# HEAT WAVE ACTION PLAN

## 2024-2025

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**JAMMU & KASHMIR**

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# FOREWORD

It is with a sense of urgency and purpose that we present this Heatwave Action Plan for Rajouri District. Born out of a collective commitment to safeguarding the well-being of our community, this plan represents a milestone in our journey towards resilience and adaptation in the face of climate change.

Recognizing the importance of proactive disaster management in an evolving climate, this plan outlines our concreted efforts, organizational framework and swift response mechanisms under the guidance of the District Administration.

While policy decision originate from higher Divisions, it is our responsibility to translate them into actionable measures. This plan serves as a blueprint for mitigating the impact of heat waves, drawing from our collective experiences and striving for rapid restoration of normalcy.

We extend our gratitude for the invaluable support and input from stakeholders and we welcome further collaboration to enhance our resilience and ensure community safety amidst extreme heat events. Together let us forge ahead towards a safer and more resilient future.

11.04.2024

**Om Prakash Bhagat, (JKAS)**
Deputy Commissioner
Rajouri

April 2024

# PREFACE

As the sun beats down relentlessly, we find ourselves grappling with a pressing challenge: the heatwave. In recent years, the frequency and intensity of extreme heat events have risen, posing significant risks to the health, well-being, and livelihoods of our community. In response to this growing threat, we present the Heatwave Action Plan—a comprehensive strategy crafted to enhance resilience, mitigate risks, and foster adaptation in the face of extreme heat.

This action plan is the culmination of extensive research, collaboration, and stakeholder engagement. We have drawn upon scientific expertise, local knowledge, and global best practices to develop a framework that addresses the multifaceted dimensions of the heatwave phenomenon. From the identification of heat-vulnerable populations to the implementation of early warning systems, each component of this plan is meticulously designed to protect the most vulnerable among us and build a more resilient community.

Central to our approach is a commitment to inclusivity and equity. We recognize that the impacts of the heatwave are not evenly distributed, with marginalized communities often bearing the brunt of its effects. As such, this action plan prioritizes targeted interventions and support for those most in need, ensuring that no one is left behind in our pursuit of resilience.

As we embark on this journey, we do so with a sense of urgency and purpose. The threat posed by the heatwave is not abstract; it is a reality that demands our immediate attention and action. Yet, within this challenge lies an opportunity—to come together as a community, to innovate, and to build a future that is resilient to the impacts of climate change.

I extend my deepest gratitude to all those who have contributed to the development of this Heatwave Action Plan. Your dedication, expertise, and unwavering commitment to the well-being of our community have been instrumental in shaping this document. May it serve as a guiding light in our collective efforts to build a more sustainable, equitable, and resilient future for our community.

**Heat Wave Action Plan, 2024-2025**
**April 2024**
**Issued By: DDMA Rajouri**

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# CHAPTER I

## INTRODUCTION TO HEAT WAVES

### 1.1 INTRODUCTION

Across the globe, hot days are getting hotter and more frequent, while we're experiencing fewer cold days. Heat Wave is also called a "silent disaster" as it develops slowly and kills and injures humans and animals worldwide. Higher daily peak temperatures of longer duration and more intense heat waves are becoming increasingly frequent globally due to climate change. Heat Waves typically occur between March to June, and in some rare cases even extend till July. In July 2023, Earth broke or tied its record for the hottest day on record, four days in a row. As per the annual Global Climate Report 2023, the year 2023 was the warmest year since global records began in 1850 at 1.18°C (2.12°F) above the 20th century average of 13.9°C (57.0°F). This value is 0.15°C (0.27°F) more than the previous record set in 2016. The 10 warmest years in the 174-year record have all occurred during the last decade (2014–2023). Of note, the year 2005, which was the first year to set a new global temperature record in the 21st century, is now the 12th-warmest year on record. The year 2010, which had surpassed 2005 at the time, now ranks as the 11th-warmest year on record. Heat Wave Action Plan is a Plan intended to provide a framework for the implementation, coordination, and evaluation of extreme heat response activities in the State that reduce the negative health impacts of extreme heat. The Plan's primary objective is to alert those populations most at risk of heat-related illness that extreme heat conditions either exist or are imminent, and to take appropriate precautions.

### 1.2 DEFINITION

Heat wave is a condition of air temperature which becomes fatal to human body when exposed. Quantitatively, it is defined based on the temperature thresholds over a region in terms of actual temperature or its departure from normal. In certain countries it is defined in term of the heat index based on temperature and humidity or based on extreme percentile of the temperatures. The 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. Different countries define heat wave differently in context of their local conditions. In India, as per Indian Meteorological Department (IMD) classification, heat wave is considered if maximum temperature of a station reaches at least 40°C or more for plains, 37°C or more for coastal stations and at least 30°C or more for hilly regions. Following criteria are used to declare a heat wave:

**Figure 1: Criteria for Heat Wave**

| Situation | Normal Temperature | Heat Wave | Moderate Heat Wave | Severe Heat Wave |
|---|---|---|---|---|
| I | If normal temperature is < **40° C.** | Any increase from the normal temperature is called a Heat Wave. | **+ (5 or 6) ° C** : Moderate Heat Wave/Heat Wave Days (HWD) | **+7° C** or more: Severe Heat Wave Day (SHWD) |
| II | If normal temperature is ≥ **40° C**. | Any increase from the normal temperature is called Heat Wave. | **+ (3 or 4) ° C:** Moderate Heat Wave (or HWD) | **+5° C** or more: Severe Heat Wave Day (SHWD) |
| III | If the maximum temperature of any place continues to be **45° C** consecutively for two days, it is also called a Heat Wave condition or HWD. | | | |

***Source: Indian Meteorological Department***

**Warm Night** is declared if actual maximum temperature of a station is more than or equal to 40°C and minimum temperature departure is more than or equal to 5°C.

**Very Warm Night** is declared if actual maximum temperature of a station is more than or equal to 40°C and minimum temperature departure is more than or equal to 7°C.

## 1.3 VULNERABILITY – THREAT POSE BY EXTREME HEAT

Extreme heat can increase the risk of other types of disasters. Heat can exacerbate drought and hot, dry conditions can in turn create wildfire conditions. Buildings, roads, and infrastructure absorb heat, leading to temperatures that can be 1 to 7 degrees hotter in urban areas than outlying areas. This impact is most intense during the day, but the slow release of heat from the infrastructure overnight can keep cities much hotter than surrounding areas. Rising temperatures across district pose a threat to people, ecosystems, and the economy. Moreover the combination of exceptional heat stress and a predominantly rural population makes the cities vulnerable to Heat Waves. Vegetable vendors, auto repair mechanics, cab drivers, construction workers, police personnel, road side kiosk operators and mostly weaker sections of the society have to work in the extreme heat to make their ends meet and are extremely vulnerable to the adverse impacts of Heat Waves such as dehydration, heat and sun strokes. Homeless and elderly are also vulnerable for heat wave.

### a. Impact on Human Heath Life, Livelihood, Agricultural and Livestock

Extreme heat is one of the leading causes of weather-related deaths. Heat stress occurs in humans when the body is unable to cool itself effectively. Normally, the body can cool itself through sweating, but when humidity is high, sweat will not evaporate as quickly, potentially leading to heat stroke. High humidity and elevated night time temperatures are likely key ingredients in causing heat-related illness and mortality. When there's no break from the heat at night, it can cause discomfort and lead to health problems, especially for those who lack access to cooling, which are often people who have low incomes. Other

groups that are particularly vulnerable to heat stress include older adults, infants and children, people with chronic health conditions, and outdoor workers.

