4. Heat and Health

Purpose

Build collaboration, awareness, and capacity to address climate-related public health impacts and implement solutions that improve community health outcomes.

Introduction

Heat, Health, and Climate Change

The gradual increase in global surface temperatures can have a dramatic impact on the health and stability of communities. Extreme heat events are periods of excessively hot and/or humid weather that can last for multiple days. This can lead to heat-related illnesses such as heat stress or heat stroke. Both can be life-threatening if not treated quickly. According to the World Health Organization (WHO), "approximately 489,000 heat-related deaths occur each year," with many of them occurring during unprecedented heat waves.[1] Florida is especially at risk to extreme temperatures due its high temperatures and humidity. Combined, this creates apparent temperature, defined by what the temperature feels like rather than what it is. The heat index chart, which is the same as apparent temperature, shows how hot it will feel depending on the temperature and humidity (Figure 4.1). In summer 2025, new records were set in many Florida cities. Images like the one below, from July 31, 2025, were common occurrences in July and August 2025.

[1] World Health Organization, "Heat and Health," 2024.

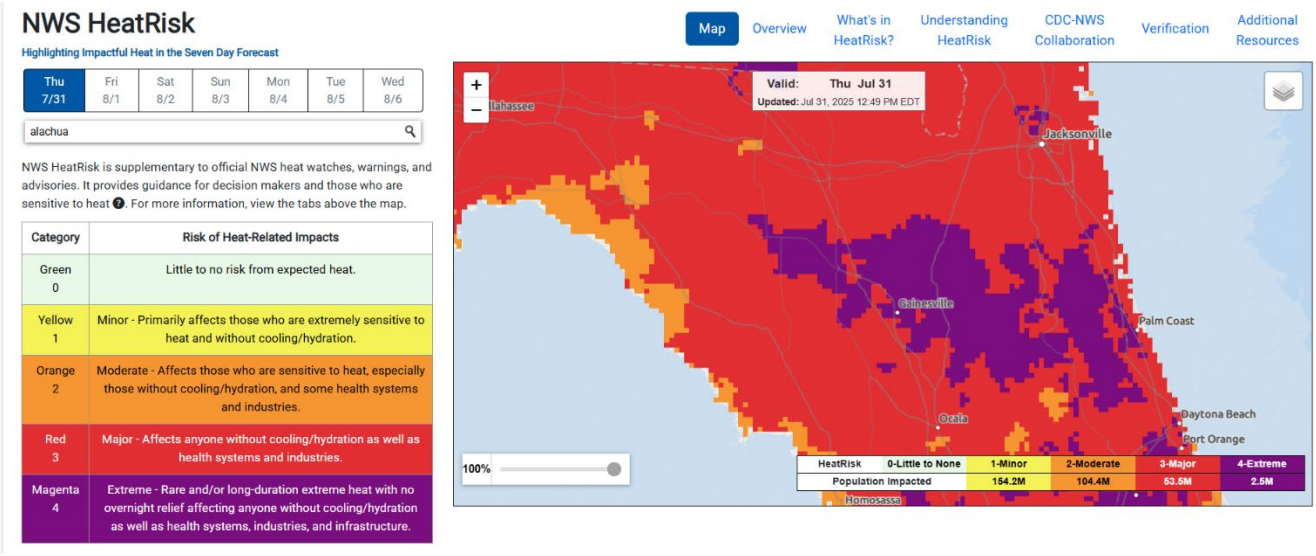

Figure 4.1: National Weather Service Heat Risk for July 31st, 2025[2]

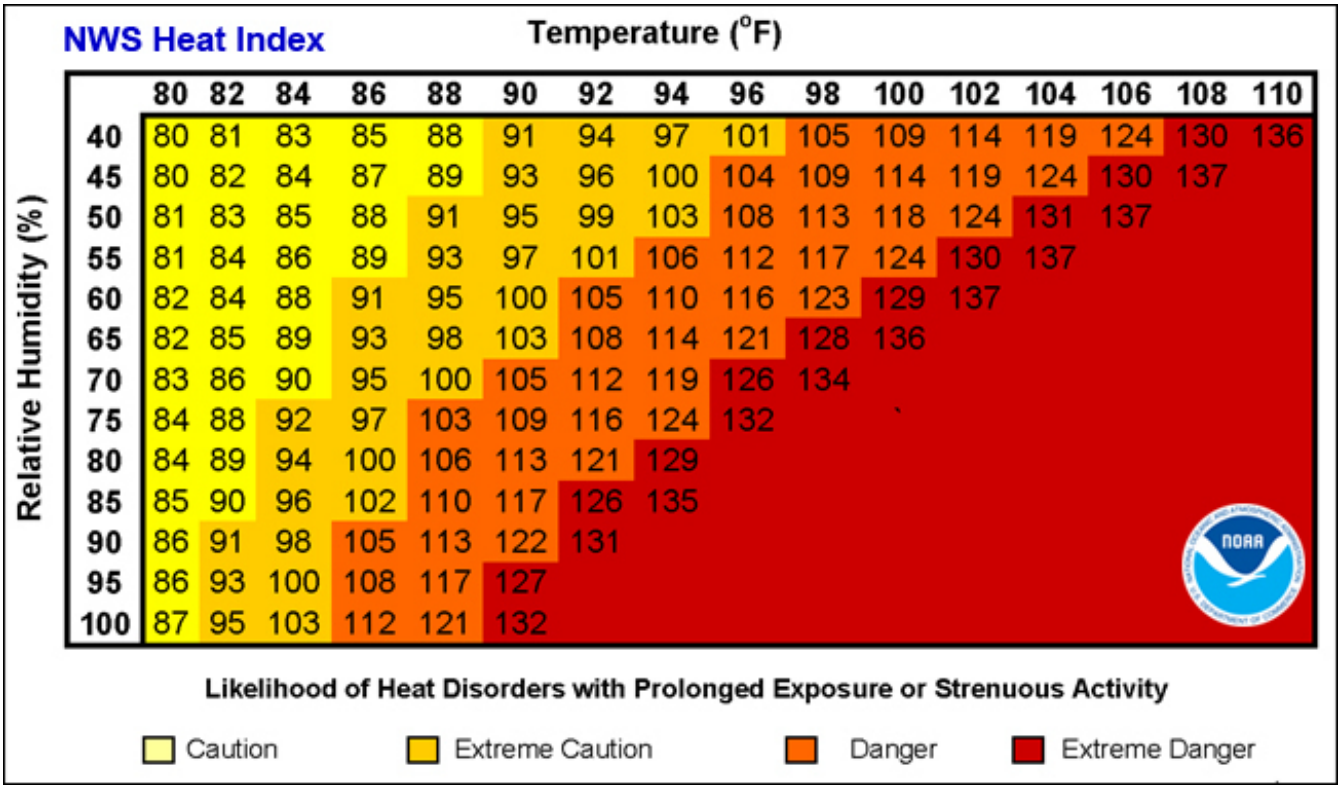

Figure 4.2 National Weather Service Heat Index Chart[3]

[2] National Weather Service, "NWS Heat Risk," 2025.
[3] National Weather Service, "What is the heat index?"

