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**Emergency Sheltering for Unhoused Populations during Extreme Winter Weather Events:
A Comparison Between Guidance Documents and Local Planning**

CPH 529 Capstone

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Abstract

In a world experiencing drastic climate changes, extreme winter weather is a present and future concern. Regardless of geographic location, extreme winter weather has detrimental effects on communities across the United States. Exposure to extreme winter weather may result in cold-related injuries or death, disproportionately impacting populations that spend more time outside, such as people experiencing homelessness. Gronlund concluded that there is "a higher risk of hypothermia, hyperthermia, and mortality among the homeless vs. non-homeless during periods of extreme heat or cold (Gronlund, 2018)." Communities across the United States routinely combat the effects of cold weather by implementing various disaster plans. This Capstone compares national and federal guidance for sheltering unhoused populations in extreme winter weather with a sample of existing community emergency sheltering plans. The guidance documents include both government and non-government organizations. The sample of community plans are from cities across the United States, incorporating a variety of geographic locations and climate regions. Guidance documents are compared to the community plans, identifying crucial sheltering strategies, such as shelter plan activation, operations, communication, transportation, capacity, and shelter plan deactivation. After the comparison, common themes are identified, and recommendations are made for each significant sheltering strategy. Each plan or guidance document offers a unique approach to addressing the major strategies in winter sheltering plans. Recommendations for future guidance may be compiled into a single, detailed document, such as a plan component checklist, applicable to any community across the United States.

Chapter 1: Introduction

In a warming world, one may argue that extreme winter weather is a concern of the past. With climate change, however, extreme weather of all types, including cold air outbreaks and heavy snowfalls, has increased over time (Cohen, 2021). In November 2023, all fifty states reported temperatures below freezing, with cities such as Jackson, KY and Danville, VA reaching record lows (Yablonski, 2023). As the global climate changes, winter weather remains a present and future concern, across a wide range of geographic locations.

Exposure to winter weather conditions may result in cold-related injuries or death (Lane, 2018). Populations that spend extended time outside are more susceptible to these adverse events, including people experiencing homelessness (Lane, 2018). According to a study of emergency department visits in Toronto, Canada, people experiencing homelessness were more frequently seen for cold-related injuries compared to the general population (Richard, 2023). Another study of emergency department visits in Ontario, Canada, found that rates of visits associated with cold exposure avoidance increased among individuals experiencing homelessness (Richard, 2024). Cold weather injuries and death are preventable with education, resources, and shelter; factors that disproportionately affect the unhoused population (Lane, 2018).

This project explores current plans and guidance in place for assisting and sheltering the unhoused population during extreme winter weather events.

Specific Aim 1: To examine existing national and federal recommendations addressing extreme winter weather and emergency sheltering for unhoused populations.

Specific Aim 2: To assess current U.S. community plans for consistent themes and strategies for sheltering the unhoused population during extreme winter weather.

Specific Aim 3: To develop winter shelter planning recommendations for future local and national guidance documents that apply to any community in the United States.

Chapter 2: Background and Literature Review

What is the definition of homelessness? The Centers for Disease Control and Prevention defines individuals experiencing homelessness as people who “stay in a shelter, live in transitional housing, or sleep in a place not meant for human habitation, such as a car or outdoors (Centers for Disease Control and Prevention, 2022).” The U.S. Department of Housing and Urban Development has four categories to describe homelessness: Category 1-Literally Homeless, Category 2-Imminent Risk of Homelessness, Category 3-Homeless Under Other Federal Statutes, and Category 4-Fleeing/Attempting to Flee Domestic Violence (HUD EXCHANGE, 2025). The definition of homelessness is extensive and therefore encompasses a large population of people.

According to the National Alliance to End Homelessness, on one night in January 2023, 653,104 persons met the homelessness criteria across the United States (Soucy, 2024). This statistic increased by over 12.1 percent compared to 2022 (Soucy, 2024). In 2023, 39.3 percent of individuals experiencing homelessness were unsheltered, and from 2019-2023, the number of individuals seeking emergency shelter for the first time increased by more than 23 percent (Soucy, 2024).

Even with the previous statistics, the unhoused population is difficult to analyze quantitatively. (United States Government Accountability Office (GAO), 2021). Data collection is hindered by nomadic lifestyles and is often resource-intensive (GAO, 2021). Due to these difficulties, it may be hard to adequately address the needs of this vulnerable population in emergency planning.

The unhoused population is considered vulnerable due to their lack of necessary resources, such as food, shelter, and transportation (Wexler, 2015). These vulnerabilities are only amplified during emergencies (Wexler, 2015), disproportionately exposing the unhoused community to hazardous events such as extreme temperatures and other natural disasters (Bezgrebelna, 2021). The provision of food, shelter, and transportation are necessary survival considerations in extreme weather and climate change emergency planning (Kidd, 2021).

The unhoused population is prone to the harmful health effects of extreme winter weather, such as hypothermia, cold weather injuries, and death (Rathjen, 2019). Gronlund concluded that there is “a higher risk of hypothermia, hyperthermia, and mortality among the homeless vs. non-homeless during periods of extreme heat or cold (Gronlund, 2018).” According to a study conducted to explore cold-related illnesses and death, there were, on average, 15 cold-related deaths each year in New York City from 2005-2014 (Lane, 2018). 75% of these deaths occurred while outdoors, and half were suspected to be experiencing homelessness (Lane, 2018). When examining emergency department visits in Toronto, people experiencing homelessness were more likely to be examined for cold-related injuries compared to other patients (Richard, 2023). According to a study conducted in Adelaide, South Australia, people experiencing homelessness more frequently described health impacts from extreme cold rather than heat (Cusack, 2012). This study also concluded that unhoused service providers planned more for extreme heat events versus extreme cold (Cusack, 2012). An emphasis on effective winter emergency planning is necessary to prevent detrimental health effects on the unhoused population.

From Anchorage to Los Angeles, there are individuals experiencing homelessness in varying climates. During the peak of a cold snap in January 2024, an estimated 200 people were

living outside in Anchorage (Berman, 2024). In 2021, Los Angeles County data indicated that at least 14 individuals experiencing homelessness “froze to death” (Miller, 2024). In recent years, weather has shown that every community in the United States, across all geographic locations, is susceptible to extreme winter weather (Yablonski, 2023). Guidance for winter emergency sheltering should be accessible and applicable to any climate region in the United States.

