



Chaffee, El Paso, Lake, Park and Teller Counties

-2025-

**SOUTH CENTRAL REGION
HEALTHCARE COALITION JOINT
RISK ASSESSMENT**

MISSION

The mission of the South Central Healthcare Coalition (SCHCC) is to enhance coalition member readiness throughout the emergency management cycle of preparedness, response, recovery, and prevention/mitigation. This is systematically accomplished by assessing member organization hazard vulnerabilities, by identifying capability-based needs and priorities, by conducting training and exercises, by cultivating strong interagency collaboration and communication, and by efficiently and effectively using existing health and medical resources.

ACKNOWLEDGEMENTS

This document was prepared by the SCHCC Readiness and Response Coordinators. It has been approved by representatives from each of the four core member agencies. Special acknowledgement goes to the SCHCC members and partners for their participation, input, and feedback throughout the process.

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SCHCC Region HealthCare Coalition

JOINT RISK ASSESSMENT (JRA) 2025

The South Central Healthcare Coalition (SCHCC, HCC) is a collaborative network of healthcare organizations and their respective public and private sector response partners that serve as a multiagency coordinating group to assist with preparedness, response, recovery, and mitigation activities related to healthcare organization operations. The SCHCC supports Emergency Support Function 8 (ESF 8) authorities during incidents through communication and coordination. The SCHCC aspires to be recognized by its regional partners as having a formally defined and exercised role that is integrated into local, regional, and state emergency operations plans to facilitate the communication and coordination of healthcare response during disasters.

JOINT RISK ASSESSMENT BACKGROUND

Background

The Healthcare Preparedness Program requires all Healthcare Coalitions to complete and annually submit a Joint Readiness Assessment (JRA). This JRA data is to be integrated into planning to update Preparedness, Response and Continuity of Operations Plans.

The SCHCC Joint Risk Analysis seeks to identify and prioritize the likely hazards that the HCC could face. Coalition members participate in and/or review the HCCs Regional JRA efforts, and provide important information related to hazards and vulnerabilities. The outputs of the HCC JRA data are to be integrated into planning to update Preparedness, Response and Continuity of Operations Plans.

Goals

1. To coordinate the JRA process with state and local emergency management organization assessments, such as CEPA (Colorado Emergency Preparedness Assessment), and any public health hazard assessments, including a jurisdictional risk assessment.
2. To include regional characteristics, such as risks for natural or manmade disasters, geography, and critical infrastructure.
3. To address population characteristics, including children, pregnant women, seniors, and individuals with access and functional needs (e.g., people with disabilities and others with unique needs).
4. To regularly review and share the JRA with all members of the HCC and any other relevant entities.
5. To use the information from the regional JRA to identify the healthcare resources and services that are vital for the continuity of healthcare delivery during and after an emergency.

Purpose

This Regional Healthcare Coalition JRA will be one of nine coalition JRA's to be incorporated into CDPHE-OEPR State Jurisdictional Risk Analysis Report and submitted to State CEPA review board in preparation for the yearly State Preparedness Report.

This JRA represents this region's unified assessment of its hazards, vulnerabilities, and gaps as they impact and relate to the healthcare system in the South Central Region HCC. Each succeeding annual update will consist of a review of the previous year's data (updating where appropriate), and integration of relevant new information as it becomes available. The annual Joint Risk Assessment update will also take into account lessons learned and corrective actions identified through plan updates and revisions, exercises, and real-world events. This information will then inform updates in the HCCs Preparedness, Response and Continuity of Operations Plans.

Scope

This document provides critical information for both the Regional HCCs and CDPHE-OEPR. It is a key source document that allows users to gain situational awareness of this region's hazards and vulnerabilities, resource gaps and population considerations as they pertain to the delivery of healthcare services. This document will be utilized by CDPHE-OEPR for its State Jurisdictional Risk Analysis, and submitted on behalf of the Colorado Healthcare Coalitions to the State level THIRA group.

The Healthcare and Public Health Sector provides recovery support to all sectors of the economy through hazards such as infectious disease outbreaks, terrorism, and natural disasters. Because the vast majority of the sector's assets are private companies, collaboration and information sharing between the public and private sectors is essential to increasing resilience of the region's Healthcare critical infrastructure. While healthcare delivery is a local process, the public health component, focused primarily on population health, is managed across all levels of government.