Another consequence of climate change is the increase in vector-borne diseases, or diseases that are spread by vectors such as mosquitoes or ticks. Increased heat is associated with higher rates of mosquito development, bites, and the amount of time the mosquitoes incubate the disease.[4] Additionally, as temperatures and humidity increase, vector populations can migrate and new diseases can be introduced into local environments. Some mosquito-borne diseases that have begun to spread into Florida include dengue fever, malaria, yellow fever, the West Nile virus, and Eastern Equine Encephalitis (EEE).[5,6] Ticks, which have also expanded in geographical range due to temperature increases, can spread diseases such as Lyme disease, southern tick-associated rash illness (STARI), and ehrlichiosis.[7,8]

Changes to mental health are an often-overlooked impact of climate change. The term climate anxiety describes the deep sense of fear and loss many people experience in response to climate change. While climate anxiety is a healthy response to a crisis, it can be so intense that it interferes with daily function, produces maladaptive behaviors, exacerbates or intertwines with existing mental disorders, or triggers mental disorders like post-traumatic stress disorder (PTSD).[9] While many experience anxiety relating to climate change as a whole, localized impacts of climate change can also cause extreme stress.[10] For instance, extreme heat and sea level rise may cause individuals to consider relocating or force them to. Displacement can take a significant toll on emotional wellbeing and heighten economic stress, factors that can impact mental health. Studies also show that factors such as extreme heat or displacement are correlated with increased violence or aggression.[11, 12]

Heat in Alachua County

The Climate Vulnerability Assessment shows that extreme heat events in Alachua County will continue to be more intense (hotter, more frequent, and longer lasting). The average daily maximum temperature is projected to increase by approximately 6°F by the end of the 21st Century.[13] The project data also show that the number of extremely hot days will increase by ten times by 2100.[14]

These are not impacts that will only be felt in the future – they are being felt now. From January to September 2024, the County experienced 35 days above an apparent temperature of 90°F.[15] The apparent

[4] EPA, "Climate Change Indicators: West Nile Virus."
[5] Florida Department of Health, "Dengue Fever."
[6] Florida Department of Health, "West Nile Virus (WNV)."
[7] EPA, "Climate Change Indicators: Lyme Disease."
[8] UF/IFAS, "Ticks and Disease in Florida."
[9] Clayton, "Climate Anxiety: Psychological responses to climate change," *Journal of Anxiety Disorders,* 2020.
[10] *Ibid* footnote 9.
[11] Plante and Anderson, "Global Warming and Violent Behavior," *Association for Psychological Science*, 2017.
[12] Amin, "Climate change and lethal violence: a global analysis," *International Journal of Climate Change Strategies and Management,* 2025.
[13] Alachua County Spatial Vulnerability Assessment Report, 2024, 2.
[14] *Ibid* footnote 13, 2.
[15] CDC, "Heat & Health Tracker," *Climate and Health Program.*

temperature in 2024 in Alachua County was higher than the historical average, indicating a pressing need to address heat-related illnesses (see Figure 4.1).

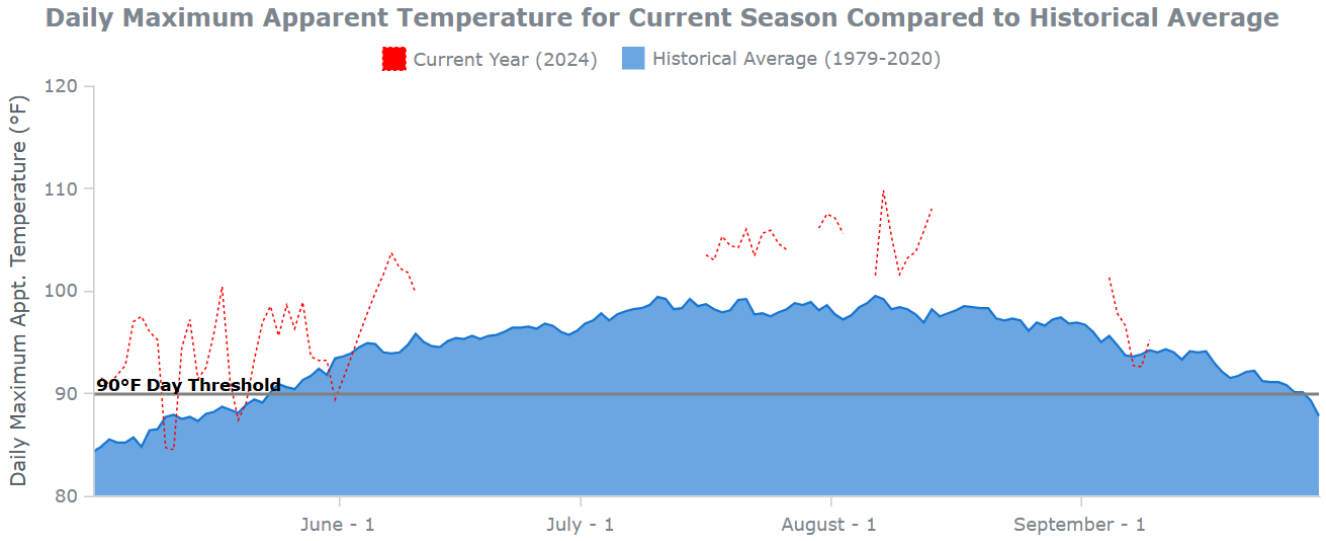

Figure 4.3: Alachua County's Daily Maximum Apparent Temperature for 2024 Season Compared to Historical Average[16]

Heat Resilience and Vulnerability

Extreme heat events are not felt uniformly throughout the County. Dense, urbanized areas of the County experience hotter temperatures than the surrounding rural areas because buildings and other impervious surfaces like parking lots absorb and retain more heat compared to natural land covers. This is known as the urban heat island effect (UHI) (see the Natural Resources and Land Use and Transportation Chapters on recommendations to tackle UHIs).

In Alachua County, heat-related illnesses disproportionately impact those prone to heat-related illnesses and those without access to adequate cooling and hydration. Those prone to heat-related illnesses include infants and people over 65, who between 2013 and 2022 experienced around "108% more days of heatwave per year than in 1986-2005."[17] Another group that will be impacted are student athletes who practice outdoors, or anyone else who spends large amounts of time exerting themselves outdoors. Arduous exercise outdoors, especially right after school hours in the mid-to-late afternoon, increases the risk of heat stroke or stress and dehydration. Figure 4.2 shows extreme heat vulnerability throughout Alachua County, showcasing concentration in urban areas.