Hot days are also associated with increases in heat-related illnesses, including cardiovascular and respiratory complications and kidney disease. In extreme temperatures, air quality is also affected. Hot and sunny days can increase the production of ground-level ozone, a harmful pollutant that is the main component of smog, which can damage the respiratory system and is particularly harmful for those with asthma. In addition, greater use of air conditioning requires more electricity which, depending on the electricity source, emits other types of pollution, including particulates that have an impact on air quality too. These increases in ozone and particulate matter can pose serious risks to people, particularly the same vulnerable groups directly impacted by heat mentioned above.

**b. Impact on Agriculture and Livestock**

Apart from impact on human life, the Heat Wave has also been found to profoundly affect crop production both in terms of quantity and quality. High temperatures can be damaging to agriculture. Plant growth is negatively impacted by high day time temperatures and some crops require cool night temperatures. Heat waves can exacerbate droughts and wildfires, which can lead to negative impacts on the agriculture sector.

Similar to humans, high temperatures can negatively impact livestock, leading to declines in milk production, slower growth, and reduced conception rates. High relative humidity and little wind exacerbate this issue. Animals struggle to offload excess heat through transpiration and evaporation, causing increased salivation and unmanageable body temperature. This makes it difficult to bring animals down with ice packs.

**c. Impact on Energy**

Warmer temperatures affect many aspects of the energy system, including production, transmission, and demand. While higher summer temperatures increase electricity demand for cooling, at the same time, they can lower the ability of transmission lines to carry power, possibly leading to electricity reliability issues like rolling blackouts during heat waves. In addition, warming rivers and lakes reduce waste heat absorption, reducing thermal efficiency and potential plant shutdowns.

## 1.4 HEAT WAVE ACTION PLAN (HWAP)

In view of the above, there is a need to a holistic Heat Wave Action/Response Plan (HWAP) for district Rajouri in order to make it more specific and strategic.

**a. Aim of the HWAP**

Rajouri District Disaster Management Authority is the primary agency with responsibility for the hazard of Heat Wave in the district. The purpose of the Heat Wave

Action Plan (HWAP) is to outline the arrangements for the management of Heat Waves in district Rajouri across preparedness, response and recovery. The aim of this plan is to enable the district to mitigate the effects of, prepare for, respond to, and recover from heat waves.

**b. Necessity of HWAP**

A coordinated multi-agency approach is needed to effectively manage heat waves in the district, requiring clear roles, responsibilities, strategic monitoring, and clear triggers for activation and data sharing and analysis of the extreme heat impacts across the community.

**c. Objectives of HWAP**

- The HWAP aims to provide a framework for implementation, coordination and evaluation of extreme heat response activities in cities/towns/panchayats that reduce the negative impact of extreme heat.
- The primary objective is to alert those at risk of heat-related illness in places where extreme heat conditions either exist or are imminent, and to take appropriate precautions.
- The Plan also calls for preparedness measures to protect livestock/animals as extreme heat causes significant stress to them as well.
- The HWAP is intended to mobilize departments and communities against avoidable health problems during spells of very hot weather.
- The Plan also intends to help early warning agencies as well as the media, taking all administrative/preventive actions that need to be taken by multiple agencies.

**d. Goals of HWAP**

- Identifying vulnerable populations and creating heat preparedness plans with all residents in mind, that may include steps like opening cooling centers during periods of extreme heat and adopting workplace heat stress standards.
- Installing cool and green roofs and cool pavement to reduce the urban heat.
- Planting trees to provide shade and to cool the air through evapotranspiration.
- Pursuing energy efficiency to reduce demand on the electricity grid, especially during heat waves.
- The climate mapping for resilience and adaptation portals to help communities understand and plan for their climate risks today and in the future, including a real-time map of wildfire, drought, flooding, and extreme heat across the district.

## 1.5 KEY STRATEGIES

Government agencies will have a critical role to play in preparing and responding to Heat Waves at a local level, working closely with health and other related departments on long term strategic plan.

- **Establish Early Warning System and Inter-Agency Coordination** to alert residents on predicted high and extreme temperatures. Who will do what, when, and how is made clear to individuals and units of key departments, especially for health.

- **Capacity building/Training Programme** for health care professionals at local level to recognize and respond to heat-related illnesses, particularly during extreme heat events. These training programmes should focus on medical officers, paramedical staff and community health staff so that they can effectively prevent and manage heat-related medical issues to reduce mortality and morbidity.

- **Public Awareness and Community Outreach** for disseminating public awareness messages on how to protect against the extreme heat-wave through print, electronic and social media and Information, Education and Communication (IEC) materials such as pamphlets, posters and advertisements and Television Commercials (TVCs) on Do's and Don'ts and treatment measures for heat related illnesses.

- **Collaboration with NGOs and Civil Society** to improve bus stands, building temporary shelters, wherever necessary, improved water delivery systems in public areas and other innovative measures to tackle Heat wave conditions.