The following factors must be considered when reviewing current research and guidance for winter sheltering of unhoused individuals. In many cases, individuals experiencing homelessness are not included in community or federal-level research and planning (Eisenhardt, 2024). Current federal guidance for winter sheltering of the unhoused is COVID-19-driven (HUD EXCHANGE, 2021). Much of the research focuses on the adverse effects of winter weather exposure, such as cold weather injuries and impacts on emergency departments (Richard, 2023).

This Capstone project addresses the gaps in planning for emergency winter sheltering of the unhoused population by comparing national and federal guidance with existing community plans. Based on the comparison, common themes were identified, and recommendations were developed for consideration in future emergency winter sheltering guidance.

Chapter 3: Methods

An internet search was performed to identify national and federal emergency winter sheltering guidance and recommendations for the unhoused population. Search strategies included variations of the following keywords: winter weather, emergency shelter, and people experiencing homelessness. Considered agencies included federal (government) and national (non-governmental agencies), such as the U.S. Department of Housing and Urban Development (HUD), the National Alliance to End Homelessness, the Centers for Disease Control and

Prevention (CDC), the Federal Emergency Management Agency (FEMA), and the National Coalition for the Homeless (NCH). Planning and guidance documents were evaluated for their applicability to extreme winter weather, the unhoused population, and emergency shelter activation.

A table for the selected national and federal guidance was constructed to compare key components, strategies, and required resources. Table 1 identifies key plan and resource components for each organization, including shelter plan activation and deactivation criteria, operation strategies, communication strategies, transportation strategies, and capacity strategies. When possible, data inputs were standardized to reduce qualitative variability. For example, the key planning component “capacity” has the subcomponent of “scalability.” “Scalability” includes strategies for “increasing the number of beds, increasing shelter locations, etc.” Those strategies include “overflow shelters, hotel vouchers, etc.” This qualitative data analysis led to recommendations for planning components, strategies, and required resources in winter weather sheltering plans for the unhoused population.

The second step performed was an internet search for local winter weather emergency sheltering plans, including city, county, or state-level plans. Search strategies included variations of the following keywords: winter weather, emergency shelter, and people experiencing homelessness. Evaluation criteria were the same as the national and federal-level plan search; extreme winter weather, the unhoused population, and emergency shelter activation. Seven city plans from the United States were selected for this stage of the analysis. Plans from what are considered “warm weather communities” were included.

After reviewing the local plans, a summary table was constructed, breaking down the key components of each local plan. The same process used in the federal guidance comparison was

used for the local plan comparison. Table 2 identifies key plan components for each city, including shelter plan activation and deactivation criteria, operation strategies, communication strategies, transportation strategies, and capacity strategies.

The third step was to compare the seven local plans reviewed in step two with the federal and national guidance reviewed in step one. Table 3 assesses the comparative comprehensiveness of the guidance documents and local plans. It identifies common components in planning at the community, national, and federal levels.

Finally, recommendations were created from identified themes and gaps in emergency sheltering of unhoused populations. The intent of these recommendations is to provide planning guidance for developing winter weather emergency sheltering plans for unhoused populations.

Chapter 4: Results

Evaluation Findings

Main Components and Subcategories

The main components are commonalities derived from the initial review of the guidance and plans. The main components were identified as critical factors in winter emergency sheltering of unhoused populations. These components are utilized throughout the results, discussion, and recommendation sections.

Main components:

1. Shelter Plan Activation
2. Operations
3. Communication
4. Transportation
5. Capacity

6. Shelter Plan Deactivation

Upon a more thorough document review, subcategories were created for each main component. The subcategories identify important strategies in addressing and implementing the main components of sheltering.

1. Plan Activation subcategories:

- a) Time
- b) Temperature
- c) Other

2. Operations subcategories:

- a) Sustainment (meals, beds, survival items)
- b) Roles and Responsibilities
- c) Hygiene
- d) Staff Training
- e) Medical
- f) Transition Guidance
- g) Warming Centers

3. Communication subcategories:

- a) Partners/Stakeholders
- b) Public
- c) Street Outreach

Transportation subcategories:

- a) Designated Transportation
- b) Pick-up Locations

4. Capacity subcategories:
 - a) Scalability
 - b) Barrier for Entry
 - c) Involuntary Evaluation Plan
5. Plan Deactivation subcategories:
 - a) Time
 - b) Temperature
 - c) Other

Federal and National Search Results and Summary

During the federal and national guidance search, the focus remained on organizations associated with emergency preparedness and/or homelessness. The search included the following organizations: Housing and Urban Development (HUD), the National Alliance to End Homelessness, the Centers for Disease Control and Prevention (CDC), the Federal Emergency Management Agency (FEMA), and the National Coalition for the Homeless (NCH). The inclusion criteria were winter weather, homelessness, and emergency shelter. Both HUD and NCH had guidance meeting all three criteria.

Guidance A-U.S. Department of Housing and Urban Development

In 2021, HUD published resources for winter planning and COVID-19 homelessness response. These documents provide guidance on how to plan for, conduct, and increase an emergency winter sheltering response for the unhoused population. The collection includes multiple guides, templates, and flyers. In addition, the documents provide recommendations for pandemic-level COVID-19 precautions when setting up winter shelters. (HUD EXCHANGE, 2021)

Guidance B-National Coalition for the Homeless

The NCH provides support to unhoused individuals in order to end homelessness altogether. In 2010, NCH released guidance on winter services, detailing their research and recommendations on successful winter sheltering practices (NCH, 2010). The NCH frequently posts on its website, issuing calls for action to improve homelessness response (NCH, 2023). For this project, the analysis includes the 2010 guidance, as well as a call for action concerning winter shelter (NCH, 2010; NCH, 2023).

Table 1

Table 1 is a qualitative data table that contains the information derived from the federal and national winter weather guidance documents. For Table 1, the x-axis contains the name of the federal or national organization and its corresponding alphabetical letter; the letter is used to identify the guidance document in Table 3. The information is listed under the organization on the x-axis and listed in the subcategory of the main component on the y-axis. For example, HUD guidance concerning hygiene can be found under the HUD column and in the Operations-Hygiene row.