The SCHCC Member Organizations belong to the following subsectors:

- Direct patient care
- Health information technology
- Coroners
- Medical materials
- Public health
- Behavioral health
- Federal response and program offices
- County/City response and program offices
- Military

Planning Assumptions

- While there is likely significant overlap between the SCHCC JRA and individual JRAs for a healthcare organization or jurisdiction, these are separate and distinct processes.
- Coalition members will generally face many of the same hazards, however all vulnerabilities may not exist across all member organizations.
- The SCHCC JRA is not a replacement for an individual organization or facility-specific JRA.
- This assessment and analysis is based upon the data received by SCHCC members; it is not a comprehensive assessment of all SCHCC member organizations.
- This JRA does not provide details regarding the unique attributes and risks that have been identified in the individual counties of our region. Therefore, hazards and vulnerabilities may appear to be more homogenous throughout the region than they are at the local level.
- This JRA process incorporated state and local emergency management organization assessments and other public health hazard assessments, though the primary focus of this assessment is on the threats' impact to healthcare.

REGION OVERVIEW – PARTICIPATING MEMBER ORGANIZATIONS

Participants

- *UCHealth Memorial Hospital Central*
- *UCHealth Memorial Hospital North*
- *UCHealth Grandview Hospital*
- *UCHealth Pikes Peak Regional Hospital*
- *Commonspirit Penrose Hospital*
- *Commonspirit St. Francis Hospital at Woodmen*
- *Commonspirit St. Francis Hospital at Interquest*
- *Children's Hospital Colorado Springs*
- *Heart of the Rockies Regional Medical Center*
- *St Vincent Health*
- *El Paso County Public Health*
- *Lake County Public Health*
- *Teller County Office of Emergency Management*
- *Park County Office of Emergency Management*
- *Chaffee County Office of Emergency Management*

REGION OVERVIEW – GEOGRAPHY AND DEMOGRAPHICS

The South Central Region is comprised of the following five Colorado counties: Chaffee, El Paso, Lake, Park, and Teller. El Paso County (home to the City of Colorado Springs) lies mainly to the east of the Front Range of the Rocky Mountains and encompasses mostly urban and suburban areas. The remaining counties all lie within the Rocky Mountains and are comprised of rural communities. This distinct geographical difference presents a major challenge in planning and preparation within the Region, as challenges in one area are not necessarily the same in the next. Additionally, a hazard in one area of the region could be significantly more crippling than that same hazard in another area.



Population Characteristics

Figure 1: Regional Geography & Population: 2020 United States Census Bureau Data

County	Population [current year]	Land Area (sq. miles)	Persons per Sq. Mile (avg)
Chaffee County	19,476	1013.4	19.2
El Paso County	730,395	2126.4	343.5
Lake County	7,436	376.9	19.7
Park County	17,390	2,193.5	7.9
Teller County	24,710	557.1	44.4
City of Colorado Springs	478,961	195.8	2451.2
State of Colorado	5,773,714	104,185	55.7
TOTAL REGION	799,407	6268.1	86.9

** For this and all following table, data for Colorado Springs and the State of Colorado are included only for the sake of comparison, their information is not used in the calculation of the SCR totals.