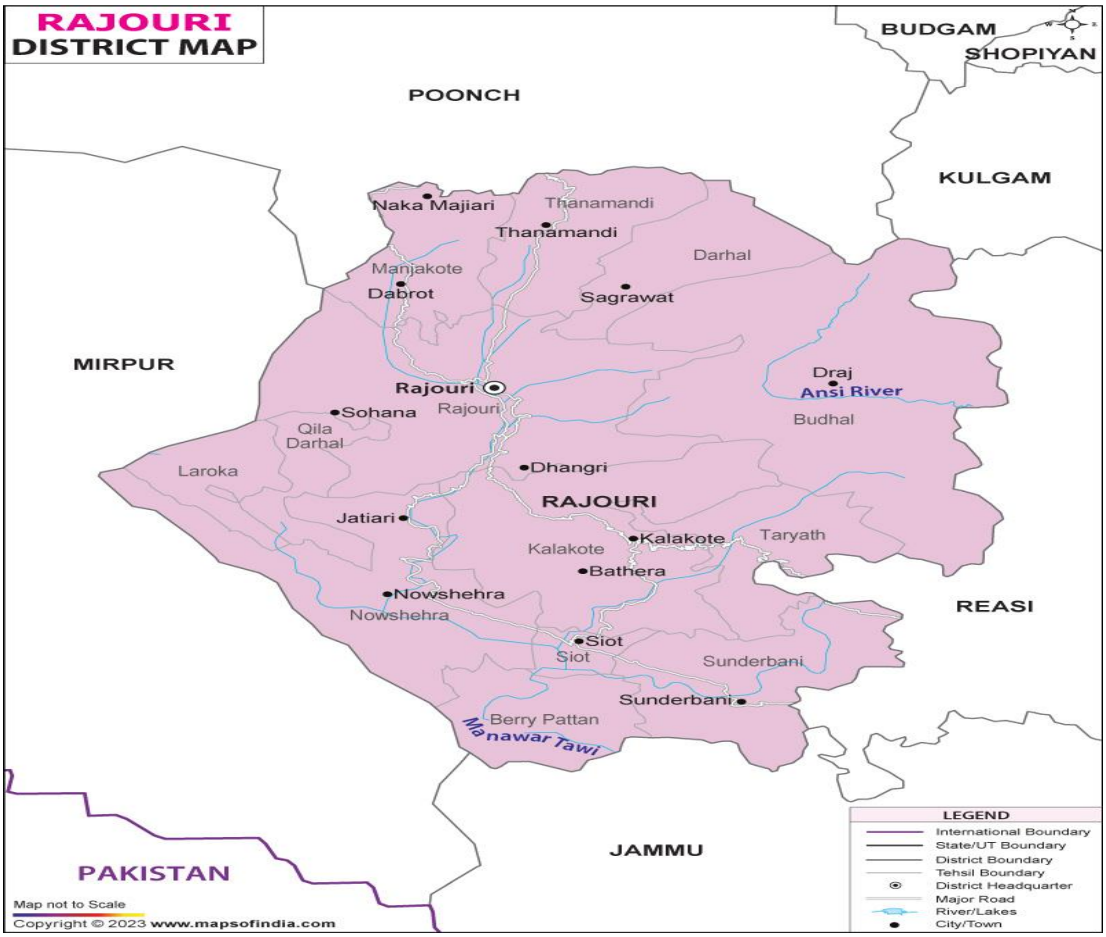
# CHAPTER II

# DISTRICT RAJOURI - AT A GLANCE

## 2.1 GENERAL PROFILE OF DISTRICT

District Rajouri is located at a distance of 150 KM North West of the winter Capital Jammu in the foot hills of Pir Panchal ranges with the line of control passing through the South Western side of the District. Rajouri District had been part of Poonch district prior to 1967. On 22nd September 1967, Government bifurcated district Poonch into two districts namely 'Rajouri' and 'Poonch', to facilitate the process of development and better supervision of economic activities in this area. By this way, Rajouri emerged as a District from 1st January 1968. The District has an area of 2630 Sq. Kms. with peculiar physical features. The District is situated in the west of Jammu Division and is surrounded by the Poonch, Reasi and Jammu Districts. The District comprises of 13 Tehsils and 19 Blocks.

**Figure 2. Map of Rajouri District**




## 2.2 HAZARD PROFILE OF DISTRICT

Rajouri has several bio-geographic, hydro-meteorological and agro-climatic zones and it is vulnerable to multiple natural hazards as well as was disaster. Rajouri occupies a strategic position in Jammu and Kashmir with Line of Control touching Pakistan all along the

west and south-west border. The climate of the district differs from region to region on account of variations in its geography. The area has different weather conditions of different places because of the lofty mountains that check the moisture-laden winds from entering the district. Extreme heat can further create the conditions for drought and can exacerbate the impacts of drought by putting additional stress on available water supplies. Extreme heat can also lead to increased storm activity, which is linked to both high wind and flash flood hazards. It can also contribute to the spread of wildfires.

**Table No. 1 Risk Assessment Profile of Rajouri District**

| Type of Hazard | Time of Occurrence | Potential Impact | Vulnerable Areas |
|---|---|---|---|
| Flood | July - September | Loss of crops, infrastructure, humans and bovine life. Livelihood system, houses,private public property etc. | Any place of the District |
| Drought | April-June | Loss of crops and Livelihood system. | Any place of the District |
| Earthquake | Any time | Loss of property and life. | Complete District. |
| Fire | Any time | Loss of property and life. | Any place of the District. |
| Accident | Any time | Loss of assets and life. | Any place of the District. |
| Lightning | Any time | Loss of assets and life. | Any place of the District. |
| Heat Wave | April-September | Loss of Life, Crops and Livelihood system. | Any place of the District. |

## 2.3 DISTRICT RAJOURI MINIMUM AND MAXIMUM TEMPERATURES

Minimum and maximum temperatures are the two extreme points of temperature in a given place during a specific period. These temperatures are significant factors in determining the climatic conditions of a particular location. Maximum and minimum temperatures are used to predict heat waves and cold spells, which can have a significant impact on human health. Following table shows the min. and max. temperature of district Rajouri (March-June) for the year 2023 and 2024 for the better analysis of Heat Wave conditions.

**Table 2. Minimum and Maximum Temperature of Rajouri District (March-June)**

| Sr. No. | Year | Month | Minimum Temperature | Maximum Temperature |
|---|---|---|---|---|
| 1. | 2023 | March | 3°C | 23°C |
| | | April | 3°C | 28°C |
| | | May | 6°C | 30°C |
| | | June | 10°C | 35°C |

| | | | | |
|---|---|---|---|---|
| 2. | 2024 | March | -2°C | 31°C |
| | | April | 11°C | 31°C |
| | | May | 15°C | 34°C |
| | | June | 15°C | 39°C |

***Source: Accuweather Weather Forecast***

## 2.4 VULNERABLE HOTSPOTS

Based on the analysis of minimum and maximum temperatures of 2023 and 2024 weather predictions, Tehsil Sunderbani and Tehsil Nowshera, can be the vulnerable hotspots during the Heat Wave as the maximum temperature recorded is 40°C and 41°C respectively.

## 2.5 TEHSIL PROFILE OF DISTRICT

At present, the District comprises 5 Sub-Divisons, 13 Tehsils and 19 Blocks. Following table shows the preliminary Tehsil profile of District Rajouri.

**Table 3. Tehsil Profile District Rajouri**

| Sr. No. | Name of Tehsil | Name of Tehsildar | Official Email | Contact No. |
|---|---|---|---|---|
| 1. | Rajouri | Sh. Virender Kumar (CPIO) | tehsildarrajouri@gmail.com | 9419285055 |
| 2. | Manjakote | Smt. Jazia Kazmi (JKAS) | tehsildarmanjakote@gmail.com | 7006553167 |
| 3. | Thannamandi | Sh. Sayed Mazhar Ali Jafri (JKAS) | tehsildarthannamandi@gmail.com | 7006447757 |
| 4. | Darhal | Sh.Ram Pal | tehsildardarhal@gmail.com | 7006541204 |
| 5. | Koteranka | Sh. Sayed Sahil Ali (JKAS) | tehsildarkoteranka@gmail.com | 9419235454 |
| 6. | Khawas | Sh. Sohan Lal Rana | tehsildarkhawas@gmail.com | 7006337289 |
| 7. | Kalakote | Sh. Manik Singh Rathore | tehsildarkalakote84@gmail.com | 9419119033 |
| 8. | Taryath | Smt. Kashyap Neha Pandit (JKAS) | tehsildarteryath004@gmail.com | 6005732846 |
| 9. | Nowshera | Sh. Ram Pal Sharma | tehsildarnowshera@gmail.com | 9596713809 |
| 10. | Qila Darhal | Sh. Jahangir Hussain | qiladarhaltehsildar@gmail.com | 9797581000 |
| 11. | Sunderbani | Sh. Diljeet Singh Parihar | tehsildarsunderbani123@gmail.com | 9419154963 |
| 12. | Beripattan | Sh. Zaheer Rana | -- | 8082132931 |

| | | | | |
|---|---|---|---|---|
| 13. | Siot | Sh. Diljeet Singh Parihar (Add.Charge) | -- | 9419154963 |

## 2.6 RAJOURI DISTRICT DISASTER MANAGEMENT AUTHORITY

According to the DM Act, 2005, in collaboration with the Divisional Disaster Management Authority, the District Disaster Management Authority (DDMA) serves as the planning, organizing, and executing body for disaster management at the district level, and shall take all appropriate steps for disaster management.