Component	Component - Subcategory	U.S. Department of Housing and Urban Development (A) (HUD EXCHANGE, 2021)
Plan Activation	Time	Season overflow shelters open for a defined period of time during winter months
	Temperature	Temperature at 32 degrees or below, 42 degrees with rain
	Other	Extreme winter weather (rain, snow, wind)
Operations	Sustainment (Meals, Beds, Survival Items)	Provide meals, sleeping accommodations (mat cot, bed), no survival items
	Roles and Responsibilities	Identify key partners, determine agency roles and responsibilities
	Hygiene	Access to sanitary facilities for hygiene and toileting
	Staff Training	Ensure staff is trained
	Medical	Create pathways to healthcare
	Transition Guidance	Offer housing assistance and case management
Communication	Partners/Stakeholders	Encourage communication, direct outreach (phone, text, email)
	Public	Encourage communication, social media, local media, press releases
	Street Outreach	Outreach teams engaging the unhoused and encouraging them to access shelter
Transportation	Designated Transportation	Develop transport solutions for moving people to and from shelters
	Pick-up Locations	Easily accessible pick-up locations/centralized system for transportation
Capacity	Scalability	Determine maximum capacity, surge capacity tool, alternative options (hotels)
	Barrier for Entry	Low barrier not mentioned
	Involuntary Evaluation Plan	Not mentioned
Plan Deactivation	Time	Season overflow shelters open for a defined period of time during winter months
	Temperature	Not mentioned
	Other	Not mentioned
Component	Component - Subcategory	National Coalition for the Homeless (B)
Plan Activation	Time	Open in October (NCH, 2010)
	Temperature	Temperature recommendation 40 or below
	Other	Be open based on need, not arbitrary number like temperature
Operations	Sustainment (Meals, Beds, Survival Items)	Blankets, warm clothing, sleeping accommodations (bed, cot, sleeping bags), meals not mentioned
	Roles and Responsibilities	Define agency role and responsibilities
	Hygiene	Not mentioned
	Staff Training	Not mentioned
	Medical	Prevent hypothermia, access to emergency services
	Transition Guidance	Long-term housing solutions are essential (NCH, 2023)
Communication	Partners/Stakeholders	Pre-approved plan for dissemination of information to stakeholders (NCH, 2010)
	Public	Pre-approved plan for dissemination of information to general public
	Street Outreach	Increase outreach, most effective method approach to reduce risk of hypothermia, talk to individuals to locate camps/common areas
Transportation	Designated Transportation	Every city should have a plan detailing emergency transportation, vans or shuttles available (NCH, 2010)
	Pick-up Locations	Not mentioned
Capacity	Scalability	City must have plan that provides enough extra beds to address increased need during winter season (NCH, 2010)
	Barrier for Entry	Recommend low barrier, no restrictions (alcohol, drug use, etc)
	Involuntary Evaluation Plan	Not mentioned
Plan Deactivation	Time	Close in April (NCH, 2010)
	Temperature	Not mentioned
	Other	Based on need

Table 1. Essential Components of Federal Winter Weather Emergency Sheltering Guidance

Local Search Results and Summary

An internet search was performed to locate a variety of community plans from various geographic and climate regions. Plan availability was a factor, with only so many cities having an advertised and publicly accessible detailed winter plan. The three inclusion criteria of winter weather, emergency shelter, and the unhoused population were applied to the search. After the completed search, seven city plans were included in this comparison. These city plans represent a variety of geographic locations and climate regions throughout the United States.

Table 2

Table 2 is a qualitative data table that contains the information from the local winter emergency sheltering plans. For optimal viewing, Table 2 will be divided into seven components (Table 2.1, Table 2.2, Table 2.3, Table 2.4, Table 2.5, Table 2.6, Table 2.7). The seven tables are listed individually under each local plan. The city will be listed in the description to provide geographical context. Throughout the paper, the local plans will be referred to as “Local Plan 1, Local Plan 2, etc.” The use of “Local Plan 1, Local Plan 2, etc.” is to preserve conciseness and reduce interpretative variability throughout the analysis. The information from each plan will be located in their specific table, listed under the plan number on the x-axis, and in the component/sub-category on the y-axis. For example, information on transportation pick-up locations for Local Plan 3, is located in Table 2.3, and falls under the “Local Plan 3” column and the “Transportation-Pick-up Locations” row.

Local Plan 1

Local Plan 1 is from the City of Baltimore, MD, which is located in the mid-Atlantic region of the northeast United States. The plan was developed by the mayor's office and specifically references both homelessness and winter shelter in the title. It is a single, detailed document, accessible to the public on the city's website. (Local Plan 1, 2024)

Component	Component - Subcategory	Local Plan 1 (Local Plan 1, 2024)
Plan Activation	Time	Plan begins November 1, may be activated before for extreme weather
	Temperature	Wind chill 32 degrees F or below (Code Purple)
	Other	Other extreme winter weather activates additional help
Operations	Sustainment (Meals, Beds, Survival Items)	Food/hot beverages provided, survival items, beds mentioned
	Roles and Responsibilities	Organization roles defined/designated
	Hygiene	Not mentioned
	Staff Training	Not mentioned
	Medical	Non-emergency medical care, substance abuse services, hospital transportation
	Transition Guidance	Resources and housing assistance
Communication	Partners/Stakeholders	Activated with winter shelter
	Public	Via email to city agencies, hospitals, etc
	Street Outreach	Social media, Mayors Office of Homeless Services website, hotline
Transportation	Designated Transportation	Targeted street outreach daily, inform individuals
	Pick-up Locations	Transportation provided during activation
Capacity	Scalability	Designated pick-up/drop off locations
	Barrier for Entry	Shelters will expand capacity, overflow shelters, hotels utilized
	Involuntary Evaluation Plan	No mention of alcohol/low barrier
Plan Deactivation	Time	Crisis evaluation for additional measures
	Temperature	Winter plan ends March 31st
	Other	Deactivate code purple with weather improvement
		Extreme winter weather subsidies

Table 2.1 Local Plan 1-Essential Components of Community Winter Weather Emergency Sheltering Plans

Local Plan 2

Local Plan 2 is from the city of Los Angeles, CA, which is located on the west coast of the United States. This plan is considered a "warm weather community" plan. The plan was developed by the city homeless services authority and includes winter shelter in the title. It is a single, detailed flyer, accessible to the public on the city's website. (Local Plan 2, 2024)