Figure 2: Current SCR Population by County

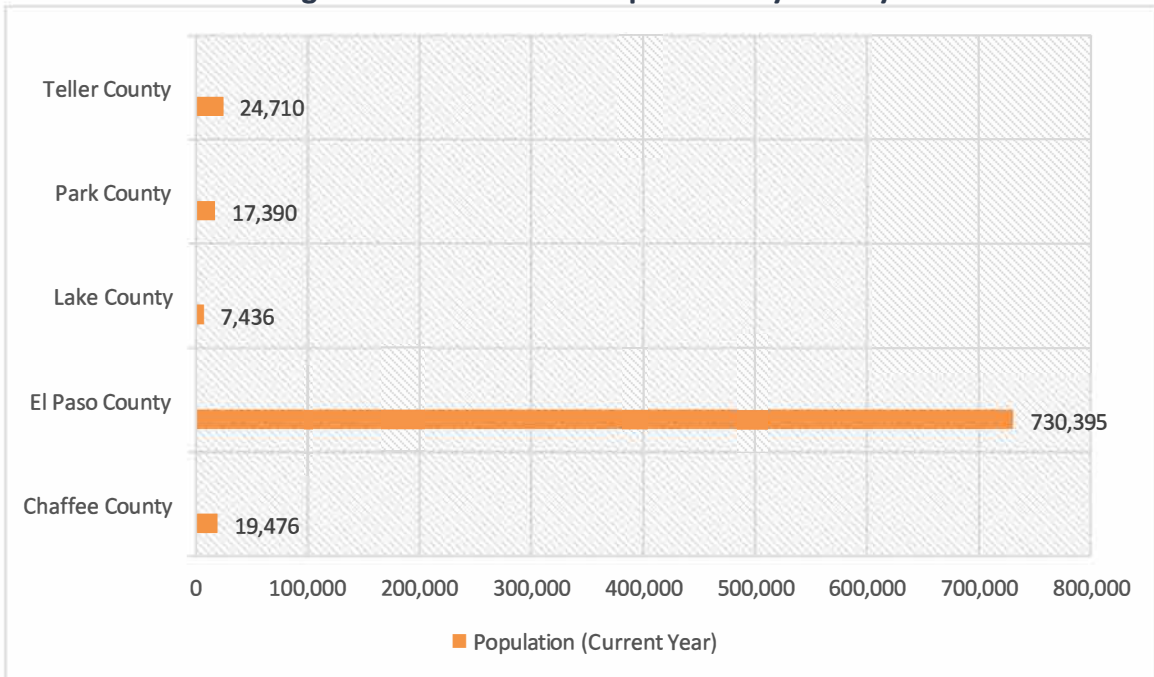


Figure 3: Persons per Square Mile by County

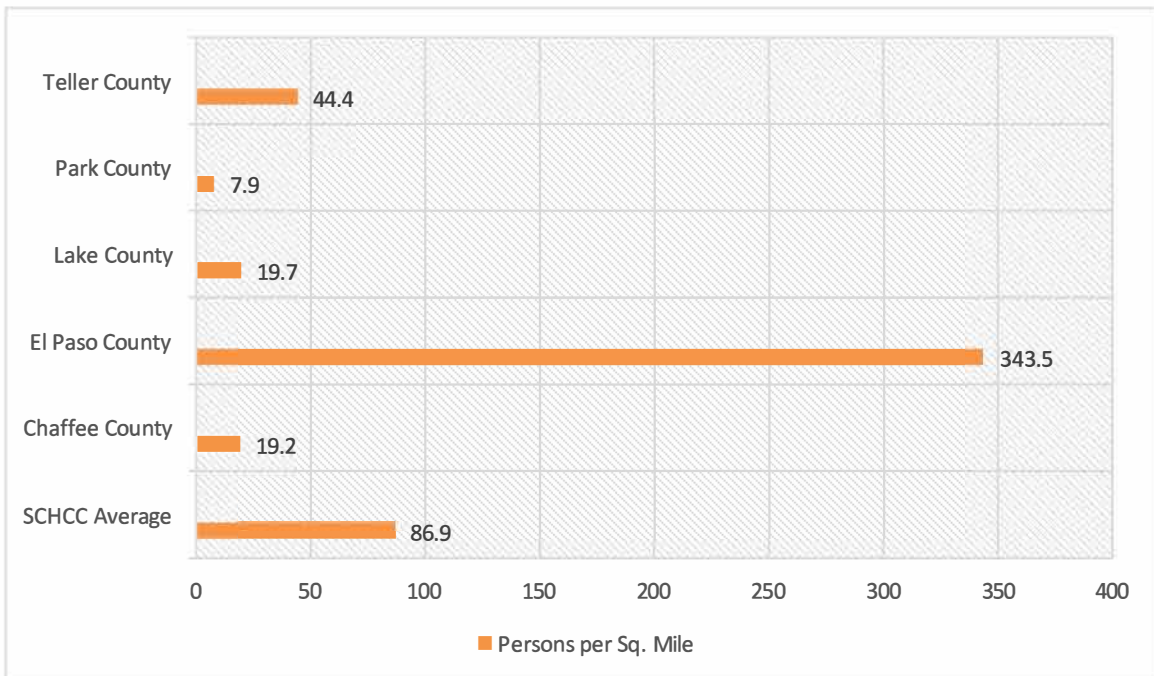


Figure 4: Regional Age & Race Demographics: 2020 United States Census Bureau Data