**Table No. 4 Rajouri District Disaster Management Authority**

| Sr. No. | Name | Designation | Name | Contact No. | |
|---|---|---|---|---|---|
| | | | | Office | Mobile |
| 1. | Deputy Commissioner | Chairman | Sh. Om Prakash Bhagat (JKAS) | 01962-262244 | 9419520302 |
| 2. | Senior Superintendent of Police | Member | Sh. Amritpal Singh (IPS) | 01962-262240 | 9541900721 |
| 3. | Additional Deputy Commissioner | CEO | Sh. Rajeev Kumar Khajuria (JKAS) | 01962-264482 | 9596701379 |
| 4. | Chief Medical Officer | Member | Dr. Rajinder Kumar | 01962-262640 | 9419184404 |
| 5. | Superintending Engineering PWD (R&B) | Member | Sh. Devi Dayal | 01962-264040 | 9419139244 |
| 6. | Assistant Director CA & PD | Member | Sh. Rohit Kumar | 01962-263419 | 9906159577 |
| 7. | Assistant Regional Transport Officer | Member | Sh. Pawan Kumar | 01962-264548 | 9419190101 |
| 8. | AD Fire & Emergency Services | Member | Sh. Himanshu Gandotra | -- | 7006860026 |
| 9. | Executive Officer MC Rajouri | Member | Sh. Yousaf Bhatt | -- | 7051061770 |
| 10. | Tehsildar Rajouri | Member | Sh. Varinder Kumar | 01962-263223 | 9419285055 |
| 11. | Superintending Engineering (I&FC) | Member | Sh. Bram Jyoti | 01962-263219 | 9419197748 |

## 2.7 TEHSIL/BLOCK DISASTER MANAGEMENT COMMITTEE

For the effective coordination, enforcement and implementation of disaster management plans, policies and guidelines at the Tehsil level following table shows the composition of Tehsil Level Disaster Management Committee IN District Rajouri.

**Table No. 5 Composition of Tehsil Disaster Management Committee**

| Sr. No. | Official Members | Non-Official Members |
|---|---|---|
| 1. | Tehsildar concerned | Elected Representative of the District/Hon'ble MLAs/MLCs |
| 2. | BDO concerned | Chief Warden Civil Defense. |
| 3. | SHO concerned | At least three prominent citizens of the District |
| 4. | AEE R&B/PHE/Irrigation/PDD concerned | |
| 5. | Tehsil Supply Officer CA&PD concerned | |
| 6. | Executive Officer MC concerned | |

# CHAPTER III

# EARLY WARNING AND COMMUNICATION

## 3.1 INTRODUCTION

A warning system aims to empower individuals and communities to respond promptly and appropriately to hazards, reducing the risk of death, injury, property loss, and damage. To effectively communicate warnings and encourage action, measures should include extending lead time of warning, improving accuracy, increasing demand for probabilistic forecasts, improving communication using new technologies, targeting services to relevant users (right information to right people at right time at the right place) and understanding warning messages.

## 3.2 FORECASTING AND ISSUANCE OF HEAT WAVE ALERT/WARNING

The India Meteorological Department is mandated to meteorological observations and provides current and forecast meteorological information for optimum operation of weather-sensitive activities. It provides real time data and weather prediction of maximum temperature, Heat-Wave warning, heat-alert for the vulnerable cities/rural area of the severity and frequency. IMD provides following range and validity of time forecast:

**Figure 3. Temperature Forecast: Specific Range, Time Duration and Area**

| | | | | |
|---|---|---|---|---|
| **Now Casting:** (Lead time/validity of 3 to 6 hours) | **Short Range:** (Lead time/validity of 1 to 3 days) | **Medium Range:** (Lead time/validity of 4 to 10 days) | **Long Range:** (Lead beyond 10 days) | **Local range:**(Its intensity,frequency and time of occurrence is indicated) |

## 3.3 IDENTIFICATION OF COLOR SIGNALS FOR HEAT ALERT

The heat alerts based on thresholds determined by the IMD using the following color signal system shall be issued:

**Figure 4. Color Signals for Heat Wave Alert**

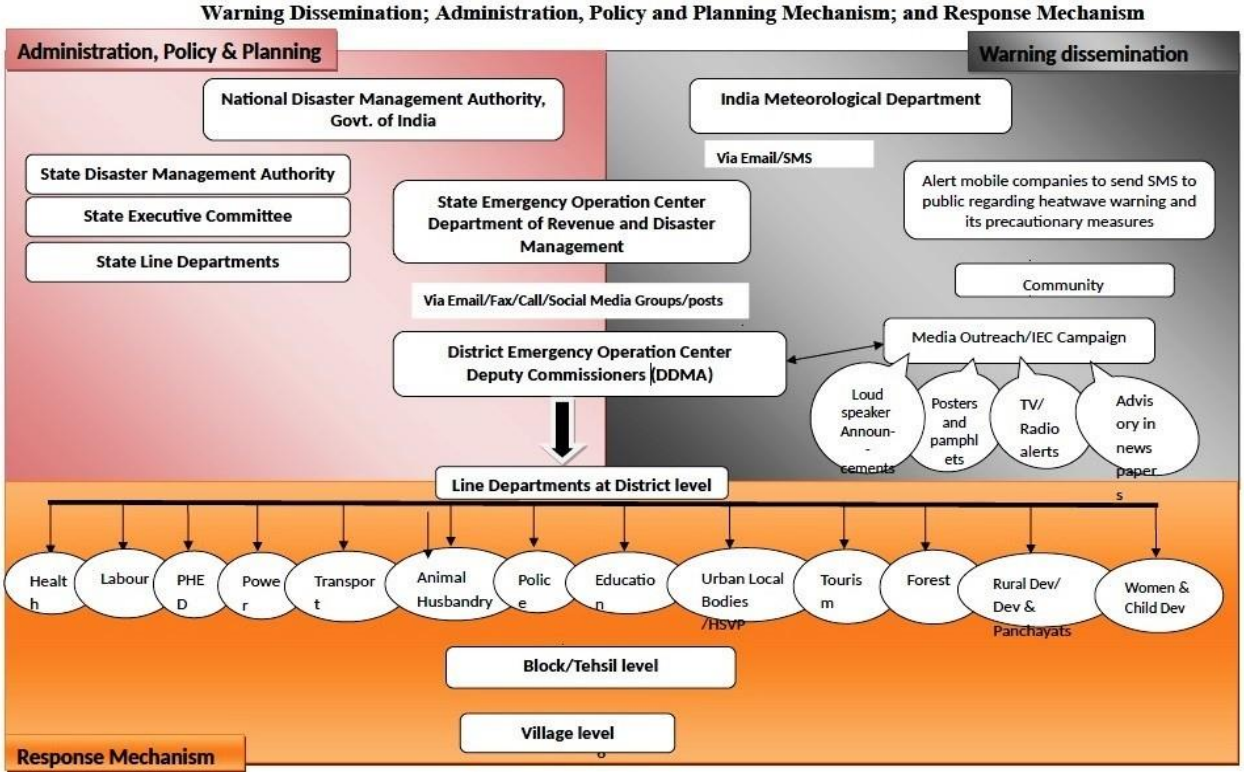
| | | |
|---|---|---|
| Red Alert (Severe Condition) | Extreme Heat Alert for the Day | Normal Maximum Temp increase 6º C to more |
| Orange Alert (Moderate Condition) | Heat Alert Day | Normal Maximum Temp increase 4º C to 5º C |
| Yellow Alert (Heat-wave Warning) | Hot Day | Nearby Normal Maximum Temp. |
| White (Normal) | Normal Day | Below Normal Maximum Temp. |