One of the most impacted groups, however, are the unhoused who lack access to cooling centers and regular hydration, as well as those who lack working HVAC systems. Figure 4.3 highlights the significant

[16] Ibid footnote 13.
[17] Romanello et al., "The 2023 Report of the Lancet Countdown on Health and Climate Change: The Imperative for a Health-Centered Response in a World Facing Irreversible Harms." *Lancet Countdown*, 2023.

gaps in cooling centers within the County. In Gainesville, many cooling centers are in a concentrated area in the east part of the city. However, no nearby cooling centers exist in high heat-vulnerability areas toward south or west of 30 Gainesville along the I-75 corridors, making access difficult to the unhoused and those with limited mobility options. To address this concern, heat mitigation and management strategies that reduce extreme heat exposure and prioritize interventions in areas most vulnerable to heat are necessary.

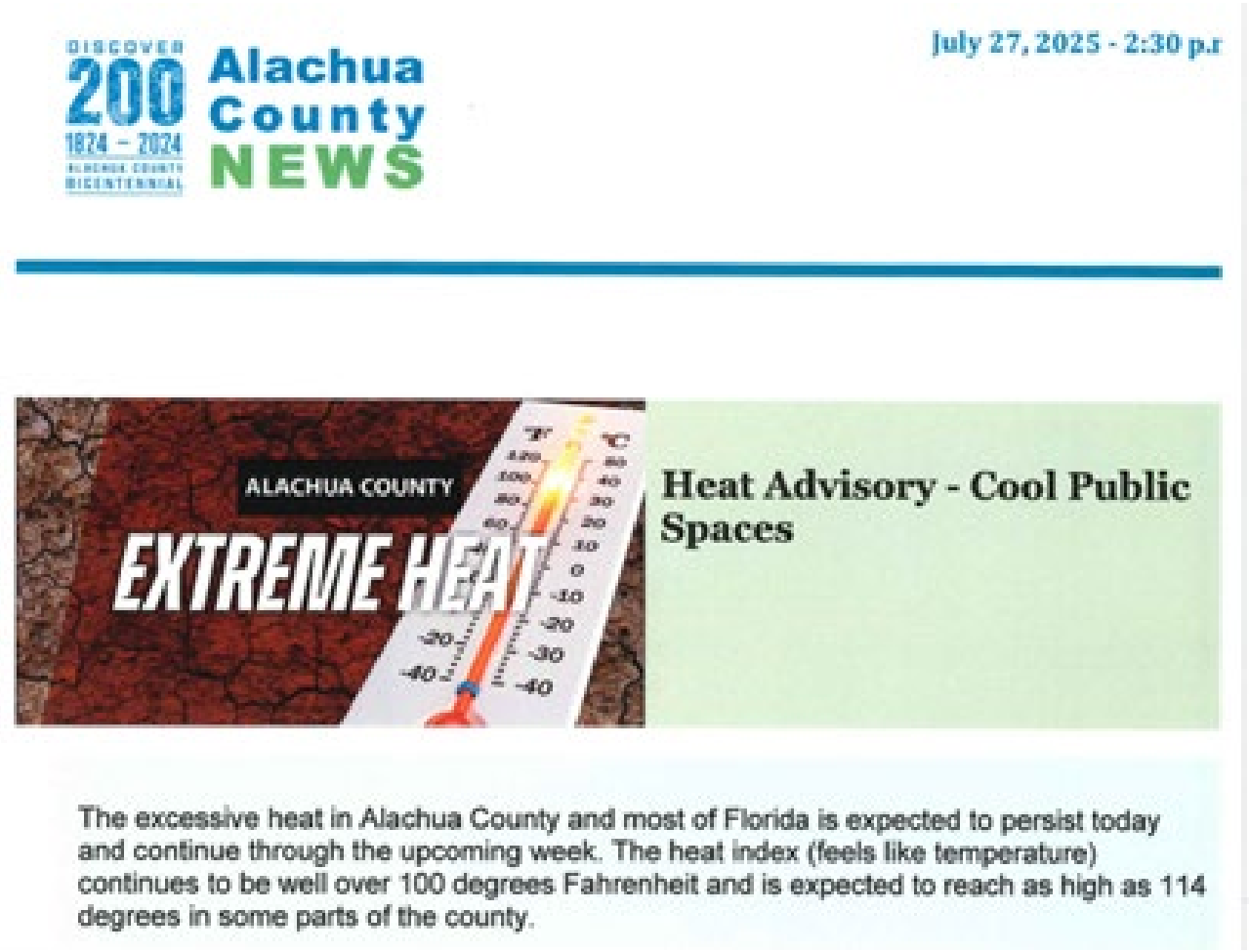

Figure 4.4: Alachua County Heat Advisory on July 27, 2025

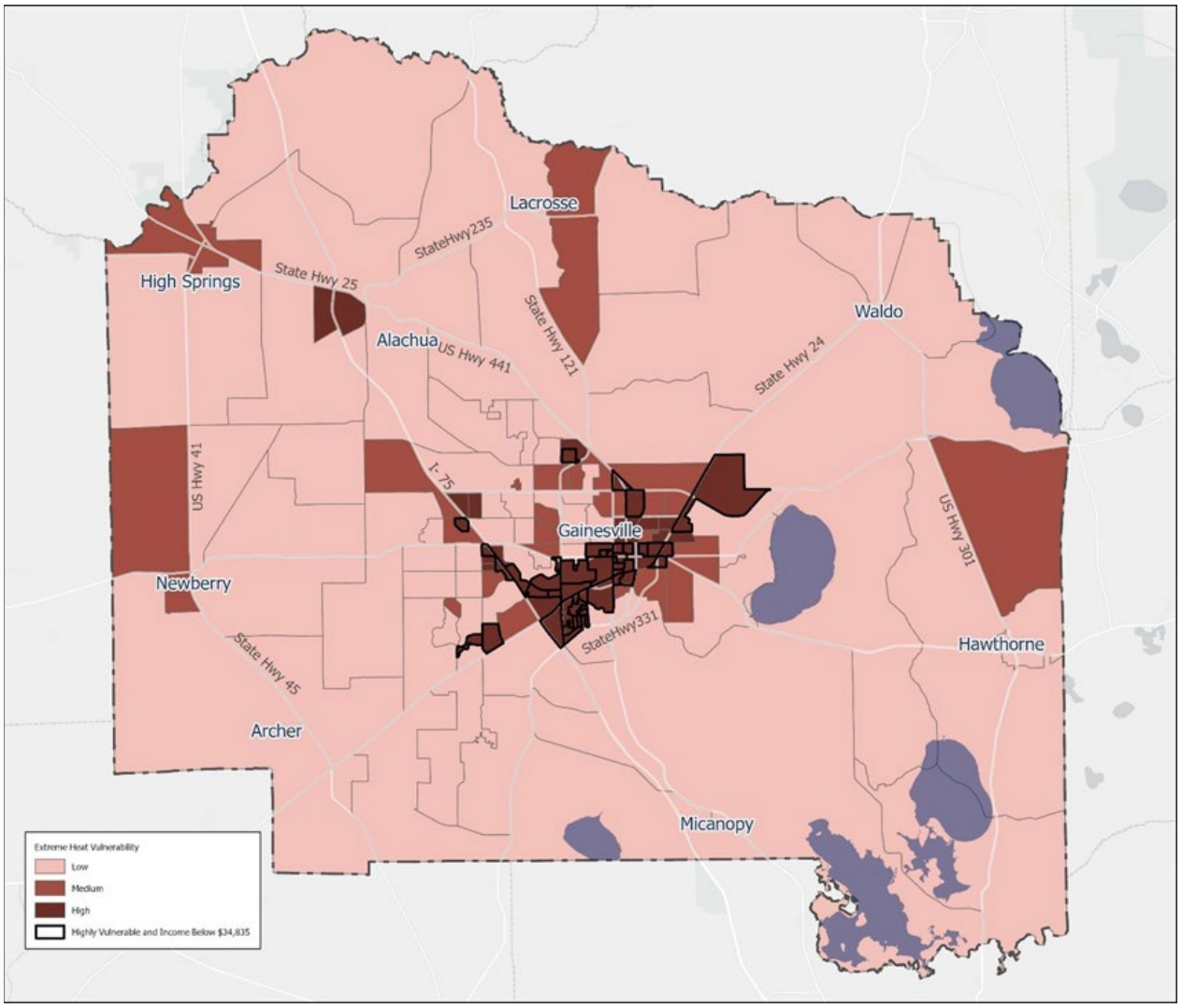

Figure 4.5: Extreme heat vulnerability (low, medium, and high colored) for residential areas by census block group in Alachua County.

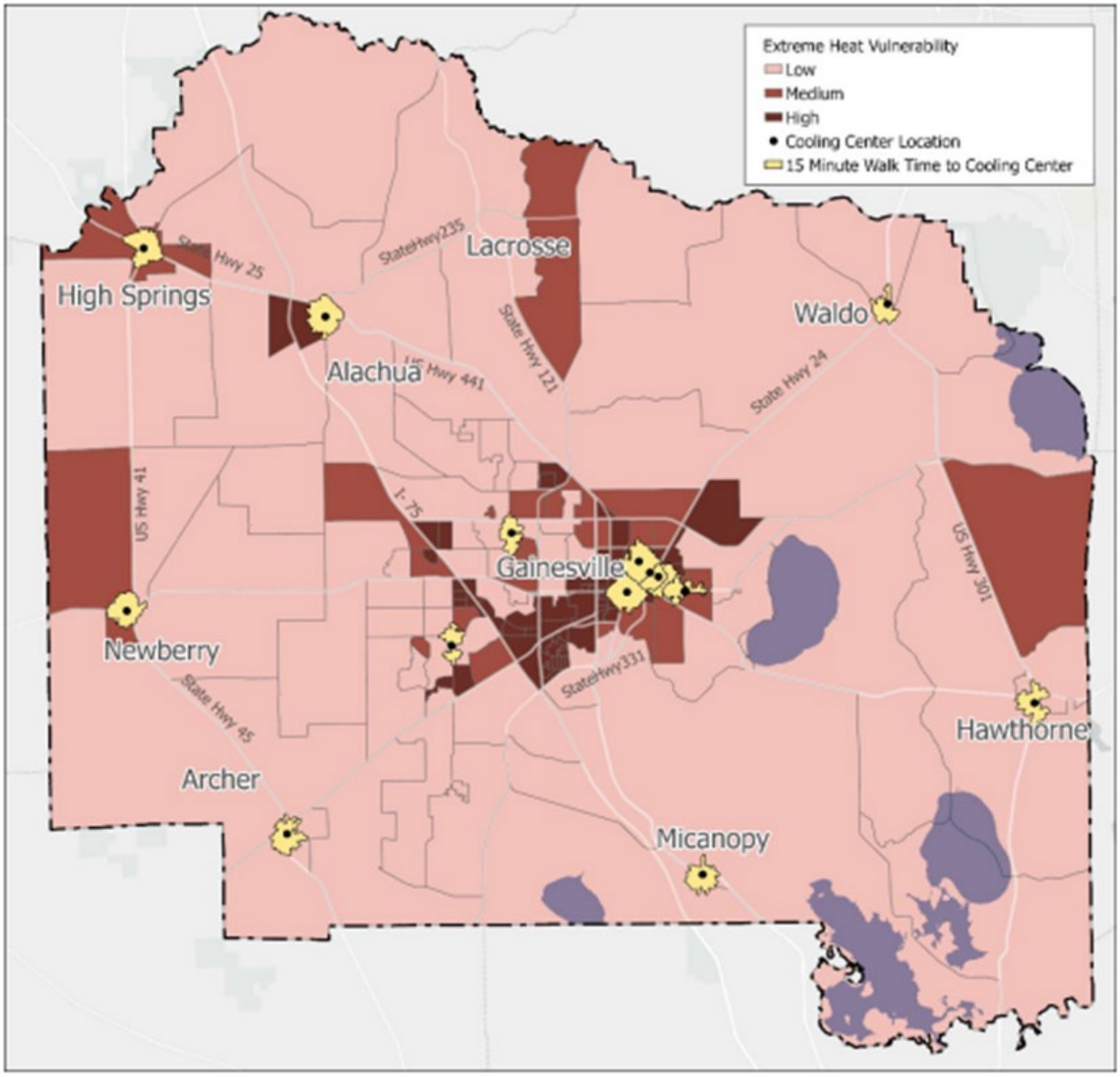

Figure 4.6: Extreme Heat Vulnerability and Cooling Center Access. Areas within a 15-minute walking distance to cooling facilities are shown in yellow

Vector-Borne Diseases in Alachua County