County	Total Number of Live Births (2022)	Children Under 5		Children Under 18		Older Adults 65 Years and Over		Older Adults 85 Years and Over		Non-White (all persons except white, non-Hispanic)	
		#	%	#	%	#	%	#	%	#	%
Chaffee County	155	746	3.8	2,916	15	4,931	25.4	546	2.8	2,783	14.2
El Paso County	9,077	44,902	6.1	169,283	22.9	103,793	14	9,505	1.3	249,911	34.2
Lake County	88	294	4	1,411	19	818	11	42	0.6	2,440	32.8
Park County	146	616	3.5	2,689	15.5	3,664	21.1	123	0.7	2,072	11.9
Teller County	190	874	3.6	4,140	16.8	5,517	22.4	392	1.6	3,144	12.7
City of Colorado Springs	NA	28,080	5.8	101,933	21	74,614	15.3	7,795	1.6	142,415	29.7
State of Colorado	NA	305,063	5.2	1.2mil	20.7	915,661	15.7	84,686	1.5	1.7mil	29.3
TOTAL REGION	9,656	47,432	5.9	180,439	22.5	118,723	14.1	10,608	1.3	260,350	32.6

**** Data highlighted in green denote a value greater than the data for the state**

El Paso County (6.1%) has a greater percentage of children under 5 and children under 18 (22.9%) as compared to the rest of Colorado, with an equally large percentage residing in the City of Colorado Springs (5.8%). Conversely, El Paso County (14%) and Lake County (11%) are the only counties that are at or below the state average of persons over 65 years of age (15.7%). Teller and Park Counties are well above the state average at 22.4% and 21.1% respectively. Chaffee County (25.4%) has the largest percentage of elderly residents (adults 65 years or older); additionally, 2.8% of Chaffee County’s residents are 85 year or older.

These populations are considered at-risk populations and could require additional needs in an emergency.

Figure 5: Region Disability Characteristics: 2020 United States Census Bureau Data

County	Total Disability Population		Hearing Difficulty		Vision Difficulty		Cognitive Difficulty		Ambulatory Difficulty		Independent Living Difficulty	
	#	%	#	%	#	%	#	%	#	%	#	%
Chaffee County	2,257	12.5	912	5	553	3.1	919	5.3	771	4.4	471	3.1
El Paso County	84,636	12.1	24,146	3.4	12,675	1.8	35,246	5.5	35,230	5.4	27,835	5.2
Lake County	1,039	14.1	201	2.7	189	2.6	386	5.4	499	7	227	3.8
Park County	1,880	10.9	774	4.5	269	1.6	542	3.3	844	5.1	709	4.9
Teller County	3,543	14.5	1,644	6.7	650	2.7	930	3.9	1,530	6.5	893	4.4
City of Colorado Springs	58,094	12.4	15,919	3.4	9,318	2	25,993	5.9	22,934	5.2	19,744	5.4
State of Colorado	664,496	11.6	204,244	3.6	116,693	2	266,029	4.9	269,031	4.9	218,398	4.8
TOTAL REGION	93,355	11.7	27,677	3.5	14,336	1.8	38,023	4.8	38,874	4.9	30,135	4.8

** Data highlighted in green denote a value greater than the data for the state.

Disability definitions:

- **Hearing difficulty:** deaf or serious difficulty hearing
- **Vision difficulty:** blind or serious difficulty seeing even when wearing glasses.
- **Cognitive difficulty:** serious difficulty concentrating, remembering, or making decisions due to a physical, mental, or emotional condition.
- **Ambulatory difficulty:** serious difficulty walking or climbing stairs.
- **Independent Living difficulty:** difficulty doing errands alone such as visiting a doctor’s office or shopping, due to a physical, mental, or emotional condition.

Persons with disabilities can be impacted by a condition that affects their body or mind making it more difficult for them to perform or participate in certain activities, as well as their ability to interact with the world around them. Among daily impacts, in an emergency, these limitations can present a challenge for

the individuals' health and safety. The total disability population within the SCR is 93,355, representing 11.7% of the region's population, slightly above the State of Colorado's average of 11.6%. Notably, Teller County has the highest disability rate at 14.5%, with significant incidences of hearing and ambulatory difficulties. El Paso County, with the largest disabled population of 84,636, sees the majority affected by cognitive and ambulatory challenges. Lake County, although smaller, shows a high disability rate of 14.1%, with ambulatory difficulty being notably prevalent.