Component	Component - Subcategory	Local Plan 2 (Local Plan 2, 2024)
Plan Activation	Time	Plan begins and shelter opens November 1st
	Temperature	No temperature requirement
	Other	Activate additional services with severe rain, cold, other emergency
Operations	Sustainment (Meals, Beds, Survival Items)	3 meals per day, cot or bed, no survival items mentioned
	Roles and Responsibilities	Designated agency roles/responsibilities
	Hygiene	Bathroom and shower access
	Staff Training	Not mentioned
	Medical	Not mentioned
	Transition Guidance	Transition to housing support
Communication	Partners/Stakeholders	Warming centers available
	Public	Constant contact notification, coordination calls
	Street Outreach	Flyers, social media, website, hotline
Transportation	Designated Transportation	Continuous outreach, identify vulnerable individuals
	Pick-up Locations	Dial hotline for ride
Capacity	Scalability	No designated pick-up/drop off locations
	Barrier for Entry	Emergency response program to expand capacity, include hotel vouchers
	Involuntary Evaluation Plan	No mention of alcohol/low barrier
Plan Deactivation	Time	Not mentioned
	Temperature	Plan ends and shelter closes March 31st
	Other	No temperature requirement
		Severe rain, cold, other emergency subsidies

Table 2.2 Local Plan 2-Essential Components of Community Winter Weather Emergency Sheltering Plans

Local Plan 3

Local Plan 3 is from the city of Anchorage, AK, which is located in the extreme northwest of the United States. The plan is a chapter in the city’s code of ordinances, and homelessness and emergency shelter are included in the title (Local Plan 3-A, 2024). The chapter is a small section of a large, searchable document (Local Plan 3-A, 2024). The code of ordinances document is available to view online through the city’s website (Local Plan 3-A, 2024). This capstone also includes information from the housing services division of the city’s website (Local Plan 3-B, 2024).

Component	Component - Subcategory	Local Plan 3 (Local Plan 3-A, 2024)
Plan Activation	<i>Time</i>	No set time frame
	<i>Temperature</i>	45 or below, ambient or wind chill
	<i>Other</i>	Civil emergency declaration
Operations	<i>Sustainment (Meals, Beds, Survival Items)</i>	Food, sleeping/bunk areas, no survival items mentioned ((Local Plan 3-B, 2024)
	<i>Roles and Responsibilities</i>	Designated agency roles/responsibilities
	<i>Hygiene</i>	Not mentioned
	<i>Staff Training</i>	Staff shall be adequately trained
	<i>Medical</i>	Not mentioned
	<i>Transition Guidance</i>	Case management available
Communication	<i>Warming Centers</i>	Warming centers available
	<i>Partners/Stakeholders</i>	Municipality website
	<i>Public</i>	Flyers, website, hotline (Local Plan 3-B, 2024)
Transportation	<i>Street Outreach</i>	Map of camp outreach sites (Local Plan 3-B, 2024)
	<i>Designated Transportation</i>	Transportation for additional services, not mentioned to shelter
Capacity	<i>Pick-up Locations</i>	No designated pick-up/drop off locations
	<i>Scalability</i>	150 max at shelters, can expand with declaration of emergency
	<i>Barrier for Entry</i>	Designated inebriate centers, accept regardless of incapacitation level
Plan Deactivation	<i>Involuntary Evaluation Plan</i>	Not mentioned
	<i>Time</i>	No set time frame
	<i>Temperature</i>	Temperatures rises above 45
	<i>Other</i>	Civil emergency expiration

Table 2.3 Local Plan 3-Essential Components of Community Winter Weather Emergency Sheltering Plans

Local Plan 4

Local Plan 4 is from the District of Columbia, or Washington, D.C., which is located in the Mid-Atlantic Region of the northeast United States. The winter plan is a single, detailed document available to view on the interagency council on homelessness web page of the city's website. (Local Plan 4, 2024)

Component	Component - Subcategory	Local Plan 4 (Local Plan 4, 2024)
Plan Activation	Time	Hypothermia season begins November 1
	Temperature	15 degrees or lower opens certain overflow shelters
	Other	Able to start earlier due to weather, extreme weather
Operations	Sustainment (Meals, Beds, Survival Items)	Meals, bed, survival items
	Roles and Responsibilities	Designated agency roles/responsibilities
	Hygiene	Showers available
	Staff Training	Staff orientation and training
	Medical	Medical assistance available
	Transition Guidance	Case management/transitional housing assistance
Communication	Partners/Stakeholders	Monthly meetings, list serves
	Public	Metro advertisements, social media, press releases, website, hotline
	Street Outreach	Coordinated outreach teams
Transportation	Designated Transportation	Transportation 24/7
	Pick-up Locations	Designated pick-up/drop off locations
Capacity	Scalability	Fill year round shelters first, overflow activated after, family style
	Barrier for Entry	Low barrier shelter
	Involuntary Evaluation Plan	Crisis evaluation/involuntary evaluation
Plan Deactivation	Time	Hypothermia season ends March 1
	Temperature	Certain over flow shelters close when temp rises
	Other	Shelter can be extended due to weather

Table 2.4 Local Plan 4-Essential Components of Community Winter Weather Emergency Sheltering Plans

Local Plan 5

Local Plan 5 is from the city of Austin, TX, which is located in the south-central region of the United States. This city is considered a “warm weather community.” This capstone references the cold weather shelter operations included in two separate press releases located on the city’s website. (Local Plan 5-A, 2024) (Local Plan 5-B, 2024)

Component	Component - Subcategory	Local Plan 5 (Local Plan 5-A, 2024)
Plan Activation	Time	No time frame
	Temperature	Reach 35 or below
	Other	Not mentioned
Operations	Sustainment (Meals, Beds, Survival Items)	Meals, no mention of others
	Roles and Responsibilities	Designated roles/responsibilities
	Hygiene	Not mentioned
	Staff Training	Not mentioned
	Medical	Not mentioned
	Transition Guidance	Not mentioned
Communication	Partners/Stakeholders	City text alert system,website
	Public	City text alert system,website, hotline
	Street Outreach	Encourage community outreach, provide information to unsheltered
Transportation	Designated Transportation	Transport to shelter from set point, bus routes to set point (free) (5-B, 2024)
	Pick-up Locations	Central embarkment point, shelter locations not listed for safety
Capacity	Scalability	Hotel vouchers for families, manage capacity
	Barrier for Entry	Not mentioned
	Involuntary Evaluation Plan	Not mentioned
Plan Deactivation	Time	No time frame
	Temperature	Temperatures rise out of criteria
	Other	Not mentioned

Table 2.5 Local Plan 5-Essential Components of Community Winter Weather Emergency Sheltering Plans

Local Plan 6

Local Plan 6 is from Kansas City, MO, located in the central region of the United States. The extreme winter weather sheltering approach is a section of the city's overall plan to end homelessness (Local Plan 6-B, 2024). This plan is described in detail on the end homelessness webpage of the city's website (Local Plan 6-B, 2024). The capstone includes information from the winter weather webpage of the city's website (Local Plan 6-C, 2024), as well as a cold weather response presentation developed by the city's Office of Unhoused Solutions (Local Plan 6-A, 2024).