Alachua County is at risk of vector-borne diseases due to high apparent temperatures and abundant standing water.[18] The last health advisory that was put out to announce that chickens within the County were testing positive for West Nile virus was in 2021.[19] However, it is likely that these events will increase in frequency as climate change worsens, apparent temperatures increase, and more frequent flooding

[18] Florida Department of Health, "Mosquito-Borne and Other Insect-Borne Diseases."
[19] Health Officials Issue Mosquito-Borne Illnesses Advisory

events create more standing water for mosquitos to breed on. Tick-borne diseases are also a risk as they spread in geographical range, thriving in high temperature and humid environments such as Alachua County.

Mental Health Resilience and Demographics

Studies show that climate anxiety disproportionately impacts younger generations. A national poll in 2019 found that "57 % of teens said that climate change makes them feel afraid."[20] Another poll from the American Psychological Association found that almost half of respondents from ages 18-34 "(47%) say the stress they feel about climate change affects their daily lives."[21] However, anyone – particularly those interested in environmental issues – can experience climate anxiety.[22] Alachua County does not have data on local climate anxiety, but by providing accessible services, staff can begin the process of understanding the best ways to address it. Deteriorating mental health, stress, and aggression has significant impacts on individuals, affecting their daily lives, habits, and relationships. For this reason, Alachua County is taking proactive measures to provide services to those experiencing eco- or climate anxiety as well as increased violence or aggression.