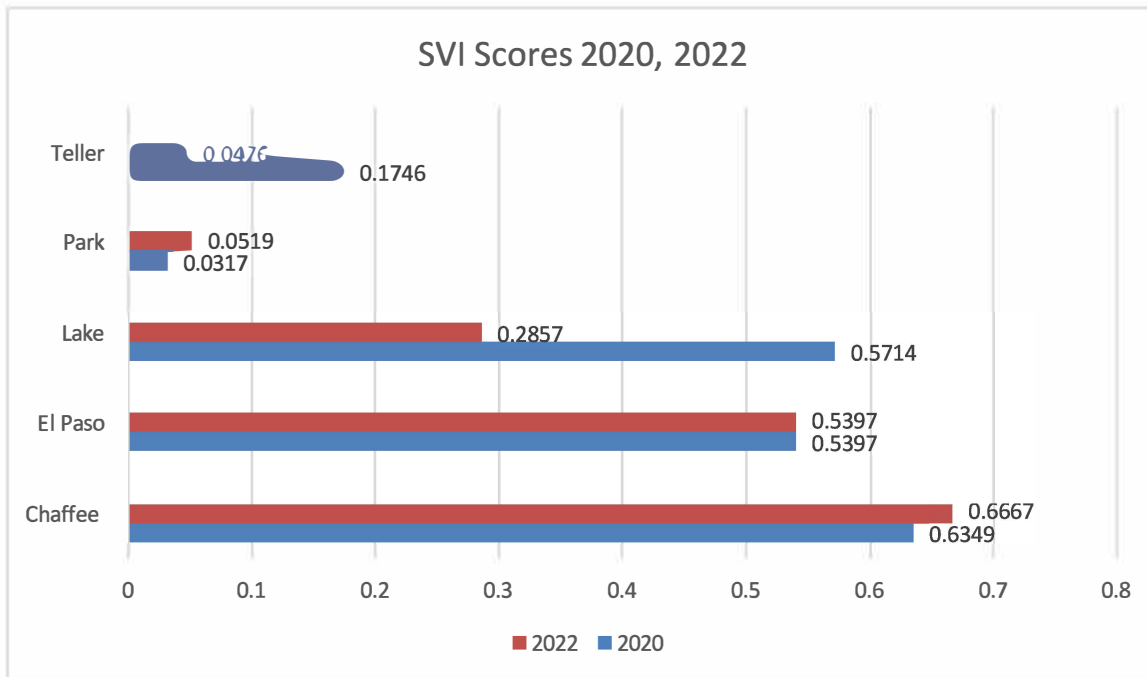
Figure 6: SCHCC Region Communication or Language Characteristics

County	Language Isolation: Non-English households that speak English less than very well (LTVW)		Most prevalent isolated non-English language	2 nd most prevalent isolated non-English language	3 rd most prevalent isolated non-English language
	#	%			
Chaffee County	336	1.8	Spanish	Indo-European	Asian/Pacific Island
El Paso County	21,565	3.1	Spanish	Indo-European	Asian/ Pacific Island
Lake County	512	7.2	Spanish	Indo-European	Asian/ Pacific Island
Park County	84	0.5	Spanish	Indo-European	Asian/ Pacific Island
Teller County	166	0.7	Indo-European	Spanish	Asian/ Pacific Island
City of Colorado Springs	15,577	3.4	Spanish	Asian/Pacific Island	Indo-European
TOTAL REGION	22,663	2.8	Spanish	Indo-European	Asian/Pacific Island

****Percentage of Non-English speaking households across Colorado is 6%.**

Language and cultural differences between a patient and their medical provider can provide for various barriers and other challenges regarding medical care. In the SCR, 2.8% of non-English speaking households are linguistically isolated, speaking English less than very well (LTVW), which is lower than the state average of 5.5%. Spanish is the most prevalent isolated non-English language across the region, followed by Indo-European and Asian/Pacific Island languages. Lake County has the highest rate of language isolation at 7.2%, while Park County has the lowest at 0.5%.

Social Vulnerability Index (SVI)



Vulnerabilities and hazards are influenced by many factors, including population density, age, disability, income, crowded households, transportation, etc. In an effort to better prepare our nation for crises, the Centers for Disease Control (CDC) developed the social vulnerability index (SVI). The SVI was developed to help public health and emergency managers to better identify the areas of higher vulnerabilities and rates of access for functional needs within their communities. The SVI provides an overall ranking of census tracts and ranks geographic areas across four themes and are as follows:

- **Socioeconomic Status (SES)**: below poverty line; unemployed; income; no high school diploma
- **Household Composition & Disability**: aged 65 or older; aged 17 or younger; civilian with a disability; single-parent household
- **Minority Status & Language**: Minority; speak English “less than well”
- **Housing & Transportation**: multi-unit structures; mobile homes; crowding; no vehicle; group quarters

Figure 7: SCHCC Regional SVI by County

An SVI map for each county can be found in Appendix C. Understanding the areas of vulnerability within a region, as well as individual counties, will enable the coalition to locate and plan for the specific needs that are identified in each community. The use of this data can help with identifying areas in the region with underserved populations, communities that lack emergency shelters, those requiring continued support to recover after an emergency or natural disaster, and development of a plan to help allocate emergency preparedness funding based on community need.

