



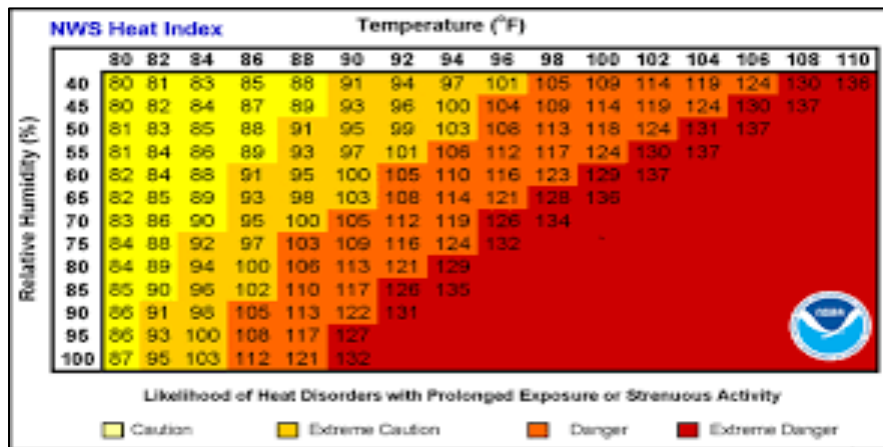
**HEAT INDEX, AIR QUALITY & HEALTH ISSUES OF  
PEOPLE EXPERIENCING HOMELESSNESS  
FACT SHEET & RECOMMENDATIONS  
[5/2020]**

**Sacramento Operational Severe Weather Guidance [2012]:** According to the guidance, cooling centers will not open until the heat index is forecast to be at least 105 degrees [F] for at least three consecutive days, accompanied by at least 75 degrees [F] nighttime temperatures.

**This arbitrarily high temperature threshold fails to consider several critical factors:**

**1. % Relative Humidity and heat index:**

Below is the Heat Index developed by the National Oceanic and Atmospheric Administration [NOAA]. NOAA defines the heat index (HI) is an index that combines air temperature and relative humidity, in shaded areas, to posit a human-perceived equivalent temperature, as how hot it would feel if the humidity were some other value in the shade. The result is also known as the "felt air temperature", "apparent temperature", "real feel" or "feels like".



Key to colors: ■ Caution ■ Extreme caution ■ Danger ■ Extreme danger

**Risk Level of Very High to Extreme**

Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning
91°F to 103°F	Moderate	Implement precautions and heighten awareness
103°F to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures

## 2. Temperature of pavement and sidewalk:

The current cooling center threshold temperature also fails to take into account people experiencing homelessness using the grassy areas, the sidewalk and pavement to place their tents, like the people near Loaves and Fishes.

One study I found, "Science: When the temperature is hot, the asphalt is insanely hot." See Table below:

<b>Air Temperature</b>	<b>Green Grass</b>	<b>Brown Grass</b>	<b>Concrete</b>	<b>Blacktop</b>
102 degrees	106 degrees	120 degrees	143 degrees	167 degrees

**Thus, the air temperature of 105 degrees can mean "insanely hot" temperatures for homeless people, a factor the City callously ignores.**

## 3. **High risk factors of developing a heat-related illness:**

According to the NOAA, the following might increase your risk of developing a heat-related illness, many of which are more common to people experiencing homelessness:

- High levels of humidity
- Obesity
- Fever
- Dehydration
- Prescription drug use
- Heart disease
- Mental illness
- Poor circulation
- Sunburn
- Alcohol use

***Homeless people at high risk: According to Sacramento Steps Forward Data Analytics & Research Team in 2017, [survey of 2,760 homeless people] the top 4 major health issues for people experiencing homelessness were:***

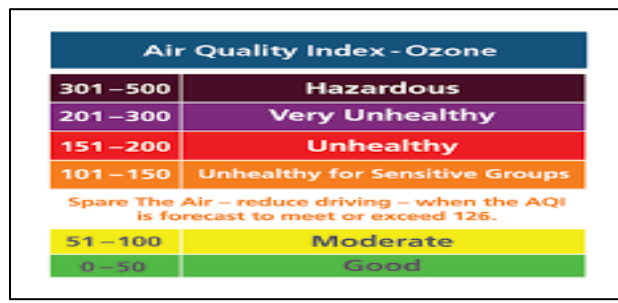
1. Asthma: 33%
2. Brain injury: 25%
3. Heat Stroke: 21%
4. Heart disease: 20%

Additionally, as the table below indicates, high risk factors to heat related diseases such as heat stroke and heart disease increase dramatically with age.

**Top 4 Homeless Health Issues by Age**

Health Issue	Overall: [N=2,760]	25 & under	25-35	36-45	46-55	56-65	65+
Asthma	33%	38.2%	36.5%	33.3%	38%	28.4%	25%
Brain Injury	25%	12.9%	21.2%	26.6%	32.1%	30.2%	26.1%
Heat stroke	21%	9.8%	18.2%	17.5%	26.2%	30.2%	34.5%
Heart disease	20%	11.1%	14.3%	16.3%	27.8%	28.7%	38.1%

Finally, an additional factor that the City and County need to consider for people experiencing homelessness: poor air quality.



**RECOMMENDATIONS**

**Based on this analysis, SRCEH has the following recommendations for opening up cooling centers:**

1. **Review and update the Sacramento Operational Severe Weather Guidance to create a more humane temperature threshold to open cooling centers;**
2. **Utilize the Heat Index to determine threshold for opening up cooling centers:** Based on the high arbitrarily high threshold set by the City, even using 105 degrees as the air temperature – using the Heat Index – the threshold would be 98 degrees at 40% humidity;
3. **Coordinate the opening of cooling centers with the county:** there needs to be a common, reasonable, threshold heat index agreed upon by the City and County so that all people experiencing homelessness can stay safe in cooling centers;
4. **Monitor Sacramento air quality:** Sacramento City and County should monitor Sacramento’s air quality and when air quality reaches 126, as it is today, the City and County should distribute masks to homeless people who request/need them – i.e. – people with asthma, upper respiratory disease and heart disease.