Alachua County Comprehensive Plan

The Alachua County Comprehensive Plan does not include any specific targets aiming to combat heat-related illnesses, though many of its goals indirectly address it. Additionally, there are goals focusing on providing general health and mental health services and resources, particularly for at-risk populations. While there is a lack of specifically addressing mental health issues relating to climate change, the CAP provides an opportunity to provide recommendations that can be codified into the Comprehensive Plan. Developing policy from a climate perspective would allow planning for a future with climate impacts in mind, making the County better prepared to face these issues.

Past and Current Efforts

[20] *Ibid* footnote 9.
[21] American Psychological Association, "Majority of US Adults Believe Climate Change Is Most Important Issue Today," 2020.
[22] *Ibid* footnote 9.

Cooling Centers

A cooling center is a location – typically an air-conditioned or cooled building – that has been designated as a site to provide relief and safe shelter during extreme heat days. The County has designated 15 different locations as cooling centers including all Alachua County public libraries and three community centers. These include:

- **Alachua Branch Library**: 14913 NW 140th St., Alachua (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., and Sunday noon – 5 p.m.)
- **Archer Branch Library**: 13266 SW SR 45, Archer (Mon & Sun closed, Tues. – Fri. 10 am – 6 pm, Sat. 10 am. – 5 pm)
- **Clarence R Kelly Center**: 1701 NE 8th Ave., Gainesville (Mon – Sat, 9 am – 6 pm, Sun closed)
- **Cone Park Branch Library**: 2801 E. University Ave., Gainesville (Mon – Fri 10 am – 6 pm, Sat 10 am – 5 pm, Sunday closed)
- **Eastside Community Center at Cone Park**: 2841 E. University Ave., Gainesville (Mon – Fri 9:30 am – 6:30 pm, Saturday and Sunday closed)
- **Hawthorne Branch Library**: 6640 SE 221st St., Hawthorne (Mon – Fri 10 am – 6 pm, Sat 10 am – 5 pm, Sun noon – 5 p.m.)
- **Headquarters Library – Gainesville**: 401 E. University Ave., Gainesville (Mon and Fri 10 am – 6 pm, Tues – Thurs 10 am – 7 pm, Sat 10 am – 5 pm, Sun noon – 5 pm)
- **High Springs Branch Library**: 23779 W. US HWY 27, High Springs (Mon – Fri 10 am – 6 pm, Sat 10 am – 5 pm, and Sun noon – 5 pm)
- **Library Partnership Branch – Gainesville**: 912 NE 16th Ave., Gainesville (Mon – Fri 10 am – 6 pm, Sat 10 am – 5 pm, Sunday closed)
- **Micanopy Branch Library**: 706 N.E. Cholokka Blvd., Micanopy (Mon and Sun closed, Tues – Fri 10 am – 6 pm, Sat 10 am – 5 pm)
- **Millhopper Branch Library**: 3145 NW 43rd St., Gainesville (Mon 10 am – 6 pm, Tues – Thurs 10 am – 7 pm, Fri 10 am – 6 pm, Sat 10 am – 5 pm, Sunday noon – 5 pm)
- **MLK Center**: 1028 NE 14th St., Gainesville (Mon – Fri 7 am – 7 pm, Sat 10 am – 6 pm, Sun 2 pm – 6 pm)
- **Newberry Branch Library**: 110 S. Seaboard Drive, Newberry (Mon – Fri 10 am – 6 pm, Sat 10 am – 5 pm, Sun noon – 5 pm)
- **Tower Road Branch Library**: 3020 SW 75th St., Gainesville (Mon and Fri 10 am – 6 pm, Tues – Thurs 10 am – 7 pm, Sat 10 am – 5 pm, Sun noon – 5 pm)
- **Waldo Branch Library**: 15150 NE US HWY 301, Waldo (Mon and Sun closed, Tues – Fri 10 am – 6 pm, Sat 10am – 5pm)

Disease Prevention

The Florida Department of Heath Disease Control Unit is tasked with surveilling human diseases and their spread. Over 90 different kinds of diseases may be reported to the Disease Control Unit to notify them of any potential outbreak or spread. The Alachua County Department of Health monitors and addresses mosquito-borne diseases by using flocks of chickens placed throughout the County to detect the West Nile Virus or EEE.[23] If detected, a Mosquito-Borne Illness Advisory is released to warn the public of confirmed cases. Alachua County also prevents mosquito spread by treating mosquito breeding retention ponds with naturally occurring larvicide.[24]

Crisis Center Community Support

The Crisis Center provides Mobile Response Teams (MRT) to support community members and students in the County who are struggling with mental health concerns. They also provide counseling services for individuals, couples and families. The Center also works closely with other social service programs to connect people to resources. The center can be reached 24/7 by contacting the **Crisis Line (352-264-6789)**.

Crisis Center Trainings

The Crisis Center provides 311 training to all volunteers and staff to help them attend to community members' concerns about weather-related disasters. Additionally, the Crisis Center has an 80-hour training for volunteers and a 40-hour training for law enforcement and 911 dispatchers that focuses on suicide prevention, de-escalation and active listening.

They also have 4 staff members and 4 volunteers trained in NOVA's Florida Crisis Response Team (FCRT). FCRT responds to mass casualties and natural disasters across the state as well as nationally to assist those affected.

Program Highlight

Alachua County Crisis Center's Impact and Volunteers

The Alachua County Crisis Center opened in 1975, making it one of the oldest crisis centers in Florida. The Center responds to around 45,000 calls on crisis lines annually with the help of over 100 volunteers. These volunteers are the reason why the Center can help as many people as it does. Without them, it would not have been possible to respond to the over 40,000 calls received during the 2004 hurricane season, or

[23] Florida Department of Health in Alachua, "Mosquito Prevention."
[24] *Ibid* footnote 23.

the 9,000 calls from the National 988 Suicide and Crisis Lifeline annually. Together with staff, they volunteer over 52,000 hours annually to support and operate these programs.

The Crisis Center has won several awards for its efforts to assist those in need, including:

- The 2025 National Association of Counties Achievement Award (awarded to the MRT)
- The 2021 Pete Fisher Humanitarian Award from the Florida Counseling Association
- The 2017 National Association of Counties Health Achievement Award (awarded to the Victim Services and Rape Crisis Center's HIV Post-Exposure Prophylaxis Program)

Strategies and Action Items

Goal 4.1 – Increase Citizen Awareness of Heat and Heat-Related Illnesses

STRATEGY 4.1.1 *- Recommend BMPs for outdoor workers, student athletes, and others who engage in strenuous exercise.*

Heat-related illnesses disproportionately impact individuals who spend hours outside. Best management practices (BMPs) are recommended to employers with outdoor workers, such as providing shade, water, and breaks when the heat index is high. BMPs are also recommended for schools and sports teams when athletes are engaging in strenuous exercise outdoors. For the general public, BMPs are recommended through heat advisories that are posted on several platforms.