The following interpretations by county were derived by the workgroup using the CDC's collected data charts, SVI scores, and prepared county maps:

Lake County: (No Change) While this decrease is substantial, Lake County's vulnerability remains significantly higher than that of Park and Teller Counties, ranking the third highest within the region. The overall vulnerability of Lake County is in the low to moderate range. Notably, vulnerabilities around Leadville and its immediate surroundings are lower than the rest of the county, with higher vulnerability persisting in the outer edges. This positioning underlines the relative stability in the central areas of Lake County despite the broader challenges the county faces. Outside of the county seat Lake County falls into the highest range for vulnerability across all categories, likely due to the mountainous terrain that covers that vast majority of the county.

El Paso County: (No Change) El Paso is the most populated county in the region and has ranked second for vulnerability with an SVI of 0.5397, which is in the medium to high range. Colorado Springs hosts the largest portion of the population and ranks in the highest vulnerability rating across all categories. The eastern plains and of El Paso County rank as the second most vulnerable areas of the county across all categories.

Chaffee County: (No Change) Chaffee County has the highest vulnerability score in the coalition (medium to high level vulnerability). Chaffee County data shows high vulnerability in all categories, to include overall social vulnerability which provides data for the community's capacity to prepare for and respond to the stress of hazardous events. The areas that show the largest impacts in vulnerability are seated in the north and southeast of the county where the majority of the population is centered. The western side of Chaffee County has mountainous terrain which likely contributed to the lower vulnerability scores in that area.

Teller County: (No Change) Though still low relative to other counties in the region, this indicates a significant rise in vulnerability since the previous year. The middle portion of Teller County shows moderate vulnerability, while the south part of the county exhibits high vulnerability scores in overall social vulnerability which includes the community's capacity to prepare for and respond to the stress of hazardous events.

Park County: (No Change) Park County retains the lowest SVI score compared to other counties in the region. The 2022 data suggested a low to lowest score for most of the county, with midgrade vulnerability in socioeconomic status and housing type/ transportation in the south and northwestern portion of the county. The low ranking may be due to participation of the residents in the census data collection, or the frontier nature of the county.

Methods

Each member organization/agency within the coalition was invited to participate in this assessment. The data provided by regional partners, individual member organization Hazard Vulnerability Assessment (HVA) documents, and a shared analysis process was used to complete this regional JRA.

The jurisdictional Colorado Emergency Preparedness Assessment (CEPA) was also considered during the review process. When developing a CEPA, assessment and planning included representatives and perspective from all Emergency Support Functions (ESFs) in an effort to be comprehensive and measurable. The CEPA evaluates the hazards previously identified and determines if they are still applicable, identifies any new potential hazards to the jurisdiction, and finally, identifies new technological and man-made threats that may not have been considered previously. Each of the five counties in the SCR has already prepared EOPs, Hazard Mitigation Plans or Pre-Disaster Mitigation Plans. While not every hazard or threat is applicable region-wide, a hazard or threat to any area of the region is considered a threat to the entire SCR. This not only allows individual municipalities to maintain their readiness and preparation for all potential hazards, but it allows others in the region to better prepare to render mutual aid if needed.

The following is a list of threats/hazards that could have or have previously had an impact on our region.

Naturally Occurring Events	Pandemic/ Epidemic Events	Human Related Events	Technologic, Utility, and Hazardous Events
<ul style="list-style-type: none"> • Dam Failure • Drought • Dust Storm • Flood/Flash Flood • High Winds • Ice/ Hail Storm • Landslide • Severe Blizzard/Snow • Severe Thunderstorm • Temperature Extreme (Cold) • Temperature Extreme (Hot) • Wildfire 	<ul style="list-style-type: none"> • Highly/Acute Infectious Disease Outbreak • Pandemic COVID-19 • Pandemic Influenza • Seasonal Influenza • Vaccine Preventable Disease Outbreak • Water/Foodborne Disease Outbreak 	<ul style="list-style-type: none"> • Active Shooter • Civil Disturbance • Hostage Situation • Mass Casualty (Trauma) • Staffing Shortage • Workplace Violence • Supply Shortage • Transportation Disruption • I-25 and/or Hwy 24 Closure 	<ul style="list-style-type: none"> • Communications Failure • Information Systems Failure • Cyber Attack • Broken Water Main (External) • Mass Electrical Failure • Fuel Shortage • Natural Gas Leak • Potable Water Failure • Wastewater Treatment Failure • CBRNE • HAZMAT Spill

After review of the identified threats to our region and analysis of the facility-specific data provided by SCHCC organizations, the workgroup finds the following threats/hazards and vulnerabilities to be the most significant to the SCHCC and health and medical communities.

