

**Circular No.**  
**N.C.II(1)/975/2018**

Revenue Administration,  
Disaster Management and  
Mitigation Department &  
Chepauk, Chennai - 600 005

**Dated 21.03.2018**

**CIRCULAR**

Sub: Natural Calamities – Heat wave – Preparedness Measures for Management of Heat wave-Instructions issued - regarding.

Ref: 1. Guidelines for Prevention and Management of Heat-Wave 2016 issued by the NDMA.  
2. This office Circular No. NC II (1)/2975/2016 dated 27.02.2018

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The State of Tamil Nadu, which is located in the vulnerable part of the Indian Peninsula, is subject to climate and geological related disasters viz., cyclone, flood, earthquakes, tsunami and drought to varying degrees. In the recent years, due to rising temperatures during the summer/ pre-monsoon months several places are subject to 'Heat wave' conditions.

As you aware, Heat-wave is a condition of atmospheric temperature that leads to physiological stress, which sometimes can claim human life.

Heat-wave is defined as,

“The condition where maximum temperature at a grid point is 3°C or more than the normal temperature, consecutively for 3 days or more. World Meteorological Organization defines a heat wave as five or more consecutive days during which the daily maximum temperature exceeds the average maximum temperature by five degrees Celsius. If the maximum temperature of any place continues to be more than 45° C consecutively for two days, it is called a heat wave condition”.

**India Meteorological Department (IMD) criteria for Heat Wave and Severe Heat Wave:**

- ❖ Heat wave is considered only after maximum temperature of a station reaches at least 40° C or more for plains, at least 30° C or more for hilly regions and 37° C or more in sea shore areas

## **High Risk Groups**

- Children, Pregnant women & Senior citizens
- Labourers including those at construction sites/Outdoor workers/Farmers/MNREGS workers
- Police personnel/security staff
- Industrial workers working at High Temperatures
- Street hawkers/Salesmen
- Riksha pullers/auto drivers/Travellers/bus drivers
- Coolies/Slum residents/Beggars/Homeless
- Chronic sick/indoor cases
- Patients on drug treatment
- Addicts (Alcohol, drugs etc)

The above list is only indicative and not exhaustive. Hence, District Collectors are advised to update the above list of the groups/localities that are vulnerable to heatwave based on local situation.

## **Heat-wave Management:**

The following measures have to be initiated by the DDMA's to tackle the Heat wave conditions and its effect during summer 2018. In addition, any additional measures that may be required based on the past experience in the district should also be put in place.

## **Early warning measures:**

- ❖ Activate the DEOC with inter-departmental personnel with wide publicity of Toll free No: 1077.
- ❖ Issue of heat alert when extreme heat events are forecast by IMD to all key Departments / Agencies through DEOC.
- ❖ Dissemination of heat alerts/advisories through local print, electronic and social media

## **Preparedness measures:**

- ❖ Ensure drinking water supply to all habitations.
- ❖ Local bodies shall identify the areas to provide shelters and drinking water during heat alert period such as bus depots/stops, markets, railway stations, pilgrimage, tourist, industrial areas etc.
- ❖ District Administration have to prioritize maintaining power to critical facilities such as hospitals and UHCs.
- ❖ Checking of inventories of medical supplies including IV fluids, cooling packs or ice, ORS powder in PHCs, UHCs, and 108 emergency ambulances.

- ❖ Adequate arrangements for treatment of heat stroke patients round the clock.
- ❖ Display of prevention measures to overcome HEAT WAVES.
- ❖ Ensure the services of 108 / 104 Emergency Service with adequate supply of IV fluids.
- ❖ Establish mobile Health teams to cover major bus stands / Terminals, pilgrimage, tourist centres and other public places.
- ❖ Keep open the parks in afternoon and for a longer duration during evenings.
- ❖ Labour department to enforce better working conditions for workers such as provision of sheds, safe drinking water, bathing facilities etc as per the Labour Act.
- ❖ Fire and Rescue Services Department has to ensure the readiness of vehicles and fire fighting equipment to face any emergency.
- ❖ Police personnel on duty in the open, to be educated on precautionary measures to be taken during heatwave.
- ❖ Shelters for traffic police may be provided, wherever feasible.
- ❖ Children in anganwadis and schools may be advised to ensure that they are not exposed in the sun.
- ❖ To collect information on the works sanctioned under MGNREGS programme in High risk areas to plan for mitigation effort during heat period.
- ❖ MGNREGS workers shall be educated in following the do's and don'ts. Adequate water, shelter should be provided as per the rules prescribed under MGNREGS. It is to be ensured that the children of MGNREGS workers are also adequately taken care of and not exposed to sun.