***Impact & action suggested by NDMA Guideline on heat wave-2019***

## 3.4 WARNING DISSEMINATION & ADMINISTRATION

Heat Wave forecast is transmitted to Divisional Commissioners, District Commissioners and all other concerned authorities through email by State Control Room for alertness and preparedness for action. The warning is further transmitted to SSP, ADC/ADM, SP, SDMs, Tehsildars and all the heads of line departments through mass text and image message in the WhatsApp group. Department of Public Information and Public Relation disseminate of heat alerts/advisories, DOs and DONTs to various district as well as local level newspapers and other electronic media. A chart showing Warning Dissemination; Administration, Policy and Planning Mechanism; and Response Mechanism regarding Heat Wave in the State are at Figure 4.

**Figure 5. Warning Dissemination, Administration, Policy & Planning and Response Mechanism.**



# CHAPTER IV

# INSTITUTIONAL MECHANISM - ROLES & RESPONSIBILTIES

## 4.1 HEAT WAVE ACTION PLAN – INSTITUTIONAL MECHANISM

Heat Wave Action Plan is a framework for implementation, coordination and evaluation of extreme heat response activities. It defines the roles and responsibilities of departments concerned observing multi-sectoral and multi-dimensional administrative approach. The DDMA has the responsibility for overall management of disasters in the district, with the Chairman-cum-Deputy Commissioner mobilizing response machinery and financial powers. Deputy Commissioner oversees the cooperation of all stakeholder participation. Empowerment and capacity building of all the stakeholders should be the main priorities of DDMA/District administration.

The heat wave mitigation measures involve a multi-sectoral approach, including provision of drinking water, temporary shelter, rescheduling working hours, and improved emergency medical services. This action plan provides a framework for Departments/Authorities to implement, coordinate, and evaluate activities to reduce the detrimental effects of intense Heat Waves in the District Rajouri. In light of the aforementioned, the following departments have been designated, and their roles have been assigned, in order to ensure that Heat Wave is managed effectively in the District:

**Table 6. District Agencies and their Role/Responsibilities**

| Sr. No. | District Agencies and their Role/Responsibilities | |
|---|---|---|
| | **Agencies** | **Role/Responsibilities** |
| **1.** | District Administration /DDMA | • Preparation/revision of Heat Wave Action Plan based on NDMA revised guidelines and localexperiences.<br>• Coordination among all stakeholders with clearly defined roles and responsibilities.<br>• Real-time surveillance and evaluation of weather situation.<br>• To disseminate the information received from IMD to the public atlarge.<br>• Disseminate the heat-health warning, determine the threshold for action and communicate the risks.<br>• Prepare SoP for heat wave response based on forecast and Weather Prediction<br>• Flexible timing of market and offices.<br>• Collaboration with non-governmentand civil society.<br>• Special care for vulnerable groups- children, disabled, women and old aged.<br>• Take necessary measures, wherever applicable. |
| **2.** | PRIs/ULBs | • Appointment of Nodal Officer at each level (district, tehsil and block,department etc.)<br>• Implementation of Heat Wave Action Plan. |

| | | |
|---|---|---|
| | | • Heat wave should be included inannual disaster training calendar.<br>• Open parks/open areas during daytime for providing spaces with shade.<br>• Sprinkling of water on roads.<br>• Construct shelters, sheds at public places, provide access to public parks during heat wave season.<br>• Promote cool roofs initiative such as paint roof white, create greenroofs and walls, and plant trees in neighborhood to keep them cool.<br>• Reviewing preparedness & mitigation measures.<br>• Implementation of instruction for mainstreaming heat health precautionary measures, including re-scheduling of working hours in all schemes and programmes.<br>• Ensure shed for resting and drinkingwater facilities for workers at all work places.<br>• Inter district collaboration for sharing experiences and data. |
| **3.** | Department of Health | • Prepare hospital preparedness plans<br>• Dissemination of heat wave health plan by organizing awarenesscampaigns.<br>• Undertake orientation/training and issue alerts to village level functionaries.<br>• Adopt heat focused examination procedures at local hospitals.<br>• Deploy additional staff to take care of persons affected due to sunstroke.<br>• Activate Emergency services and keep sufficient stock of ORS and glucose etc. in all hospitals or dispensaries.<br>• Adopt a uniform process for registration of causalities or deaths due to heat wave.<br>• Standard protocol for death investigation.<br>• Establish a data monitoring cell and collect data from tehsils and maintain district level data base.<br>• Preparedness of the heat health andsocial care system.<br>• Ensuring 24X7 heat health facilities with adequate provision of basic medicines.<br>• Dissemination of heat wave health plan by organizing awareness campaigns.<br>• Develop monitoring mechanism for implementation of heat wave action plan.<br>• Provision of funds for heat action mitigation plans.<br>• Constitution & deployment of rapid medical and response teams. |
| | Department of Agriculture/ Horticulture | • Promote short duration and heatresisting crops.<br>• Promote sprinkler irrigation duringthe evening and early morning. |
| **4.** | Police Department | • Ensure shade for on duty traffic police, as they are more |

| | | |
|---|---|---|
| | | exposed to heat wave and distribution of cool jackets for traffic police personals. |
| **5.** | Department of PHE | • Ensure drinking water facilities at all common places.<br>• Identify vulnerable places and ensure drinking water facilities.<br>• Repair/maintenance of mechanical faults of tube wells, ponds at priority basis to ensure water storage.<br>• Suitable arrangement for drinking water supply and promptly respond to water scarcity. |
| **6.** | Department of School Education/Higher Education | • Rescheduling of school timing and vacation as per heat wave situation.<br>• Ensuring cool places for all educational institutions, and availability of water facilities.<br>• Ensure that students avoid outdoor physical activities during the summer in schools.<br>• Heat wave management should be added in school curriculum to sensitize school children and local people.<br>• Encourage research on heat wave related issue through universities/colleges.<br>• Develop training module and conduct proper training program for different stakeholders.<br>• Heat wave management should be added in school curriculum to sensitize school children and local people.<br>• Conduct capacity building and training program as per domain andexpertise of department. |
| **7.** | Department of PWD/ Roads & Building | • Long term planning for heat resilience infrastructure.<br>• Promote cool roofs technology and use other similar heat reducing technology.<br>• Ensure implementation of mixed- use planning adopted in heat wave affected cities/towns.<br>• Heat appropriate planning of new buildings (consideration, e.g., in architecture, width/height ratio, street development, orientation and site) in urban and rural areas.<br>• Ensure capacity building of structural engineers, civil engineers and architects for construction of green buildings, maintenance andfire safety of the structures.<br>• Ensure to construction of green buildings, environment and building code related to heat wave risk mitigation.<br>• Ensure implementations of latest Building Code for the construction. |
| **8.** | Department of Information and Public Relation | • IEC Campaign to create awareness through print media, electronic media, social media, etc.<br>• Display board with color coding for heat wave alert.<br>• Display Do's and Don'ts in the Public Areas, Hospitals, Parks, etc.<br>• Develop of mobile application for faster spread of heat related issues, alertness, space for shelters and drinking |