To prevent heat-related illnesses, the County should specifically recommend and encourage employers, schools, and individuals to use BMPs when the heat index is high (90˚F or higher). These BMPs should be tailored to these different audiences to understand the benefits of implementing BMPs (e.g., encouraging BMPs to employers and explaining that it can improve worker productivity). It is also critically important that information can also be given in other languages to reach the entire community.

Table 4.1 Recommendations for BMPs for outdoor workers and student athletes (Strategy 4.1.1)

Action Items	Jurisdiction	Pros	Cons	Status
Recommend use of BMPs (shade, water, rest) by employers and school administrations during times of high heat index,	State level	Prevent heat-related illnesses and deaths for outdoor workers and employers	Cannot *require* worker heat protection standards	In progress (through heat advisories)

Recommend BMPs (shade, water, rest) to outdoor workers and students during times of high heat index.	County	Prevent heat-related illnesses and deaths for outdoor workers and students.	None.	In progress (through heat advisories)
Develop information campaign about BMPs for the general public.	County (Communications)	Increases awareness of BMPs and prevents heat-related illnesses for general public.	Funding, need to reach media such as social media	Not started

STRATEGY 4.1.2 *– Expand Alachua County Ready to include heat advisories and warnings.*

Heat advisories and warnings can easily be missed by residents. The County can protect its citizens by providing more avenues for these advisories and warnings to be advertised, increasing the number of people who see them. This can be done by including heat advisories and warnings in the Alachua County Ready program, which provides real-time updates during large-scale incidents or emergencies. The Alachua County Ready website shows WeatherStem stations that describe the weather (including temperature) in several areas, including University of Florida, Archer, Hawthorne, High Springs, Santa Fe, Sweetwater, the School Board, and Waldo. However, alerts for high or extreme heat would be a more efficient way for people to get the information and act quickly.

Table 4.2 Action Items for Inform Citizens of Heat (Strategy 4.1.2)

Action Items	Jurisdiction	Pros	Cons	Status
Add extreme heat outlooks, heat advisories, extreme heat watches, and extreme heat warnings to Alachua County Ready alerts.	Alachua County	More informed on dangerous heat levels; prevents heat-related illnesses	Cost, staff time	Not started

Goal 4.2 – Increase the amount of Cooling Centers in Alachua County.

STRATEGY 4.2.1 – Identify buildings throughout the County that can be used as cooling centers.

The Vulnerability Assessment recommended that the County expand cooling centers.[25] As mentioned previously, Alachua County cooling centers are not dispersed evenly, with many areas lacking any within a 15-minute walking distance. Efforts should be made to expand and add more cooling centers throughout the County. It is extremely costly and resource-intensive to build new buildings solely for the purpose of being a cooling center. The County must focus on already-existing buildings and infrastructure that could serve as a cooling center, especially those within walking distance from bus stops. Collaborating with organizations who also have buildings would also increase the amount of cooling centers without having to build new ones. Another cost-efficient cooling mechanism is increasing natural cooling spaces within the County via outdoor shading and natural landscapes, which is described in more detail in the Natural Resources and Land Use and Transportation chapter.

The Vulnerability Assessment also mentions the increase in nighttime temperatures and humidity with climate change. It outlines how neighborhoods with insufficient cooling face health risks, increased energy burden, and increased healthcare costs. Unhoused people are one of the most at risk populations. Currently, the cooling centers listed above have limited nighttime hours and there are no emergency shelters for extreme heat at nighttime.

Table 4.3 Increasing the amount of Cooling Centers (Strategy 4.2.1)

Action Items	Jurisdiction	Pros	Cons	Status
Conduct research on potential additional public cooling centers within the County	Alachua County, cities, municipalities	More cooling centers; avoid building/developing more facilities	Only have jurisdiction over County buildings	Not started
Collaborate with organizations with buildings (e.g., churches, synagogues, etc.)	Alachua County, cities, municipalities, local organizations	More cooling centers; avoid developing new buildings; increase community collaboration	Potential resistance from organizations	In progress

[25] Alachua County Vulnerability Assessment Final Report, 2024, 24.

Establish nighttime emergency shelters for extreme heat.	Alachua County	Provides cooling for vulnerable populations with increasing nighttime temperatures.	Difficulty finding buildings, funding, staff.	Not started
Establish shuttles between cooling centers and emergency shelters lacking public transportation access.	Alachua County	Provide transportation during dangerous heat events.	Difficulty finding vehicles, funding, staff.	Not started

STRATEGY 4.2.2 – Educate citizens about Alachua County cooling centers.

Citizens can only access cooling centers if they know about them. Through the development of the CAP and receiving community feedback, staff found that knowledge of the existing cooling centers was limited. It is thus imperative to educate citizens about existing and future cooling centers, particularly in areas vulnerable to heat-related illnesses. An education campaign about cooling centers should not be restricted to digital advisories and advertisements, as many who suffer from extreme heat may not have access to the internet. It is also important to educate citizens on the signs of heat stroke or stress, so they can act quickly and get to a cooling center if needed.

Table 4.4 Increase Education of Cooling Centers (Strategy 4.2.2).

Action Items	Jurisdiction	Pros	Cons	Status
Information campaign about current cooling centers	Alachua County	Increased awareness of available resources and heat-related illness prevention	Cost	Info currently provided in press releases
Heat-related illness education campaign	Alachua County	Increased awareness of the signs of heat-related illnesses	Cost	Not started
Create an interactive map with all the Cooling Centers	Alachua County	Easier to find closest cooling center	Cost	Not started

Goal 4.3 – Prevent the Spread of Vector-Borne Diseases

STRATEGY 4.3.1 – Increase awareness of Vector-Borne Diseases and Prevention

There are many ways to prevent mosquito- and tick-borne diseases, from covering skin to using insect repellant to draining standing water. It is important that the public is educated on such matters and is able to prevent a widespread outbreak. An information campaign about mosquito- and tick-borne diseases is necessary to protect citizens and provide them with the knowledge they need to protect themselves.

School nurses play an important role in preventing and treating vector-borne diseases.[26] The CDC provides continuing education training for nurses to learn about tick-borne diseases, including prevention, diagnosis, and treatment. School nurses and other school officials can use this information to reduce mosquito and tick populations on school grounds and educate parents and guardians about vector-borne diseases.

Table 4.5 Action Items for Preventing the Spread of Vector-Borne Diseases (Strategy 4.3.1)

Action Items	Jurisdiction	Pros	Cons	Status
Develop an information campaign about preventing mosquito-borne diseases.	Alachua County Department of Health	Reduces spread of mosquito-borne diseases; encourages safe, natural methods to get rid of mosquitoes	Cost	Currently provided in press releases when mosquito populations are high.
Develop an information campaign about preventing tick-borne diseases.	Alachua County Department of Health	Reduces spread of tick-borne diseases; encourages safe, natural methods to get rid of ticks.	Cost	Not started

[26] Marquard et al., "The Role of the School Nurse in Addressing Climate-Associated Illnesses: Vector-Borne Diseases," *NASN School Nurse, 2024.*

Expand collaboration with UF and other partners for vector-borne disease surveillance and management.	Alachua County Department of Health	Increases data on vector-borne diseases.	Staff, funding	Not started
Train school nurses to recognize and treat tick-borne diseases.	Alachua County Department of Health, Alachua County Public Schools	Reduces spread of tick-borne diseases in children and young people and ensures proper treatment.	Staff, funding	Not started

Goal 4.4 – Crisis Center Phone Lines

STRATEGY 4.4.1 – Increase County preparedness and understanding of psychological impacts of climate change.