Figure 8: SCHCC Hazard Identification Assessment

Hazard	Frequency	Severity
Infectious Disease	Very High	Guarded
Wildfire	Very High	High
Active Threat	High	Elevated
Cyber Attack	High	High
Winter Weather	Very High	Elevated

*Severity refers to the impact that will be felt by people, property, crops, or facilities.

Frequency

- Very High = Likely Annual Occurrence or more
- High = Likely Bi-annual Occurrence
- Moderate = Likely within a 5 year period
- Low = Likely within a 10 year period
- Very Low = Likely within a 50 year period

Severity

- Severe
- High
- Elevated
- Guarded
- Low

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RISKS

To identify risk levels for each threat and hazard, the SCR HCC utilized a scoring system that was provided to all Colorado HCCs by the Colorado Division of Homeland Security and Emergency Management (DHSEM). The risk calculation takes into account the level of threat, system weakness, and impacts and consequences. These three variables produce a final risk score for each threat or hazard. This risk score is broken up into five levels ranging from low to severe. It is important to note that, although this scale is subjective in nature, a comprehensive review of the data was conducted at all levels: facility, system, local, regional, and state. This data was used to support the risk calculations provided in **Figure 9**.

A full breakdown of each scale used in Figure 9 is included on page 17 and 18.

Figure 9: SCHCC Risk Identification

Hazard	Threats & Hazards Scale (T) 1-4	System Weakness (W) 1-4	Impacts & Consequences (I) 1-4	Risk = T x W x I
Infectious Disease	Medium (2)	High (3)	Medium (2)	Guarded (12)
Wildfire	High (3)	Medium (2)	High (3)	Elevated (18)
Active Threat	Medium (2)	High (3)	High (3)	Elevated (18)
Cyber Attack	High (3)	High (3)	(High 3)	Elevated (21)
Winter Weather	High (3)	Low (1)	Medium (2)	Low (6)

Figure 10: SCHCC Threats and Hazards Scale

Threats and Hazards Scale	
1	Low: Little or no credible threat posed by adversaries, natural disaster, or technological failure
2	Medium: Potential threat posed by adversaries, natural disaster, or technological failure
3	High: Credible threat posed by adversaries, natural disaster, or technological failure
4	Critical: Definite threat posed by adversaries, natural disaster, or technological failure

Figure 11: System Weakness Scale

System Weakness Scale	
1	Low: Few or no weaknesses with multiple layers of protective measures or countermeasures in place with proven effectiveness
2	Medium: Few weaknesses with some protective measures or countermeasures in place with proven effectiveness
3	High: Multiple weaknesses with some protective measures or countermeasures in place with proven effectiveness
4	Critical: Multiple weaknesses with no protective measures or countermeasures in place with proven effectiveness

Figure 12: Impacts and Consequences Scale

Impacts and Consequences Scale	
1	Low: Little or no effects on the system or patients/clients
2	Medium: Moderate effects leading to injury or economic loss, including possible disruptions to healthcare delivery
3	High: Serious effects leading to loss of life, serious injury, or economic loss, including disruptions to healthcare delivery
4	Critical: Grave effects leading to significant loss of life, serious injury, or economic loss, including total disruption to healthcare delivery

Figure 13: Total Risk Scale

Total Risk Scale	
1-7	Low: At least two factors Low or one Low with no Critical
8-15	Guarded: All factors Medium/High or at least two High or Critical with one Low
16-23	Elevated: Two factors Critical or one Critical with no Low or at least two High with no Low
24-35	High: At least two factors High or Critical with no Low
36-64	Severe: All factors minimally High with at least one Critical