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|---|---|---|
| | | water. |
| **9.** | Department of Forest | • Ensure proper afforestation and mass plantation at public places.<br>• Promote rain water harvesting.<br>• Continuous watch in the forest area to avoid forest fires.<br>• Provide safety drinking water and shade in forest areas.<br>• Maintain water bodies/ponds in the forest area for wild animals and birds.<br>• Increase forest coverage and greenarea.<br>• Coordinate with Transport Department and Road Construction Department for plantation of trees along roadside, barren land and other areas.<br>• Identify "heat hot-spots" using framework for tracking based on IMD data. |
| **10.** | Department of Tourism | • Ensure proper registration of tourists who are visiting the State/UT/District.<br>• Publicize advisories for tourists on Heat Wave conditions in the State/UT/District.<br>• Build temporary shaded areas and ensure availability of safe drinking water for pilgrims at religious places. |
| **11.** | Department of Railways | • Repair/maintenance of mechanical/electrical system on priority basisincluding fan and cooling system.<br>• Ensure drinking water facilities in trains and railway stations. |
| **12.** | Department of Transportation | • To ensure shelter/sheds at bus stops, drinking water facilities at busstops.<br>• Enable better emergency transport system for affected people to health care facilities with adequate essential equipments. |
| **13.** | Department of PDD | • Create awareness among people on energy conservation.<br>• Ensure repair & maintenance work for uninterrupted power supply before and during the summer.<br>• Re-scheduling load shedding.<br>• |
| **14.** | Department of Animal Husbandry | • Follow the advisory on heat wave.<br>• Shelter for livestock and animal husbandry should be maintained.<br>• Pre-positioning of adequate veterinary medicines and supplies.<br>• Update contingency plan regarding provision of drinking water for animals.<br>• Awareness on the impact of heat on animals and coping mechanisms. |
| **15.** | Department of Labour/Social Welfare | • Training with construction/industries/commercial entities regarding Heat Wave related illness.<br>• Implement the directions for heat wave season.<br>• Re-scheduling of working hours for employees in different sectors. |

| | | |
|---|---|---|
| | | • Ensure drinking water facilities at work places.<br>• Coordinate with Health Department and ensure regular health check-up of the workers and provide emergency ice packs and heat illness prevention material to construction workers.<br>• Awareness activities for construction workers, factory laborers, manual laborers and workers whose occupations require intensive work outdoors during extreme heat about the risks, signs, and symptoms of heat stress |
| **16.** | Department of Science & Technology | • To develop application related to awareness generation, quick information sharing on the Heat Wave Risk Reduction.<br>• Research & development activities to promote utilization of science & technology in the field of Heat Wave Risk Reduction.<br>• Promote research on Heat Wave related issues. |
| **17.** | Civil Society/NGOs/ Corporate Social Sector | • To support the government departments in generating awareness in community.<br>• Coordinate with government for implementing the Heat Wave managementmeasures.<br>• Support in setting up water kiosks on highways, remote places etc.<br>• Distribute IEC materials duly accredited by the State Government.<br>• Promote healthy living style during summer. |
| **18.** | Department of Election Cell | • Coordination with relevant departments and stakeholders to integrate heat wave management into election preparations.<br>• Ensure that polling stations have adequate shading and water facilities for voters and polling staff.<br>• Coordinate with local authorities to adjust polling hours if necessary to mitigate the impact of extreme heat on voters and election staff.<br>• Collaborate with the Department of Information and Public Relations to disseminate information about voting procedures and safety measures during the heat wave.<br>• Monitor the health and well-being of election officials and workers, providing necessary support and resources to prevent heat-related illnesses.<br>• Implement contingency plans to address any disruptions caused by the heat wave on polling day.<br>• Work closely with the Department of Health to ensure that medical support is available at polling stations and election offices. |

### 4.2 NODAL OFFICERS FOR THE IMPLEMENTATION OF HWAP 2024-25

The Nodal Officer at both District and Block Levels is the responsible authority for the implementation of the Health Action Plan at their respective level. This authority will serve as a point of coordination and communication, to implement relevant measures before, during, and after the extreme heat season.

**Table 7. Nominated Nodal Officers for the Implementation of HWAP 2024-25**

| DISTRICT LEVEL NODAL OFFICER | | | |
|---|---|---|---|
| **S.No.** | **Name of the Officer** | **Designation** | **Mobile No.** |
| **1** | Sh.Shrez Ahmed | Assistant Commissioner Panchyat | 8492013266 |
| **BLOCK LEVEL NODAL OFFICERS** | | | |
| **1** | Sh.Khadam Hussain Shah | BDO Budhal | 7051302538 |
| **2** | Sh.Ayaz Ahmed Bhat | BDO Rajnagar | 9797512151 |
| **3** | Sh. Madan Mohan | BDO Dangri | 9419154419 |
| **4** | Sh.Khalil Ahmed | BDO Darhal | 9419155972 |
| **5** | Sh.Rakesh Thapa | BDO Doongi | 9419789944 |
| **6** | Sh.Mohd Ibrahim | BDO Kalalote | 9697532815 |
| **7** | Sh.Khadam Hussain Shah | BDO Khawas | 7051378922 |
| **8** | Sh. Naveel Hamdani | BDO Lamberi (Addl. Charge) | 9419107768 |
| **9** | Sh.Madan Mohan | BDO Manjakote (Addl. Charge) | 9419154419 |
| **10** | Sh.Mohd Ibrahim | BDO Moughla (Addl. Charge) | 9697532815 |
| **11** | Sh.Naveel Hamdani | BDO Npwshera | 9419107768 |
| **12** | Sh.Pradeep Kumar | BDO Pnjgrain (Addl. Charge) | 6006458311 |
| **13** | Sh.Sheikh Wajid Ahmed | BDO Planger | 9910061323 |
| **14** | Sh.Rakesh Thapa | BDO Qila Darhal (Addl.Charge) | 9419789944 |
| **15** | Sh.Pradeep Kumar | BDO Rajouri | 6006458311 |
| **16** | Sh.Naveel Hamdani | BDO Seri (Addl. Charge) | 9419107768 |
| **17** | Ms.Neha Choudhary | BDO Siot | 9906784614 |
| **18** | Sh.Inderjeet | BDO Sunderbani | 7006965118 |
| **19** | Sh.Sheikh Wajid Ahmed | BDO Thanamandi (Addl. Charge) | 9419141711 |

## ROLES & RESPONSIBILITIES OF NODAL OFFICERS

### Phase 1 - Pre-Heat Season (January-March)

- Convening high-level inter-agency meetings for a periodic review of the Heat Wave Action Plan.
- Area mapping to plan and execute targeted activities.
- Enlisting high-risk areas of the District/Block vulnerable to heat waves for more focused activities on heat prevention.
- Re-engaging district and local agencies to facilitate internal communications.
- Identifying the key community and non-governmental actors to facilitate the implementation of the HWAP and awareness generation activities, especially last-mile outreach.