The crisis center currently provides 24/7 crisis and 988 (Suicide and Crisis phone lines) phone lines. They also operate 311 Critical Information phone lines during natural disasters to address community members' concerns. However, for staff to adequately address climate-related mental health illnesses and aggression, more specialized training and actions are required. Collaborating with local organizations who are knowledgeable about climate change and its psychological impacts can also help staff develop a more comprehensive understanding of how to address these issues.

Table 4.6 Increasing County preparedness for psychological impacts of climate change (Strategy 4.4.1)

Action Items	Jurisdiction	Pros	Cons	Status
Provide ongoing training for staff and volunteers on the biological, psychological and social effects of climate change	Alachua County Crisis Center	Increase efficacy and confidence of staff and volunteers to support our clients through the implementation of	None	Not started

		evidence-based strategies		
Connect and join other organizations who are conducting outreach events related to climate change	Alachua County Crisis Center	Reach a larger audience	None	Not started
Maintain a systems approach to understanding how migration is impacting infrastructure needs in our community	Alachua County Crisis Center	Understand the needs of our community	None	Not started
Connect individuals to groups/resources related to climate change	Alachua County Crisis Center	Meet the needs of our clients	None	Not started
Increase staffs' knowledge of the intersection of climate and mental health	Alachua County Crisis Center	Meet the needs of our clients	Funding	Not started
Have a greater number of staff/volunteers NOVA trained	Alachua County Crisis Center	Enable staff to respond to those affected by natural disasters	Funding	Emerging/ Ongoing

Triple Bottom Line

People

Goals such as increasing the number of cooling centers throughout the County can protect citizens from heat-related illnesses and improve comfort, particularly for the unhoused or those without working HVACs. It is important that these cooling centers are strategically located to target communities with high heat vulnerability, and that they are accessible (e.g., close to public transportation, within walking distance, etc.). Additionally, transforming locally owned buildings into cooling centers allows the County to engage more with community partners, getting a better understanding of citizens' needs.

Providing the resources to combat heat can serve as a mechanism to decrease heat-related violence. One study found that each 1°C increase in average temperature can "yield a 6% increase in violent crime rates, as many as 25,000 more serious and deadly assaults per year in the United States…."[27, 28] Such violence can be avoided by either through cooling centers or better access to County mental health services.

The threat of vector-borne diseases will only grow as climate change impacts worsen. Ensuring Alachua County residents are informed and prepared can prevent outbreaks of potentially life-threatening diseases.

Profit

Citizens can save money through avoided hospital or medical bills from either heat-related illness, vector-borne diseases, or psychiatry. Extreme heat alone adds national health care costs of around $1 billion every summer.[29] Community participation in preventing mosquito reproduction can also help the County avoid the costs of spraying.

Planet

Emphasizing natural methods of mosquito control encourages the protection of the species that consume them as well as their habitats. Several bird species in Alachua County consume mosquitoes, including the Purple Martin, the Eastern Phoebe, and the Northern Cardinal. The University of Florida Bat House colony, which is made up of 450,000 to 500,000 bats, consumes around 2.5 billion insects per night.[30]

Research shows that climate anxiety or distress is mitigated by participation in collective climate action.[31] However, this response can only happen when healthy coping mechanisms are established. Meaning-focused coping is a helpful strategy that experts have identified for managing climate distress. It encourages individuals to find meaningful actions they can take to help the planet while making room for all the emotions they may experience in response to climate change.[32]

The strategies and action items discussed would raise awareness of heat-related health impacts in a warming world, increasing concern about climate change. If this is combined with the other action items to address the psychological impacts of climate change, it would encourage healthy coping strategies that empower people to engage in pro-environmental behaviors. Facilitating environmental engagement in the County is essential as broad support is needed to adequately address a rapidly changing climate.

---

[27] Ibid footnote 12.
[28] Anderson and DeLisi, "Implications of global climate change for violence in developed and developing countries," *The Psychology of Social Conflict and Aggression,* 2011.
[29] Wolf et al., "The Health Care Costs of Extreme Heat," *Center for American Progress*, 2023.
[30] The Florida Museum, "About the Bats – University of Florida Bat Houses."
[31] Schmidt, "Climate Anxiety," *The Magazine of Harvard Medical School,* 2023.
[32] *Ibid* footnote 31.

Community Engagement

Education on the signs of heat-related illnesses

One of the best ways to prevent heat stroke and stress is by noticing the signs early and being able to distinguish between the two to appropriately respond to either. Signs of heat exhaustion include:

- Weakness, headache, dizziness, or fainting.
- Paleness.
- Unusually elevated heart rate.
- Fast and shallow breathing.
- Nausea or vomiting.
- Muscle cramps.

Signs of heat stroke include:

- Confusion, altered mental status.
- Slurred speech, loss of consciousness.
- Hot, dry skin, profuse sweating, seizures.
- Extremely high body temperature (above 103°F).

Noticing these signs early and taking action can save lives. For more information, see the County Website. Another source is the National Integrated health Information System https://www.heat.gov/, which includes Heat and Health Tracker by zip code.

Visit a Cooling Center

Those exposed to the heat or lack an adequate A/C system may use one of the 15 cooling centers open to the public:

- **Alachua Branch Library**: 14913 N.W. 140 Street, Alachua (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., and Sunday noon – 5 p.m.)
- **Archer Branch Library**: 13266 S.W. State Road 45, Archer (Monday & Sunday closed, Tuesday – Friday 10 a.m. – noon, 1 p.m. – 6 p.m., Sunday noon – 5 p.m.)
- **Clarence R Kelly Center**: 1701 N.E. 8th Avenue, Gainesville (Monday – Saturday, 9 a.m. – 6 p.m., Sunday closed)
- **Cone Park Branch Library**: 2801 E. University Ave., Gainesville (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., Sunday closed)
- **Eastside Community Center at Cone Park**: 2841 E. University Avenue, Gainesville (Monday – Friday 9:30 a.m. – 6:30 p.m., Saturday and Sunday closed)

