

**STATE ENVIRONMENTAL HEALTH INDICATORS COLLABORATIVE (SEHIC)
CLIMATE CHANGE INDICATORS**

Indicator: CC5: Adaptation Indicators

Measure(s): CC5.2: Access to Cooling Centers

MEASURE: Access to Cooling Centers

Last updated:	April 24, 2010
Measurement units:	No
Geographic scale:	Statewide
Time scale:	revised every 5-10 years
Significance/background:	Cooling centers provide an air-conditioned space for vulnerable populations such as the young, the elderly, and the socioeconomically disadvantaged to escape warm temperatures during extreme heat events. Cooling centers are often established in civic buildings such as gyms, libraries, and community centers.
Rationale:	Extreme heat events can cause or contribute to negative health outcomes by pushing the body's internal thermal regulation out of balance through prolonged exposure to heat and humidity or through overexertion in warm temperatures. Cooling centers provide access to cool, dry air, thereby helping the body regain its thermal equilibrium. Access to cooling centers is particularly important for vulnerable populations whose access to air conditioning has been disrupted due to power outages; outstanding bills; or, participation in exterior activities such as construction work, landscaping, and sporting events.
Limitations:	While States may list extreme heat as a relevant natural hazard and cooling centers as an appropriate emergency measure, the location of cooling centers is generally determined by localities. While the exact location of cooling centers may change from year to year, the neighborhoods or census block groups targeted for cooling centers are likely to remain constant.
Data resources:	FEMA listing of state offices and agencies of emergency management: http://www.fema.gov/about/contact/statedr.shtm
Data limitations:	No single repository currently exists listing which state or local jurisdictions establish cooling centers during extreme heat events or where the cooling centers are located.
Related data:	Location of vulnerable populations, especially the young, the elderly, and areas with high incidences of utility payment defaults.
Related SEHIC measures:	CC 1.4 Maximum and Minimum Temperatures/Heat Index CC 1.5 Increase in Heat Alerts/Warnings CC 2.1 Excess Mortality due to Extreme Heat CC 2.2 Excess Morbidity due to Extreme Heat

	CC 3.1 Population Vulnerability or General Social Vulnerability CC 3.2 Heat Vulnerability CC 4.1 Total Energy Consumption per Capita CC 4.2 Renewable Energy Generation per Capita CC 4.3 Vehicle Miles Traveled per Capita CC 5.1 Development of a State Adaptation Plan CC 5.3 Number of Heat Wave Early Warning Systems/Heat Alerts CC 5.4 Number of Municipal Heat Island Mitigation Plans CC 5.5: Number of Health Surveillance Systems Related to Climate Change CC 6.5 Completion of a State/Local Climate Change Action Plan
Recommendations:	Contact FEMA to verify whether or not a listing of state and local hazard mitigation plans and emergency operations plans are publicly available. Consider providing a methodology for using vulnerability maps to calculate the ideal distance for cooling centers in areas with medium to high vulnerability to extreme heat events.
Examples of local online cooling center locators:	Keep Cool Illinois Campaign listing of state cooling centers: http://keepcool.illinois.gov New York City online cooling center locator: http://gis.nyc.gov/oem/cc/index.htm Pacific Gas & Electric Neighborhood Cooling Center Locator Map for customers in PG&E's service area: http://www.pge.com/myhome/edusafety/seasonal/coolingcenters/map/

HOW-TO GUIDE: Access to Cooling Centers

1. Go to the FEMA listing of state offices and agencies of emergency management:
<http://www.fema.gov/about/contact/statedr.shtm>
2. Click on the link for your state.
3. Search for the state's hazard mitigation plan and emergency operations plan.
4. Search for identification of extreme heat as a hazard.
5. Search for inclusion of cooling centers as an example of emergency response measures during extreme heat events.