- Organizing preventative training and outreach efforts for health workers, link workers, school children, and the local community.
- Setting up targeted distribution channels for multilingual awareness materials and IEC among different population groups.
- Establish Heat Wave Action Web Page on Disaster Management / District Website.

**Phase 2 - During the Heat Season (March-July)**

- Creating an active heat alert and appropriate local response when a heat wave event is identified by the meteorological department.
- Notifying key agency leaders and ensuring functioning communication channels with all the stakeholders.
- Modifying heat alert level in accordance with the severity of changing temperature thresholds and the latest forecast.
- Notifying relevant stakeholders when the heat alert has passed.
- Communicating locations of emergency facilities and cooling centers / shaded areas with each department /organization.
- Expanding access to shaded areas for outdoor workers, slum communities, and other vulnerable populations. For example, confirm that night shelters stay open all day for migratory populations during a heat alert.
- Conducting daily conference calls to discuss reports and breaking developments during a heat alert, and ensure that communication channels remain operational.
- Identifying and setting up public displays of temperature and forecasts, such as LED electronic scrolling boards.
- Continued surveillance of temperature data and forecasts.
- Instructing water department or local municipal department to ensure availability of staff and clean drinking water during a heat alert.
- Informing power supply, companies to prioritize maintaining power to critical facilities (such as hospitals and UHCs).
- Notify the Steering Committee and relevant agencies when the heat alert is over.

**Phase 3 - Post-Heat Season (July-September)**

- Convening annual evaluation meetings with relevant stakeholders for the review of the Health Wave Action Plan.
- Review of quantitative and qualitative data for process evaluation and improvement.
- Evaluate the reach and impact of the plan and revise accordingly. Revision of the plan is to be based on the performance feedback.
- Build on the “Green Cover” activity to establish a tree-plantation campaign in hotspot areas such as roadsides and during the plantation festival in June. Incorporate student volunteers or incentivize builders to plant trees to help this effort.

# CHAPTER V

# PROPOSED TRAINING PROGRAMME - EXTREME HEAT PREVENTION & MANAGEMENT

## 5.1 IMPORTANCE OF TRAINING PROGRAMMES

The first and very foremost important learning of the training is making the participants clearly understand the distinction between extreme heat and Heat Wave. Both of these terminologies are often used very lucidly and interchangeably but in reality, they are not the same. While all the Heat Wave events are extreme heat events, not all extreme heat events need to be a Heat Wave. It is very much possible that an event of very high-temperature day/s during summer may not satisfy the criteria for Heat Wave (if any) and can still be an extreme heat event...! What is that distinction? Why it is important? This will be explained to participants during the training programme.

The proposed training programme will also draw the attention of participants to the most important climatological and weather-related global and regional phenomenon's which are climate change and global warming. The way they are linked with each other and how they are related to extreme heat will be described. Lastly, the training programme will end with examples of some of the extreme heat and Heat Wave events of the past in India and in J&K that made a major impact in the field of extreme heat prevention and management.

**Table 8. Proposed Training Programme Dealing with Extreme Heat Prevention & Management**

| Sr. No. | Training Module | Participants | Purpose of Training | Methodology | Timeframe |
|---|---|---|---|---|---|
| **1.** | Institutional Mechanisms to deal with extreme heat and Heat Waves. | Appointed Nodal Officers and Line Departments | (i) To illustrate institutional mechanisms Heat Wave prevention and management measures at district and block levels. | The trainer may narrate the topic through a PowerPoint presentation and then engage with participants on the question given above at the end of this | March-June |

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| | | | | session. | |
| **2.** | **Awareness about Heat Wave Risks and Prevention** | **Students, Labour Class, Farmers, Aanganwadi Centres, Vulnerable Groups** | **(i) To illustrate the understanding of Heat Wave Risks and Prevention.<br>(ii) To enable them understanding the early warning alerts and community action** | **(i) Interactive presentations tailored for student engagement.<br>(ii) Group discussions and Q&A sessions.<br>(iii) Distribution of educational materials and resources.<br>(iv) Performing mock exercises or "Nukkad Nataks" engaging Civil Defence Volunteers/ Aapda Mitra Volunteers.** | **March-June** |

**5.2 POST TRAINING EVALUATION**

The Nodal Officers appointed at district and block levels shall assess the overall effectiveness of the training. The difference between participants understanding of the subject during pre-training evaluation and during the post- training evaluation will give a fair about the aptness of topics covered in the training and the trainer's ability to efficiently delivering the subject. This will also be useful in improving the training module in the future.

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**a.Objectives of the Evaluation**

- Assess changes in participants understanding of various topics of the training.
- Check whether the topics covered are aligned with the needs of participants.
- To get feedback from participants and trainees on changes required in future.

## Annexure - I

## LIST OF KEYAPPOINTMENTS IN DISTRICT RAJOURI FOR QUICK RESPONSE

| Sr. No. | Name | Designation | Official Email | Contact No. |
|---|---|---|---|---|
| 1. | Sh. Om Prakash Bhagat (JKAS) | Deputy Commissioner, Rajouri | pa.dcrajouri@gmail.com | 9419520302<br>01962-262481 |
| 2. | Sh. Rajiv Kumar Khajuria (JKAS) | Additional Deputy Commissioner, Rajouri | adcrajouri112@gmail.com | 9596701379<br>01962-263378 |
| 3. | Sh.Mohd Jhangir Khan (JKAS) | Assistant Commissioner Revenue, Rajouri | acrrajouri123@gmail.com | 9797977078<br>01962-263369 |
| -4. | Sh. Vijay Kumar | Assistant Commissioner Development | -- | 9596839999 |
| 5. | Sh. Tejinder Singh (IPS) | Deputy Inspector General of Police R-P Range Rajouri HQ | -- | 9419902100 |

| | | | | |
|---|---|---|---|---|
| 6. | Sh. Amritpal Singh (IPS) | Senior Superintendent of Police | -- | 9541900721 |
| | Sh. Isar Ahmed (JKAS) | Assistant Commissioner (Defence) Rajouri/Poonch HQ Rajouri | cladraj@gmail.com | 959670929 |
| 5. | Sh. Babu Ram Tandon (JKAS) | ADC Nowshera | nowsheraadc@gmail.com | 9797670265 |
| 6. | Sh. Rajiv Mangotra (JKAS) | ADC Sunderbani | adcsunderbani@gmail.com | 9419297242 |
| 7. | Sh. Krishan Lal (JKAS) | ADC Kalakote | adckalakote@gmail.com | 9419333824 |
| 8. | Sh. Dil Mir (JKAS) | ADC Koteranka | koteranka@gmail.com | 9419174902 |
| 9. | Sh. AbidHussain (JKAS) | SDM Thannamandi | sdmthannamandi@gmail.com | 9596979798 |
| 10. | Sh. Rajinder Kumar | Chief Medical Officer Rajouri | -- | 9419184404 |
| 11. | Sh. Ashwani Sharma | Executive Engineer PWD | -- | 9419198332 |
| 12. | Sh. Rashid Choudhary | Executive Engineer PDD/JPDCL | -- | 7006247471 |
| 13. | Sh. Rashid Choudhary | Executive Engineer Elect M &RE Division Rajouri (Clubed) | -- | 7006247471 |
| 14. | Sh. Manoj Gupta | Executive Engineer Mechanical Division Rajouri | -- | 9419181214 |
| 15. | Sh. Mohd Maqsood | Chief Planning Officer | -- | 9419679226 |
| 16. | Sh. Himanshu Gandotra | Assistant Director F&EM Rajouri | -- | 7006860026 |
| 17. | Sh.Wakeel Bhat | Social Welfare Officer Rajouri | -- | 9419196825 |
| 18. | Sh. Yousaf Bhatt | Executive Officer Municipality | -- | 7051061770 |
| 19. | Sh. Pawan Kumar | ARTO Rajouri | -- | 9419190101 |
| 20. | Sh. Ranjeev Sharma | DFO Rajouri | -- | 9622241776 |