Component	Component - Subcategory	Local Plan 6 (Local Plan 6-B, 2024)
Plan Activation	Time	Level 1 active 24/7 December 1st
	Temperature	Level 2-4 activated with dropping temperatures
	Other	Level 2-4 can start Nov 1st (cold weather season), pending funding availability
Operations	Sustainment (Meals, Beds, Survival Items)	Beds, meals, survival items
	Roles and Responsibilities	Designated roles/responsibilities
	Hygiene	Drop in centers with hygiene facilities
	Staff Training	Standardized staff training
	Medical	Medical services, mental health, substance abuse
	Transition Guidance	Transition living services and case management
Communication	Warming Centers	Drop in day centers
	Partners/Stakeholders	Website, planning committee (Local Plan 6-A, 2024)
	Public	Hotline, website
Transportation	Street Outreach	Outreach teams and outreach app
	Designated Transportation	Assistance with bus passes
Capacity	Pick-up Locations	Navigation center to determine individual needs
	Scalability	Levels determined by temperature increase # of beds
	Barrier for Entry	Emergency shelters are all low barrier (Local Plan 6-C, 2024)
Plan Deactivation	Involuntary Evaluation Plan	Not specifically mentioned
	Time	Level 1 ends March 1st
	Temperature	Level 2-4 ends with improving temperatures
	Other	Level 2-4 available through April 1st, funding dependent

Table 2.6 Local Plan 6-Essential Components of Community Winter Weather Emergency Sheltering Plans

Local Plan 7

Local Plan 7 is from New York City, NY, which is located in the northeast region of the United States. This capstone references the winter sheltering procedure created by the city's homeless services department (Local Plan 7-A, 2025). This single, detailed document is available online (Local Plan 7-A, 2025), and further information is available on the Department of Homeless Services-Street Outreach web page of the city's website (Local Plan 7-B, 2023).

Component	Component - Subcategory	Local Plan 7 (Local Plan 7-B, 2024)
Plan Activation	Time	No specific time frame
	Temperature	32 degrees or below
	Other	Increase services with extreme winter weather
Operations	Sustainment (Meals, Beds, Survival Items)	Beds, meals, survival items not mentioned (Local Plan 7-A, 2024)
	Roles and Responsibilities	Designated roles/responsibilities
	Hygiene	Showers available
	Staff Training	Training of staff mentioned
	Medical	Emergency medical service available
	Transition Guidance	Transition living services and case management (Local Plan 7-A, 2024)
Communication	Warming Centers	Drop in day centers and service buses
	Partners/Stakeholders	Distribution list, alert app
	Public	Website, social media, hotline
Transportation	Street Outreach	Outreach teams, code blue priority lists
	Designated Transportation	Outreach team provide transportaion
Capacity	Pick-up Locations	No designated pick-up/drop off
	Scalability	Drop ins open 24/7 during code blue, assist as many as possible (7-A, 2024)
	Barrier for Entry	No one seeking shelter will be denied during code blue, low barrier (7-A, 2024)
Plan Deactivation	Involuntary Evaluation Plan	Involuntary transport of at risk to hospitals
	Time	No specific time frame
	Temperature	Temperature improvement
	Other	Weather improvement

Table 2.7 Local Plan 7-Essential Components of Community Winter Weather Emergency Sheltering Plans

Comparison Results

Table 3

Table 3 is a qualitative data table that is a visual comparison of the federal and national guidance documents to the local community plans concerning winter emergency sheltering of unhoused populations. This table is a candid, visual depiction of components in the federal guidance, national guidance, and local plans. This table also assists in analyzing data in Tables 1 and 2. Three colors are incorporated into Table 3: green, yellow, and red. Green indicates that the category/sub-category was adequately addressed in the guidance or plan, yellow means it was somewhat addressed, and red means it was not addressed. For example, for Local Plan 1, Operations-Staff Training is red since it is not addressed in the emergency plan. These classifications are subjective and not based on any current standardized criteria.

Components		Guidance		Local						
Component	Component - Subcategory	A	B	1	2	3	4	5	6	7
Plan Activation	Time									
	Temperature									
	Other									
Operations	Sustainment (Meals, Beds, Survival Items)									
	Roles and Responsibilities									
	Hygiene									
	Staff Trainings									
	Medical									
	Transition Guidance									
	Warming Centers									
Communication	Partners/Stakeholders									
	Public									
	Street Outreach									
Transportation	Designated Transportation									
	Pick-up Locations									
Capacity	Scalability									
	Barrier for Entry									
	Involuntary Evaluation Plan									
Plan Deactivation	Time									
	Temperature									
	Other									

Key
Addressed
Somewhat Addressed
Not Addressed

Table 3. Comparison of Guidance Documents and Local Community Plans

Chapter 5-Discussion

Discussion of Results

Results Overall

Each federal, national, and local entity offered its unique approach to sheltering the unhoused population from extreme winter weather. Table 3 provides a visual representation of the key sheltering components present in each guidance document and local plan. Local Plan 4 has all components/subcomponents present, while Local Plan 5 has the smallest number of subcomponents included. The majority of the local plans and guidance do not address at least one subcomponent. Comparing the current guidance and local plans allows for the identification of the finest sheltering strategies for future guidance. Further discussion of these strategies is

broken down by the critical winter sheltering component, referencing the information included in Tables 1 and 2.

Plan Activation

A defined activation strategy is crucial for any emergency sheltering plan. After document review, three plan activation-related themes were identified: time, temperature, and other. Time refers to an identified period that the plan and/or shelter is active. Six out of the nine entities mention or recommend a set date for plan activation. Five out of those six have shelters open or recommend shelters open on a defined date. The most common activation strategy identified was temperature, with all organizations having a temperature activation component. While Local Plan 5 opens their shelters at 35 degrees Fahrenheit or below, Local Plan 6 expands their current shelter capacity with decreasing temperatures. The last theme identified was other activation criteria, with eight out of nine organizations mentioning alternate criteria for activation. The other criteria included extreme winter weather, such as freezing rain or snow, or a civil emergency declaration.

Operations

When reviewing the documentation for themes/subcategories in shelter operations, the following were identified: sustainment (meals, beds, survival items), roles and responsibilities, hygiene, staff training, medical, transition guidance, and warming centers.