- **Hawthorne Branch Library**: 6640 S.E. 221 Street, Hawthorne (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., Sunday noon – 5 p.m.)
- **Headquarters Library – Gainesville**: 401 E. University Avenue, Gainesville (Monday and Friday 10 a.m. – 6 p.m., Tuesday – Thursday 10 a.m. – 7 p.m., Saturday 10 a.m. – 5 p.m., Sunday noon – 5 p.m.)
- **High Springs Branch Library**: 23779 W. U.S. Hwy 27, High Springs (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., and Sunday noon – 5 p.m.)
- **Library Partnership Branch – Gainesville**: 912 N.E. 16 Avenue, Gainesville (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., Sunday closed)
- **Micanopy Branch Library**: 706 N.E. Cholokka Boulevard, Micanopy (Monday and Sunday closed, Tuesday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m.)
- **Millhopper Branch Library**: 3145 N.W. 43rd Street, Gainesville (Monday 10 a.m. – 6 p.m., Tuesday – Thursday 10 a.m. – 7 p.m., Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., Sunday noon – 5 p.m.)
- **MLK Center**: 1028 N.E. 14th Street, Gainesville (Monday – Friday 7 a.m. – 7 p.m., Saturday 10 a.m. – 6 p.m., Sunday 2 p.m. – 6 p.m.)
- **Newberry Branch Library**: 110 S. Seaboard Drive, Newberry (Monday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m., Sunday noon – 5 p.m.)
- **Tower Road Branch Library**: 3020 S.W. 75th Street, Gainesville (Monday and Friday 10 a.m. – 6 p.m., Tuesday – Thursday 10 a.m. – 7 p.m., Saturday 10 a.m. – 5 p.m., Sunday noon – 5 p.m.)
- **Waldo Branch Library**: 15150 N.E. U.S. Hwy 301, Waldo (Monday and Sunday closed, Tuesday – Friday 10 a.m. – 6 p.m., Saturday 10 a.m. – 5 p.m.)

Prevent Mosquitos from Multiplying and Wear Protective Clothing

Draining standing water prevents mosquitos from multiplying. The Alachua County Department of Health recommends draining water from:

- Garbage cans,
- House gutters,
- Pool covers,
- Coolers,
- Toys,
- Flowerpots,
- And any other container where there may be standing water.[33]

If there are mosquito problems in a community, citizens may contact their municipality's mosquito control unit or the Florida Department of Health in Alachua County (call 352-334-7930). Additionally, to prevent mosquitos and ticks from biting, the Florida Department of Health recommends:

[33] Ibid footnote 23.

- Applying repellent,
- Walking in the center of trails,
- Wearing long-sleeved shirts and long pants that are tucked into shoes,
- Showering quickly after being outdoors,
- And checking skin, clothes, and pets for ticks[34]

Ask for Help

Those experiencing or know anyone experiencing climate anxiety and other climate-related distress should not hesitate to reach out and ask for help from a professional or use of the County's various mental health services described previously. This applies to those experiencing or knowing someone who is experiencing increased agitation or aggression because of climate change. The Crisis Center provides several services to handle such issues, including the 24/7 Crisis Line (352-264-6789). Other services can be found on the Alachua County Crisis Center Services website.

The Climate Psychology Alliance of North America also provides a directory for climate-aware therapists, including in Alachua County, that can help people address their concerns:

https://www.climatepsychology.us/climate-therapists

[34] Florida Department of Health, "Tick-Borne Disease Prevention"

References

Alachua County. 2021. *Health Officials Issue Mosquito-Borne Illnesses Advisory* . https://alachuacounty.us/news/Article/Pages/Health-Officials-Issue-Mosquito-Borne-Illnesses-Advisory.aspx.

American Psychological Association. 2020. *Majority of US Adults Believe Climate Change Is Most Important Issue Today* . February 6. https://www.apa.org/news/press/releases/2020/02/climate-change.

Amin, Saqib. 2025. "Climate change and lethal violence: a global analysis." *International Journal of Climate Change Strategies and Management* 17 (1): 216-245.

Anderson, C. A., & DeLisi, M. 2011. "Implications of global climate change for violence in developed and developing countries." In *The psychology of social conflict and aggression*, by A. W. Kruglanski, & K. D. Williams. J. P. Forgas, 249-265. Psychology Press.

Ballew, M.T., et al. 2024. "Climate change psychological distress is associated with increased collective climate action in the U.S." *npj Climate Action* (Nature Portfolio).

Centers for Disease Control and Prevention. n.d. *Heat & Health Tracker.* https://ephtracking.cdc.gov/Applications/heatTracker/.

Clayton, Susan. 2020. "Climate anxiety: Psychological responses to climate change." *Journal of Anxiety Disorders* 74.

Environmental Protection Agency. 2025. *Climate Change Indicators: Lyme Disease* . https://www.epa.gov/climate-indicators/climate-change-indicators-lyme-disease.

—. 2025. *Climate Change Indicators: West Nile Virus.* https://www.epa.gov/climate-indicators/climate-change-indicators-west-nile-virus.

Florida Department of Health. 2024. *Dengue Fever.* https://www.floridahealth.gov/diseases-and-conditions/dengue/index.html.

—. 2024. *Mosquito Prevention.* November 18. https://alachua.floridahealth.gov/programs-and-services/environmental-health/mosquito-prevention/index.html.

—. 2023. *Mosquito-Borne and Other Insect-Borne Diseases.* August 10. https://www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/index.html.

—. 2024. *Tick-Borne Disease Prevention.* July 15. https://www.floridahealth.gov/diseases-and-conditions/tick-and-insect-borne-diseases/prevention.html.

—. 2024. *West Nile Virus (WNV).* https://www.floridahealth.gov/diseases-and-conditions/west-nile-virus/index.html.

Florida Museum of Natural History. 2022. *About the Bats.* University of Florida Bat Houses.

JonesEdmunds. 2024. *Climate Vulnerability Assessment: Final Report.* Alachua County, 24.

JonesEdmunds. 2024. "Spatial Vulnerability Assessment Report."

Marquard S, Wade H, Oerther S. 2024. "The Role of the School Nurse in Addressing Climate-Associated Illnesses: Vector-Borne Diseases." *NASN School Nurse.*

National Weather Service. 2025. *NWS Heat Risk.* July 31. https://www.wpc.ncep.noaa.gov/heatrisk/.

—. n.d. *What is the heat index?* https://www.weather.gov/ama/heatindex.

Plante, Courtney, and Craig A Anderson. 2017. "Global Warming and Violent Behavior." *Association for Psychological Science Observer*, January 31.

Romanello, M., Di Napoli, C., Green, C., Kennard, H., Lambard, P., & Scamman, D. 2023. "The 2023 report of the Lancet Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms." *Lancet Countdown.*

Schmidt, Charles. 2023. *Climate Anxiety.* https://magazine.hms.harvard.edu/articles/climate-anxiety.

UF/IFAS Extension. 2025. *Ticks & Disease in Florida.* https://sfyl.ifas.ufl.edu/family-resources/ticks-and-disease/.

Woolf, Steven. 2023. *The Health Care Costs of Extreme Heat.* Center for American Progress.

World Health Organization. 2024. *Heat and Health.* https://www.who.int/news-room/fact-sheets/detail/climate-change-heat-and-health.