### **Veterinary Measures:**

#### **Animal care**

- ❖ Poultry and cattle will also be adversely affected during heat wave. Cattle and poultry owners to be cautioned accordingly.
- ❖ Ensure adequate stock of medicines in all veterinary hospitals for treatment of cattle /poultry birds.
- ❖ Ensure provision of water in veterinary dispensaries

#### **Wild life**

- ❖ Provision of water supply to animals in reserved/protected areas and in zoos

### **Public Awareness and community outreach measures:**

- ❖ Release of messages on DOs / Don'ts to the general public and vulnerable groups about Heat wave.
- ❖ Utilize local radio, FM broadcasts, cinema theatres, print and social media to disseminate heat protection tips and high temperature warnings to the vulnerable sections.
- ❖ Preparation of Posters & pamphlets with tips to take care of cattle and poultry during heat waves.
- ❖ Local bodies to take a lead role in creating awareness.
- ❖ Public should be cautioned not to venture into the forests without permits, since forests are prone to fires during summer

### **Capacity Building/ Training programmes:**

- ❖ Medical & Health Department officials shall be advised to conduct training programs/orientation course on heat illness for medical staff.
- ❖ Training of school teachers to equip them with knowledge of heat protection tips and activities which they can disseminate in classrooms.

### **Involvement of Governmental and Non-Governmental Organisations:**

- ❖ Actively involve NGOs / Rotary Clubs / Lions Clubs and Corporate houses as part of Corporate Social Responsibility to provide shelters, drinking water (Thaneer pandal) during heat days.

### **Forest fires:**

Forest fires are caused especially during summer due to extreme dry conditions and also are man made.

#### **Causes of forest fires: -**

- **Natural causes-** Many forest fires start from natural causes such as lightning which set trees on fire. High atmospheric temperatures and dryness (low humidity) offer favorable circumstance for a fire to start.
- **Environmental causes** are largely related to climatic conditions such as temperature, wind speed and direction, level of moisture in soil and atmosphere and duration of dry spells.
- **Man made causes-** These can be intentional or unintentional. Fire is caused when a source of fire like naked flame, cigarette or bidi, camp

fires, electric spark or any source of ignition comes into contact with. Intentionally forest fires can be caused due to the old practice of shifting cultivation, the use of fires by villagers to ward off wild animals, fires lit intentionally by people living around forests for recreation, fires started accidentally by careless trekkers/visitors to forests who discard cigarette butt etc

- **Hence, public shall be adequately educated on the causes of forest fire and may be advised not to venture into forests during summer**

The list of Do's and Don'ts related to heat wave is enclosed in Annex-1 and the Symptoms and First Aid for various Heat Disorders is enclosed in Annex-2. In addition to the above, NDMA Guidelines for preparation of Action Plan-Prevention and Management of the Heat wave may also be referred for necessary action.

The District Collectors besides taking necessary action have to monitor the situation closely in the event of Heat wave and send regular updates, shall not hesitate to escalate the problem to State level as and when the situation warrants by bringing it to the notice of Principal Secretary/ Commissioner of Revenue Administration, so that assistance can be strengthened from the State level.

Sd/- K. Satyagopal  
Principal Secretary/  
Commissioner of Revenue Administration  
and State Relief Commissioner

To

All the District Collectors

Copy to:

1. The Principal Secretary to Government,  
Revenue Department,  
Secretariat, Chennai-9

2. Principal Secretary to Government  
Health Department  
Secretariat, Chennai -9

**ANNEX-1**  
**DOs & DON'Ts**

Heat Wave conditions can result in physiological strain, which could even result in death. To minimize the impact during the heat wave and to prevent serious ailment or death because of heat stroke, the following measures are useful:

**DO's**

- ✓ Listen to Radio, watch TV, read Newspaper for local weather forecast to know if a heat wave is on the way.
- ✓ Drink sufficient water and as often as possible, even if not thirsty.
- ✓ Wear light weight, light-coloured, loose, and porous cotton clothes. Use protective goggles, umbrella/hat, shoes or chappals while going out in sun.
- ✓ While travelling, carry water with you.
- ✓ If you work outside, use a hat or an umbrella and also use a damp cloth on your head, neck, face and limbs.
- ✓ Use ORS, coconut water homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. which help to re-hydrate the body.
- ✓ Recognize the signs of heat stroke, heat rash or heat cramps such as weakness, dizziness, headache, nausea, sweating and seizures. If you feel faint or ill, see a doctor immediately.
- ✓ Urine in darker yellow or orangish yellow indicates severe dehydration.
- ✓ Keep animals in shade and give them plenty of water to drink.
- ✓ Keep your home cool, use curtains, shutters or sunshade and open windows at night.
- ✓ Use fans, damp clothing and take bath in cold water frequently.
- ✓ Provide cool drinking water near work place.
- ✓ Caution workers to avoid direct sunlight.
- ✓ Schedule strenuous jobs to cooler times of the day.
- ✓ Increasing the frequency and length of rest breaks for outdoor activities.
- ✓ Pregnant workers and workers with a medical condition should be given additional attention.

**DONT's:**

- ✓ Do not leave children or pets in parked vehicles.
- ✓ Avoid going out in the sun, especially between 12.00 noon and 3.00 p.m.
- ✓ Avoid wearing dark, heavy or tight clothing.
- ✓ Avoid strenuous activities when the outside temperature is high. Avoid working outside between 12 noon and 3 p.m.
- ✓ Avoid cooking during peak hours. Open doors and windows to ventilate cooking area adequately.
- ✓ Avoid alcohol, tea, coffee and carbonated soft drinks, which dehydrates the body.
- ✓ Avoid high-protein food and do not eat stale food.

## ANNEX-2

### Symptoms and First Aid for various Heat Disorders

<b>Heat Disorder</b>	<b>Symptoms</b>	<b>First Aid</b>
<b>Sunburn/ Heat rash</b>	Skin redness and pain, possible swelling, blisters, fever, headaches.	Take a shower, using soap, to remove oils that may block pores preventing the body from cooling naturally. If blisters occur, apply dry, sterile dressings and get medical attention.
<b>Heat Cramps</b>	Painful spasms usually in leg and abdominal muscles or extremities. Heavy sweating.	Move to cool or shaded place. Apply firm pressure on cramping muscles or gentle massage to relieve spasm. Give sips of water. If nausea occurs, discontinue.
<b>Heat Exhaustion</b>	Heavy sweating, weakness, Skin cold, pale, headache and clammy. Weak pulse. Normal temperature possible. Fainting, vomiting.	Get victim to lie down in a cool place. Loosen Clothing. Apply cool, wet cloth. Fan or move victim to air-conditioned place. Give sips of water slowly and If nausea occurs, discontinue. If vomiting occurs, seek immediate medical attention. Or call 108 and 102 for Ambulance
<b>Heat Stroke (Sun Stroke)</b>	High body temperature (106°F). Hot, dry skin. Rapid, strong pulse. Possible unconsciousness. Victim will likely not sweat.	Heat stroke is a severe medical emergency. Call 108 and 102 for Ambulance for emergency medical services or take the victim to a hospital immediately. Delay can be fatal. Move victim to a cooler environment. Try a cool bath or sponging to reduce body temperature. Use extreme caution. Remove clothing. Use fans and/or air conditioners. <b>DO NOT GIVE FLUIDS.</b>



## **EMERGENCY TREATMENT**

If Heat Stroke is suspected, call 108 immediately. While waiting for the ambulance:

- ✓ Make the victim lie down
- ✓ Take the person's temperature.
- ✓ If possible move the affected person to somewhere cooler / shaded area.
- ✓ Apply cold compresses
- ✓ Elevate feet
- ✓ Give a cool shower by sprinkling with water or Wrapping in a damp sheet and using a fan to create an air circulation.
- ✓ Encourage to drink fluids, if they are conscious.
- ✓ Do not give aspirin or paracetamol.

## **LONG TERM MITIGATION EFFORTS**

1. Afforestation and Community participation in Tree plantation
2. Develop gardens and parks. Encourage terrace gardens in residential areas.
3. Strict enforcement of rain water harvesting
4. Encourage recycling of waste/kitchen water, which can be used for flushing and watering plants
5. Cool roofs concept: Cool roofs function primarily by reflecting heat incident on a building back to the atmosphere. Develop a program for cool roof (lime based white wash, white ceramic tiles covering), through CSR activities, which can reduce temperature by 3-7 degrees for indoors.
6. Development and Maintenance of Open Space Reservation (OSR) lands as parks by the urban local bodies. Remove encroachments from all the OSR lands.

Sd/- K. Satyagopal  
Principal Secretary/  
Commissioner of Revenue Administration  
and State Relief Commissioner