Sustainment items are necessary for overall survival. Three out of the nine organizations adequately addressed sustainment, including meals, beds, and survival items, such as hats and gloves. Six out of the nine organizations somewhat addressed sustainment, mentioning at least two out of three sustainment items.

The subcategory of roles and responsibilities refers to tasks assigned to plan stakeholders. In any emergency plan, defined and designated tasks improve the overall response. Every organization adequately addressed the roles and responsibilities of participating stakeholders. Any organization would be able to look at the emergency plan or guidance and understand their role in the response.

The hygiene subcategory refers to amenities such as showering and bathing access for unhoused individuals. Five out of nine organizations included hygiene opportunities in their emergency plans.

Staff training is an important topic to address in an emergency plan. Training ensures that staff are prepared, and able to assist individuals to the best of their ability. Five out of nine organizations adequately address staff training. For example, Local Plan 4 specifically mentions staff orientation and training for shelter teams.

The medical subcategory refers to the sheltered individuals' access to medical services. Living on the streets is dangerous, with hypothermia an extreme concern during the winter season, and substance abuse a concern year-round. Six out of the nine organizations mention access to emergency or substance abuse services.

The overall goal of any plan addressing homelessness is to end homelessness. Transition guidance, such as case management and housing assistance, is crucial in ending homelessness. Eight out of nine organizations reference transition guidance opportunities in their plans.

The last subcategory, warming centers, is an efficient method to get individuals off the street during dangerous weather. Eight out of nine organizations have plans to activate warming centers.

Communication

Communication will make or break an emergency response. Communication themes identified were communication methods to partners/stakeholders, communication methods to the public, and street outreach for the target audience. Overall, communication was the component that was addressed by every organization. Communication with stakeholders and the public creates awareness of current plan operations. Effective street outreach ensures that the unhoused population is informed about available services.

Transportation

Transportation was a mutual component of the guidance and local plans. The unhoused population tends to be a nomadic group and therefore are located throughout the entire city. Identified themes for transportation are designated transportation and pick-up locations. All nine of the organizations included designated transportation in their plans. Six out of the nine included designated pick-up locations, where unhoused individuals would receive transportation to winter shelters.

Capacity

Capacity is a critical component for increasing winter weather sheltering response. Common themes identified were scalability, barrier-for-entry, and an involuntary evaluation plan. All nine organizations included or recommended a scalability method to increase shelter capacity. Some plans specifically mentioned the use of hotel vouchers to increase capacity. Barrier-for-entry is a method of ensuring shelter accessibility for all individuals. When a shelter has a "low-barrier" policy, individuals are not denied entry due to alcohol or drug use (National Coalition for the Homeless, 2023). Five out of nine organizations addressed a low-barrier policy. Involuntary evaluation determines if an individual is in the state of mind to make decisions on

their health and if they are not, response teams may involuntarily take them to receive services (Local Plan 7, 2023). Three out of the seven local plans included an involuntary evaluation plan; the federal and national organizations did not mention an involuntary evaluation plan in their guidance.

Plan Deactivation

The last main component is plan deactivation. Plan deactivation is a defined criterion that ends the emergency winter response. Common themes are the same as plan activation: time, temperature, and other deactivation criteria. Six out of nine organizations have a stated or recommended end date for plan or shelter deactivation. All local plans have shelter services that end with weather improvement. A defined temperature deactivation was not specifically mentioned in the federal and national guidance. Seven out of nine plans had other criteria for ending the shelter response, such as a civil emergency. Local Plan 6 allows extended shelter activation beyond the official end date if there is impending winter weather.

Strength and Limitations

This review of guidance documents and local plans for emergency winter sheltering of unhoused populations offers both strengths and limitations. Strengths include individuality of the guidance and local plans. Each organization offers a different method for addressing essential components. The local plans are from different geographic locations and climate regions of the United States, producing recommendations applicable to any community in the United States.

Limitations for this review include accessibility to guidance documents and local plans. Each organization may have more detailed plans or documentation that are unavailable to the public. This review only includes public source data; therefore, any identified themes or

conclusions are based on the information publicly available. Other limitations include factors that are not addressed in this review, such as funding or population size.

Recommendations

General

Based on this review of current guidance and local plans, future national guidance should be made into one accessible document. A challenge with this review was that cold weather plans and guidance often consisted of multiple separate documents. One document would allow for easy access to necessary strategies for emergency winter sheltering. The future guidance may be in a checklist form, allowing for a usable, one-stop-shop resource for addressing critical components in emergency sheltering plans.

Plan Activation

The ideal strategy for plan activation would be a defined period for open shelter, allowing for consistency and predictability among its users (National Coalition for the Homeless, 2010). If this is not possible, temperature activation should begin at 40 degrees Fahrenheit because hypothermia may occur above freezing temperatures (National Coalition for the Homeless, 2010). Opening criteria should be clearly defined and communicated to stakeholders, the public, and the unhoused population.

Operations

Recommendations for operations include plans for meals, beds, showers, and survival items. Individuals living on the street often do not have access to these amenities. These items are essential for any vulnerable individual living outside and offer a reprieve from the outdoors. Survival items may be dispersed to both individuals who accept or refuse shelter.

Defined roles and responsibilities are critical for a successful shelter operation. These descriptions were present in all of the guidance documents and plans, and therefore, should be included in any future guidance documents. Each plan should list the responsibility (e.g. shelter activation) for each organization (e.g. Mayor's office). This will ensure all essential responsibilities are addressed and assigned to participating organizations.

Medical services should be accessible, from emergency treatment of hypothermia to managing substance abuse. Transition guidance, including case management and housing assistance, is crucial for addressing the larger concern of homelessness. Warming centers are an easy and quick solution to bringing individuals inside during extreme winter weather. Warming centers are ideal for individuals who do not want to enter a more structured shelter setting.

Communication

Defined communication methods are essential for a seamless operation. For example, stakeholders should receive an email notification before an emergency activation. Social media and press releases easily convey information to the public. Targeted street outreach will ensure unhoused individuals have access to shelter information and resources. For example, before and during extreme winter weather events, Local Plan 7 has a designated outreach team that contacts known vulnerable individuals using a pre-existing list. Incorporating these tactics into the emergency shelter plan will expand outreach efforts.

