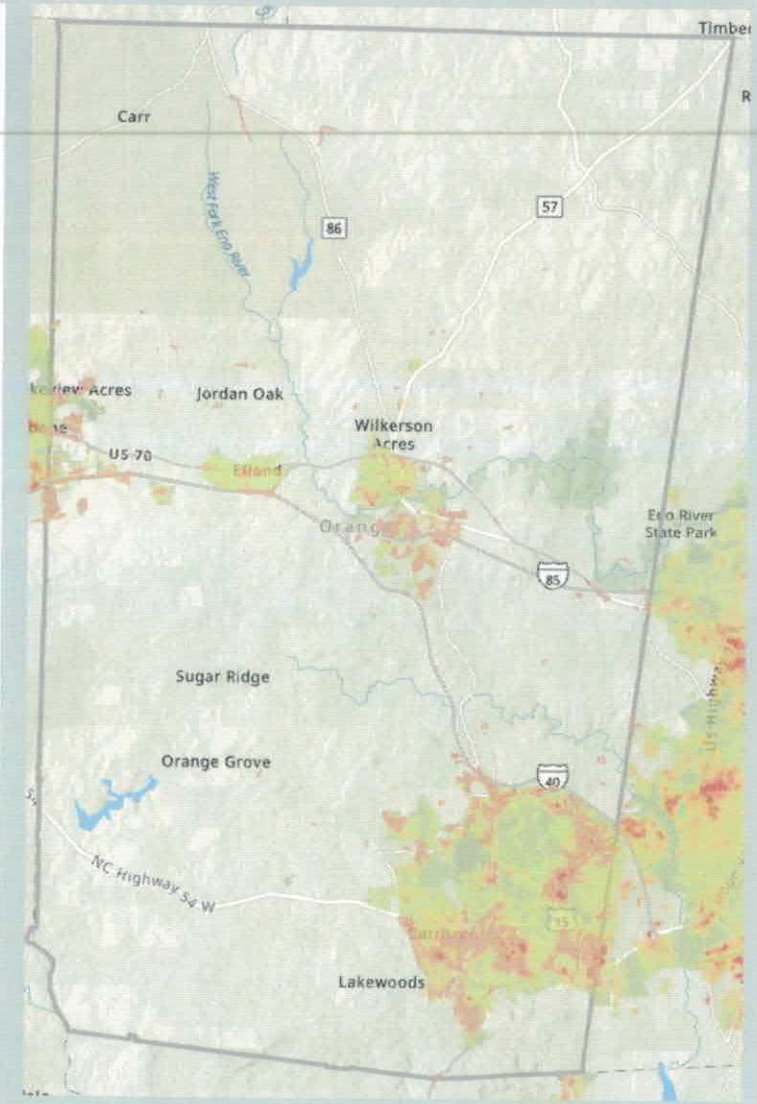
Heat Season

	Average Monthly Maximum and Minimum Air Temperatures for Chapel Hill (1991-2020)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max	51.2	54.8	62.7	72.2	79.1	86.3	89.6	87.8	81.9	72.3	62.4	54.2
Min	31.7	33.8	40.1	48.1	57.0	65.3	69.3	67.9	62.2	49.6	39.5	34.5

	Average First or Last Date When Threshold is Exceeded for Chapel Hill									
	First Date					Last Date				
	85 °F	90 °F	95 °F	100 °F	105 °F	85 °F	90 °F	95 °F	100 °F	105 °F
Max Air Temperature	4/7	5/23	7/16	7/5	NA	10/1	9/11	8/20	7/5	NA
Max Heat Index	4/23	5/29	6/20	6/5	7/19	10/6	9/21	9/11	8/21	7/28

Heat Maps


Heat Action Planning - Vulnerability
Vulnerability Index
More Vulnerability
Less Vulnerability
Medium Rural Capacity
The Rescaled Vulnerability layer is a composite index that includes several ACS data layers from the 'People' section of the 'NC Resiliency Exchange Vulnerability Maps'.
The source layers' values are expressed as a percentage of the population within each census tract.
Across the data sets vulnerability can be expressed as either a high or low percentage value relative to the total population.
To address the high/low preference discrepancy between layers, values were rescaled 1-10 using appropriate functions to show the preference for either the high or low values.
The Rural Capacity Index (RCI) is delineated for one area with a rating of Medium. The rest of Orange County has RCI ratings of High.


