

Learning to Live in a Changing World: Planning Against the Threat of Extreme Heat Events

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Background

- Climate change has created extreme heat events that impact communities and their ability to prepare against them. These events are projected to continue and become more intense.
- This will impact the most vulnerable to the effects and can worsen many pre-existing health conditions, create heat illness, and even death.
- Strategies for jurisdictions to prepare against extreme heat events can vary, but an overall basis of strategies applies to preparation.
- The purpose of this research is to understand the strategies best suited to prepare against extreme heat events and how these strategies will help to be better prepared for the future.

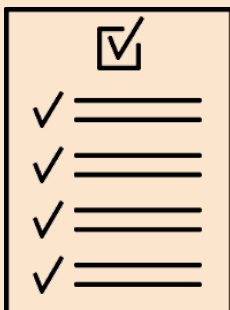
Research Question

What are effective strategies to prepare jurisdictions against extreme heat events?

Internship & Methods

- Completed an internship with Public Health - Seattle & King County.
- Created a web page for preparedness professionals to utilize in a heat event.
- Communicated with professionals in the field around climate mitigation.
- Conducted a literature review of response plans and effectivity.

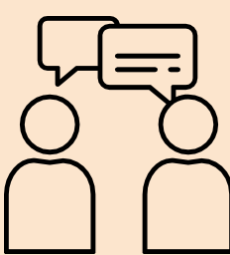
Results



The use of extreme heat response plans (Figure 1).



Identifying those most vulnerable to extreme heat within the response plans.



Communicating what planning against extreme heat events can do and how to engage with the community.

- Public Health Recommendations web page I created.

| NWS HeatRisk Values | Public Health Recommendations |
|---------------------|--|
| 2 Moderate | INITIATE EARLY WARNING, PUBLIC MESSAGING, AND RESPONSE ACTIVITIES <ul style="list-style-type: none">● Recommend sharing information about available cooling locations where general population can go to access air conditioning or cooling features such as water recreation facilities or other public places● Recommend dissemination of key public health heat safety messaging and risk communications to at-risk populations, including those experiencing homelessness, older adults, children, and outdoor workers● Consider limiting strenuous outdoor activities during the hottest period of the day● Consider cancellation and/or rescheduling of outdoor children's activities, day-camps, athletic practice, and games taking place during the hottest period of the day or consider moving them indoors where temperatures are cooler● Consider distribution of water and other cooling supplies for at-risk communities and populations● Consider activation of daytime cooling centers for unsheltered individuals● Consider undertaking preparation activities required to meet recommendations of higher HeatRisk levels, if forecast indicates increase in risk and temperatures● Monitor NWS HeatRisk forecast and alerts until forecast conditions become more favorable (e.g., HeatRisk Value of 1 - yellow - or lower) |
| 3 Major | RECOMMEND ACTIVATION OF COOLING CENTERS & REDUCTION IN OUTDOOR ACTIVITIES <ul style="list-style-type: none">● Continue outreach efforts to reach at-risk populations with risk communications, cooling supplies, and water resources● Recommend activation of daytime cooling centers for unsheltered individuals● Recommend activation of daytime cooling centers for general population● Recommend temporary suspension of strenuous outdoor activities during hottest times of the day● Recommend cancellation and/or rescheduling of outdoor children's activities, day-camps, athletic practice, and games● Recommend conducting wellness checks on elders and people living with disabilities to ensure access to air conditioning or cooling centers● Consider expanding hours of operation for cooling centers for unsheltered individuals to accommodate overnight use● Consider capabilities of schools to maintain cooler indoor air temperatures if school is in session; Public Health will recommend closure if indoor temperatures cannot be maintained reasonably free of excessive heat (WAC § 246-366-080) |
| 4 Extreme | RECOMMEND CANCELATION OF OUTDOOR EVENTS AND ACTIVITIES <ul style="list-style-type: none">● Recommend expanding hours of operation for cooling centers to accommodate overnight use● Recommend cancellation of outdoor activities and events during hottest times of the day |

Figure 1: Table shows recommended actions to support those most at risk from the threat of extreme heat in King County, that are aligned with each NWS HeatRisk value. Numerical values 0 and 1 are not included in this table as they serve as the basis for risk and those levels pose little to very low risk that not much recommendation can be made.

Source: Public Health – Seattle & King County

Broader Significance

- Having response plans in place in an extreme heat emergency can save lives.
- By identifying the most vulnerable, pre-existing health conditions, low income, outdoor workers, the unhoused they can be helped better in an emergency.
- Creating action with community involvement can strengthen relationships between government agencies and individuals.
- Public Health - Seattle & King County can serve as a resource for other jurisdictions' response planning.
- The web page I created serves an outline to be used for wildfire smoke, extreme cold, and flooding response planning.



Figure 2:

Special Thanks

To my site supervisor Jillian, for her dedication and willingness to teach me so much, my friends and family, and cohort throughout this whole journey.