Transportation

Every plan should have a designated transportation system. Unhoused individuals tend to be nomadic due to their lack of permanent housing and may be located anywhere throughout the community. Transportation from designated pick-up locations or a central onboarding location is

ideal. The pick-up or central onboarding locations should be advertised throughout the community and included in the emergency plan.

Capacity

The ability to increase shelter capacity is an essential component of the emergency sheltering plan. Each plan should have a strategy for increasing the number of beds and accessibility to shelters. Increasing accessibility and capacity may include hotel vouchers or low-barrier shelters. Utilizing hotel vouchers for certain populations, such as families, may alleviate some concerns that come with low-barrier shelters. An involuntary evaluation plan is needed to prevent individuals from obtaining life-threatening cold weather injuries.

Plan Deactivation

Deactivation criteria must be included in the emergency plan for predictability and consistency. The NCH recommends ending services in April (National Coalition for the Homeless, 2010). If the plan includes a temperature requirement, there needs to be a clearly defined threshold, such as weather improvement, with temperature stability above 40 degrees Fahrenheit. Criteria should be clearly defined and communicated to stakeholders, the public, and the unhoused population.

Resource Implications and Next Steps

Resource implications include funding, shelter resource accessibility, and trained personnel. Funding is essential for any research adjustments to a public health or emergency management program. Funding may come from the local budget, federal funding, or other sources. Local Plan 3 supplements its funding for winter sheltering through a local 5% alcohol tax (Local Plan 3, 2024). Donations may be encouraged to fulfill needed resources such as food, water, and survival items. Training designated personnel takes time and funding. HUD suggests

filling staffing positions by utilizing the volunteer network, as well as offering compensation such as hazard pay (HUD EXCHANGE, 2021).

The next step is to create a single, detailed document for distribution to communities throughout the United States. The document may be a winter emergency sheltering plan checklist of each major component and subcomponent. This sheltering strategy checklist will serve as a planning tool to create a community emergency sheltering plan. This checklist may be distributed to local and national homelessness advocacy groups, aiding their communication efforts with local, state, and federal officials.

Conclusions

Extreme winter weather is an unrelenting concern, and guidance must address the emergency sheltering of our most vulnerable. This comparison of emergency sheltering plans to guidance emphasized that winter weather is a concern no matter the location. Critical components of emergency planning must be addressed in a single, accessible document, such as a planning component checklist, applicable to any community in the United States. This checklist may assist communities in developing their emergency sheltering plans. In order to reduce homelessness, winter weather emergency planning is crucial to keeping our most vulnerable safe while providing the resources to stop the perpetual cycle.

APPLICATION OF PUBLIC HEALTH COMPETENCIES

This capstone project addresses the following Public Health and Emergency Preparedness competencies.

Foundational Competencies

MPHF5: Compare the organization, structure, and function of health care, public health, and regulatory systems across national and international settings

MPHF7: Assess population needs, assets, and capacities that affect communities' health.

Concentration Competencies

EMPMPH3: Analyze epidemiological, environmental, or health data from disaster responses.

EMPMPH5: Implement organizational capabilities for disaster preparedness and response.

IRB APPROVAL

This project did not require IRB review and approval.

LITERATURE CITED

- Berman, A. (2024). *Anchorage Daily News, Alaska: Anchorage opens warming centers and boosts capacity at homeless shelters amid cold snap*. Yahoo!News.
https://www.yahoo.com/news/anchorage-opens-warming-centers-boosts-045900245.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAEIJmuCMv19lJw6EINg-EjGWOO_TpG6a5Fydh5veNAr_ti-IVC0-LbmGRKJnL69uh9KWklkTFqIK2hT8EFiThkZGhhB9VRCZPD69EcKW6mplBOK07Glj4LhyYDT4Nx-uyff9Pf9bgFxKKcwXq8gCAPg26eTfXde5Nu-2_R7MW3MK
- Bezgrebelna M, McKenzie K, Wells S, Ravindran A, Kral M, Christensen J, Stergiopoulos V, Gaetz S, Kidd S. (2021). Climate Change, Weather, Housing Precarity, and Homelessness: A Systematic Review of Reviews. *International Journal of Environmental Research and Public Health*. 18(11):5812. <https://doi.org/10.3390/ijerph18115812>
- Centers for Disease Control and Prevention. (2022). Homelessness and Health. Retrieved from <https://www.cdc.gov/orr/homelessness/about.html>
- Cohen, J., Agel, L., Barlow, M., Garfinkel, C., & White, I. (2021). Linking Arctic variability and change with extreme winter weather in the United States. *Science*, 373(6559), 1116-1121. <https://doi.org/10.1126/science.abi9167>
- Cusack, L., Van Loon, A., Kralik, D., Paul, A., & Gilbert, S. (2012). Extreme weather-related health needs of people who are homeless. *Australian Journal of Primary Health*, 19(3), 250-255. <https://doi.org/10.1071/PY12048>

- Del Castillo, F. A., Del Castillo, C. D. B., & Corpuz, J. C. (2022). COVID-19 and the Well-Being of the Homeless Population. *Disaster medicine and public health preparedness*, 16(3), 856. <https://doi.org/10.1017/dmp.2021.45>
- HUD EXCHANGE. (2021). *COVID-19 Homeless System Response: Winter Planning Resources*. Retrieved from <https://www.hudexchange.info/resource/6193/covid19-homeless-system-response-winter-planning-resources/>
- HUD EXCHANGE. (2025). Category 1: Literally Homeless. *CoC and ESG Homeless Eligibility*. Retrieved from <https://www.hudexchange.info/homelessness-assistance/coc-esg-virtual-binders/coc-esg-homeless-eligibility/four-categories/category-1/#:~:text=What%20is%20Homeless%20Category%201,meant%20for%20human%20habitation%3B%20or>
- Eisenhardt, H., Peterson, T., & Schwebel, M. (2024). Establishing a methodology to measure vulnerability of unhoused populations to climate change in the United States. *Climate Risk Management*, Volume 45, 100629, ISSN 2212-0963, <https://doi.org/10.1016/j.crm.2024.100629>
- Gronlund, C. J., Sullivan, K. P., Kefelegn, Y., Cameron, L., & O'Neill, M. S. (2018). Climate change and temperature extremes: A review of heat- and cold-related morbidity and mortality concerns of municipalities. *Maturitas*, 114, 54–59. <https://doi.org/10.1016/j.maturitas.2018.06.002>
- Kidd, S., Hajat, S., Bezgrebelna, M., & McKenzie, K. (2021). The climate change-homelessness nexus. *The Lancet*, 397(10286), 1693-1694. [https://doi.org/10.1016/S0140-6736\(21\)00834-5](https://doi.org/10.1016/S0140-6736(21)00834-5)