| | | | | |
|---|---|---|---|---|
| 21. | Sh Asrar Ahmed Khan | Executive Engineer Irrigation & Flood Control | -- | 9797318240 |
| 22. | Sh. Sardar Khan | Executive Engineer PWD | -- | 9419228572 |
| 23. | Sh. Vinod Gupta | Warden Pahari Gupta | -- | 9419172142 |
| 24. | Sh. Rafiq Ahmed | Warden Gujjar Hostel | -- | 9906131454 |
| 25. | Deputy Officer | Police Control Room | -- | 01962-262515, 264493 |
| 26. | Deputy Officer | Army Exchange | -- | 01962-262002, 262003 |
| 27. | Official On Duty | BSNL Exchange | -- | 01962-263498 |

## Annexure - II

## IMPORTANT VITAL INSTALLATIONS OF THE DISTRICT RAJOURI

| Sr. No. | Vital Installations | Locations | HOD | Designation | Contact No. |
|---|---|---|---|---|---|
| 1. | Hospitals | GMC Kheora | Dr. Mehmood Ahmed Bajar | Suprintendent | 8492893511 |
| 2. | Revenue Offices | DC Office Rajouri | Sh. Mohd Jahangir Khan (JKAS) | AC Revenue | 9797977078 |
| 3. | Police Offices | DIG Office Rajouri | Sh.Tejinder Singh (IPS) | DIG | 9419902100 |
| | | | S. Amritpal Singh (IPS) | SSP | 9541900721 |
| 4. | BSNL Towers | 43 (In District Rajouri) | Sh. Mohria | TDE Rajouri | 9415009798 |
| | | | Sh. Javed Ahmed | JTO Rajouri | 9419120074 |
| 5. | Water Reservoirs | Division Rajouri | Sh. Ashwani Sharma | XEN PHE | 9419198332 |
| 6. | Grid Stations 132/33 KV Receiving Stations | PDD Division Rajouri | Sh. Rashid Khan | XEN PDD | 7006247471 |
| 7. | Power | Power Station | Sh. Dildar | JE | 941922112 |

| | | | | | |
|---|---|---|---|---|---|
| | Stations | Kheora | Ahmed Choudhary | | 3 |
| 8. | Bridges | PWD | Sardar Khan | XEN PWD | 9419228572 |
| 9. | Financial Institutions | District Treasury Rajouri | Sh. Mohd Bashir | District Treasury Officer | 9419279098 01962-263303 |
| 10. | Post Offices | Post Office Rajouri | Sh. Sandeep Kumar | Superintendent | 9622255510 |

## Annexure - III
## Symptoms and First Aid of Heat Illnesses

| Heat Disorder | Symptoms | First Aid |
|---|---|---|
| Heat rash | 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 seek medical attention. |
| Heat Cramps | 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 gently massage to relieve spasm. Give sips of water. If nausea occurs, discontinue. |
| Heat Exhaustion | Heavy sweating, weakness, Skin cold, pale, headache and clammy extremities. 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, call 108 and 102 for ambulance. |
| Heat Stroke (Sun Stroke) | High body temperature. Hot, dry skin. Rapid, strong pulse. Possible unconsciousness or altered mental status. 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 spraying water, cold water on body & fan the wet body. If possible sponging or cool bath sponging to reduce body temperature. Use extreme caution. Remove clothing. Use fans and/or air conditioners. **DO NOT GIVE FLUIDS ORALLY if the person is not conscious.** |

## Annexure - IV
## HEAT WAVES - DOS & DONTS

### DOs

### Must for all

- Listen to Radio; watch TV; read Newspaper and other sources for local weather news/heat advisories.
- Drink sufficient water - even if not thirsty. Persons with epilepsy or heart, kidney or liver disease who are on fluid-restricted diets or have a problem with fluid retention should consult a doctor before increasing liquid intake.
- Use ORS (Oral Rehydration Solution), homemade drinks like lassi, torani (rice water), lemon water, buttermilk, coconut water, etc. to keep yourself hydrated.
- Wear lightweight, light-coloured, loose, cotton clothes.
- If outside, cover your head: Use a cloth, hat or umbrella. Use sunglasses to protect your eyes and sunscreen to protect your skin.
- Get trained in first aid.
- Take special care for the elderly, children, sick or overweight as they are more likely to become victims of excessive heat.

### Employees & Workers

- Provide cool drinking water near workplace.
- 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.
- Notify workers about heat wave alerts.

### Other Precautions

- Stay indoors as much as possible.
- Traditional remedies like onion salad and raw mango with salt and cumin can prevent heat stroke.
- Use fans, damp clothing and take a bath in cold water frequently.
- Offer water to vendors and delivery people who come to your home or office.
- Use public transport and car-pooling. This will help reduce global warming and heat.
- Don’t burn dry leaves, agriculture residue and garbage.
- Conserve water bodies. Practice rainwater harvesting.
- Use energy-efficient appliances, clean fuel and alternative sources ofenergy.
- If you feel dizzy or ill, see a doctor immediately or ask somebody to take you to the doctor immediately.

## For Cooler Home

- Use solar reflective white paint, cool roof technology, air-light and cross ventilation and thermo cool insulation for low-cost cooling. You can also keep haystacks or grow vegetation on roofs.
- Install temporary window reflectors such as aluminum foil-covered cardboard to reflect heat back outside.
- Keep your home cool, use dark colour curtains, tinted glass/ shutters or sunshade and open windows at night. Try to remain on the lower floors.
- Green roofs, green walls and indoor plants reduce heat by cooling the building naturally, reducing air-conditioning requirements and release of waste heat.
- Maintain AC temperature at 24 degrees or higher. This will reduce your electricity bill and make your health better.

## Treatment of a Person Affected by Sunstroke

- Use a wet cloth / pour water on the victim's head.
- Give the person ORS to drink or lemon sarbat or whatever is useful to rehydrate the body.
- Take the person immediately to the nearest health centre.
- If consistently experiencing high body temperature, throbbing headache, dizziness, weakness, nausea or disorientation in the summer, call an ambulance.

## DONTs

- Avoid going out in the sun, especially between 12:00 Noon and 03:00 PM.
- Avoid strenuous activities when outside in the afternoon.
- Do not go out barefoot.
- Avoid cooking during peak hours.
- Open doors and windows to ventilatecooking area adequately.
- Avoid alcohol, tea, coffee and carbonated soft drinks, which dehydrates the body.
- Avoid high-protein food and do not eat stale food.
- Do not leave children, pets or anybody in parked vehicles - as they may get affected by Heat.
- Don't drink ice-cold drinks as they can cause stomach cramping.