Carr
86
57
Jordan Oak
Wilkerson Acres
US 70
Efland
Eno River State Park
85
Sugar Ridge
Orange Grove
40
NC Highway 54 W
Lakewoods

Heat Surveillance

Year	Watch	Advisory	Warning
20	0	5	0
21	0	2	0
22	1	5	0
23	0	7	0
24	0	12	1

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

North Carolina Annual Heat-related Illness Surveillance Report: RTP Area (NC DETECT Region 4)
May 1-September 30, 2024

NC DETECT

RTP Area (NC DETECT Region 4) Key Messages

There were **630** HRI ED visits (0.2% of total ED visits) in the summer of 2024, with an average weekly rate of HRI ED visits of **1.3 per 100,000 population.**

- The rate was highest among **males aged 20-24 years** at **4.8 per 100,000 population** (Figure 1).
- The rate of HRI ED visits was highest in **Warren County** at **3 per 100,000 population** (Figure 2).
- The most frequent heat related diagnosis code was **heat exhaustion (n =236)** (Table 1).
- The maximum heat index ranged from **69.8 to 117.8°F** at Raleigh-Durham International Airport (Figure 3).
- There were **68 days** when the minimum temperature did not drop below 70°F.

Figure 1. Rate of Heat-Related Illness Emergency Department Visits by Sex and Age RTP Area (NC DETECT Region 4)

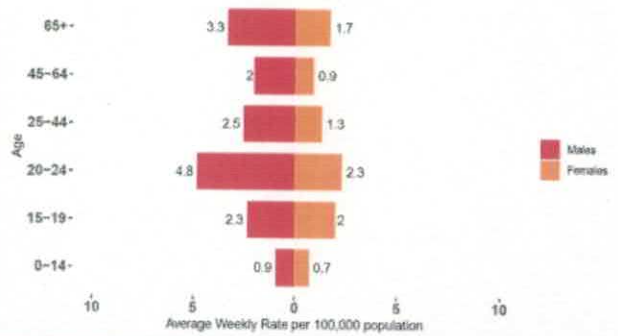


Figure 2. Average Weekly Rate of Heat-Related Illness Emergency Department Visits per 100,000 Population RTP Area (NC DETECT Region 4)

Table 1. Heat-related illness ED visits by severity

Severity[§]	Number (N = 414[‡])	Percent[†]
Heat Cramps	21	5.1
Heat Exhaustion	236	57
Heat Stroke	7	1.7
Heat Syncope	77	18.6
Other Effects[‖]	73	17.6

§ Definitions of heat-related illness severity categories: https://www.cdc.gov/niosh/topics/heatstress/heatrelillness.html
‡ Missing severity data = 216
† May not total 100 due to rounding
‖ other effects include heat fatigue, heat edema, other effects of heat and light, and other effects unspecified

Community Engagement

Task Force Purpose:

- Validate and Identify gaps in the heat action plan
- Bring together individuals responsible for the implementation of the heat action plan.

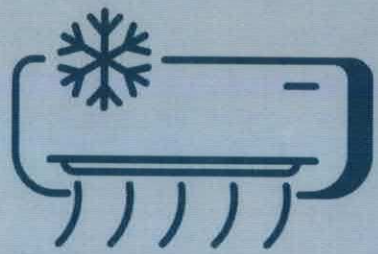
Community Engagement

- Heat Cohort does the heavy lifting
- Purposeful engagement after a draft heat action plan is created
- Climate Council
- Community Connections in Chapel Hill
- OC Communicators Workgroup
- Communications Strategy and Protocol

Heat Actions (Current)

Heat Campaign

- Coordinated heat preparedness communications
- Includes both heat season and acute heat events



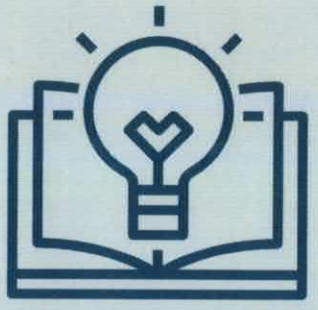
Cooling Center

- Seasonal cooling resources throughout the community
- Activation of cooling centers during an excessive heat warning

Long Term Adaptation

- Cool Pavements Program
- Cooling Expense and Weatherization Programs
- Tree Giveaways and Planting

Heat Actions (Future)



Heat Season

- Educational resources for outdoor workers
- Heat Awareness Proclamation

Extreme Heat Days

- Free direct transportation to cooling centers
- Neighborhood Check-in programs and leveraging community connections

Long Term Adaptation

- Adding mitigation strategies to Hazard Mitigation Plan (home weatherization, misting tents, utility bill assistance, etc)

Thank you

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