- Lane, K., Ito, K., Johnson, S., Gibson, E. A., Tang, A., & Matte, T. (2018). Burden and Risk Factors for Cold-Related Illness and Death in New York City. *International journal of environmental research and public health*, 15(4), 632.
<https://doi.org/10.3390/ijerph15040632>
- Local Plan 1. (2024). FY 2025 Winter Shelter & Code Purple Plan. *City of Baltimore- Mayor's Office of Homeless Services*. Retrieved from <https://homeless.baltimorecity.gov/winter-shelter>
- Local Plan 2. (2024). Winter Shelter Program. *Los Angeles Homeless Services Authority*. Retrieved from <https://www.lahsa.org/winter-shelter>
- Local Plan 3-A. (2024). Chapter 16.120-Emergency Shelter Plan for Homeless Persons. *Municipality of Anchorage Code of Ordinances*. Retrieved from https://library.municode.com/ak/anchorage/codes/code_of_ordinances?nodeId=TIT16HE_CH16.120EMSHPLHOPE
- Local Plan 3-B. (2024). Housing Services Division. *Municipality of Anchorage*. Retrieved from <https://www.muni.org/Departments/health/HousingAndHomelessness/Pages/HousingServices.aspx>
- Local Plan 4. (2024). FY 2025 Winter Plan. *District of Columbia Interagency Council on Homelessness*. Retrieved from <https://ich.dc.gov/page/winter-plan>
- Local Plan 5-A. (2024). City Enhances Cold Weather Shelter Operations for Winter Season. *City of Austin-Cold Weather Shelter Activation*. Retrieved from <https://www.austintexas.gov/news/city-enhances-cold-weather-shelter-operations-winter-season>

- Local Plan 5-B. (2025). The City of Austin will open Cold Weather Shelters on Saturday. *City of Austin-For Immediate Release*. Retrieved from <https://www.austintexas.gov/news/city-austin-will-open-cold-weather-shelters-saturday#:~:text=While%20Cold%20Weather%20Shelters%20are,at%20512%2D972%2D5055>
- Local Plan 6-A. (2023). Cold Weather Response. *Kansas City, Missouri Office of Unhoused Solutions, Housing Department*. Retrieved from <https://www.kcmo.gov/home/showpublisheddocument/11812/638360742673500000>
- Local Plan 6-B. (2024). Zero KC. *Zero KC-Kansas City's plan to end homelessness*. Retrieved from <https://www.kcmo.gov/city-hall/housing/zero-kc>
- Local Plan 6-C. (2024). Winter Weather. *Kansas City, Missouri City Hall Department of Public Works*. Retrieved from <https://www.kcmo.gov/city-hall/departments/public-works/snow-update-page>
- Local Plan 7-A. (2025). Street Outreach. *NYC Department of Homeless Services*. Retrieved from <https://www.nyc.gov/site/dhs/outreach/street-outreach.page>
- Local Plan 7-B. (2023). Code Blue Procedure. *NYC Department of Homeless Services-Office of Policy, Procedures, and Training*. Retrieved from http://onlineresources.wnyc.net/nychra/docs/dhs-pb-2023-013_code_blue_procedure_2023-2024_.pdf
- Miller, J. (2024). How Cold Weather Became the Silent Killer of L.A.'s Homeless. *Los Angeles Magazine*. <https://lamag.com/homelessness/homeless-deaths-cold-weather-winter>

- National Coalition for the Homeless. (2010). Winter Homeless Services: *Bringing Our Neighbors in from the Cold*. Retrieved from https://nationalhomeless.org/wp-content/uploads/2014/02/Winter_weather_report.pdf
- National Coalition for the Homeless. (2023). National Coalition for the Homeless Calls for Warming Centers to be Opened in US Cities to Meet Demand! Retrieved from <https://nationalhomeless.org/tag/winter-services/>
- NOAA: National Centers for Environmental Information. (2024). U.S. Climate Normals. Retrieved from <https://www.ncei.noaa.gov/access/us-climate-normals/#dataset=normals-monthly&timeframe=15&location=AK&station=USW00026451>
- Rathjen, N. A., Shahbodaghi, S. D., & Brown, J. A. (2019). Hypothermia and Cold Weather Injuries. *American family physician*, *100*(11), 680–686. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/31790182/>
- Richard, L., Golding, H., Saskin, R. *et al.* (2023). Cold-related injuries among patients experiencing homelessness in Toronto: a descriptive analysis of emergency department visits. *Can J Emerg Med* **25**, 695–703. <https://doi.org/10.1007/s43678-023-00546-7>
- Richard, L., Golding, H., Saskin, R. *et al.* (2024). Trends in emergency department visits during cold weather seasons among patients experiencing homelessness in Ontario, Canada: a retrospective population-based cohort study. *Can J Emerg Med* **26**, 339–348. <https://doi.org/10.1007/s43678-024-00675-7>
- Soucy, D., Janes, M., & Hall, A. (2024). *State of Homelessness: 2024 Edition*. National Alliance to End Homelessness. <https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness/>

- Tanner, L.M.; Moffatt, S.; Milne, E.M.G.; Mills, S.D.H.; White, M. Socioeconomic and behavioral risk factors for adverse winter health and social outcomes in economically developed countries: A systematic review of quantitative observational studies. *J. Epidemiol. Community Health* **2013**, *67*, 1061–1067. Retrieved from <https://www.jstor.org/stable/43281669>
- United States Government Accountability Office (GAO). (2021). HOMELESSNESS: HUD Should Help Communities Better Leverage Data to Estimate Homelessness. *Report to the Chair, Subcommittee on Housing, Community Development and Insurance, House of Representatives*. GAO-22-104445. Retrieved from <https://www.gao.gov/products/GAO-22-104445>
- Wexler, B., & Smith, M. E. (2015). Disaster response and people experiencing homelessness: Addressing challenges of a population with limited resources. *Journal of Emergency Management (Weston, Mass.)*, *13*(3), 195–200. Retrieved from <https://doi.org/10.5055/jem.2015.0233>
- Yablonski, S., & Oberholtz, C. (2023). *All 50 states feel the freeze Wednesday morning as some temperatures plunge to record-breaking cold*. Fox Weather. Retrieved from <https://www.foxweather.com/weather-news/50-states-below-freezing.amp>