Identified Vulnerabilities

Figure 14: SCHCC Vulnerability Identification Assessment

Vulnerability	Impact on Healthcare Delivery
IT System Failure	Medical Records; Pharmacy; Billing; HIPAA; PII
Communication Failure	Situational awareness; loss of information; patient transport; impacts to operations
Internal Flood	Generators; Emergency Departments; Operations
Mass Casualty Incident	Rural hospitals unable to manage more than 2 patients in MCI situation; patient transport
Supply Chain Disruption	Potential disruptions in essential resource availability (e.g., gases, medical supplies) due to healthcare facilities' isolation from supply chains. Reliance on a single medical supply company for multiple hospitals through MOUs may expose the network to unexpected impacts, affecting overall healthcare delivery.
Staffing Shortage	Critical staffing shortages may compromise healthcare delivery, limiting the capacity to provide essential services and increasing the strain on existing personnel.
Electrical Failure	Impact to dialysis, oxygen, durable medical equipment Medical Records Pharmacy
Access Functional Needs	<ul style="list-style-type: none"> - rural areas with lack of direct patient care capabilities - Population with access functional needs (11% of region with hearing, vision, cognitive, ambulatory, or independent living difficulties) - Population of pediatrics and geriatrics (1 – 13% of region) - Birth Rate (births per 1000 persons) - Home health

The SCHCC used the data provided by regional partners, community inclusion maps (CICO) and census data to identify vulnerabilities in our region. Vulnerabilities were defined as systems or failures that expose the region to the possibility of being attacked, harmed, or that significantly impact daily operations and/or the ability to respond to healthcare needs during an event. The SCHCC covers an area of more than 4,000 square miles. Much of that area consists of remote mountain communities with limited forms of communication. Several of these areas have communication challenges for normal conditions, and subsequently outages can have a significant impact for long durations. Our hospitals are increasingly more reliant on internal and external electronic communication routes that when interrupted can pose a significant negative impact to health and safety of the patients. Many of the hospitals within the SCHCC rate communications failure (in some form or another) as a high level of concern for normal and emergent operations. Compounding this vulnerability is the available medical facilities across the region, with the only level I and II hospitals in the SCR located in El Paso County on the most eastern side of the region. Our most western counties have little to no medical capabilities putting them at an increased risk for vulnerability to mass casualty and medical surge incidents. See page 21 for a table listing the levels and locations of trauma centers in the South Central Region.

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Figure 15: SCHCC Hospitals and Trauma Centers

Hospital	Trauma Level	Location
UCHealth Memorial Hospital Central	I	El Paso County
Common Spirit Penrose Hospital	II	El Paso County
Children’s Hospital Colorado Springs	II	El Paso County
UCHealth Memorial Hospital North	III	El Paso County
Common Spirit Penrose-St Francis Medical Center	III	El Paso County
Common Spirit St Francis Hospital – Interquest	NonD	El Paso County
Heart of the Rockies Regional Medical Center	IV	Chaffee County
UCHealth Pikes Peak Regional Hospital	IV	Teller County
St Vincent General Hospital	NonD	Lake County
UCHealth Grandview Hospital	NonD	El Paso County
NO HOSPITAL	**	Park County

The review and assessment process outlined above resulted in the following incident types being identified as the top risks to the region's public health and medical system:

- Severe Weather (winter storms, high winds, tornados, flooding)
- Active Shooter / Workplace Violence (to include bomb threats)
- Pandemic / Emergent Infectious Disease (EID)
- Wildfires / External Fires
- Infrastructure / Power Failures (including communication failures)
- Supply Chain Disruptions

The JRA workgroup recognizes that an incident related to any of the identified threats would likely impact several agencies within a community. Likewise, incidents of increased complexity naturally create a greater demand on local resources. As such, the SCHCC would be a necessary resource in supporting a community affected by these and other complex situations. Coordinated planning, training and exercise can increase the SCHCC's ability to respond in times of crisis.

Professional insight as well as historical data influences the primary threats and hazards considered in the regional assessment. The data helps to form the JRA by using incidents that have already occurred within the South Central Region as well as provide lessons learned and improvement planning. However, it is still necessary to be aware of and plan for threats such as communicable diseases/epidemic and workplace violence or other active threats. By tracking national and international trends and incidents, the SCHCC intends to increase regional awareness and to plan for potentially catastrophic incidents.

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According to FEMA, there have been 53 natural disasters affecting the counties of the South Central Region from 1953 to 2025.

Some of the major incidents in which this coalition had a stake in include the following:

- **Waldo Canyon Fire (June 2012)** – Thousands were evacuated including at least one large nursing home. In its aftermath, environmental health and behavioral health were heavily engaged. Based on feedback during the health & medical debrief, the coalition drafted an evacuation assistance plan. Closing the main highway from Colorado Springs going west resulted in lack of readily available medical resupply (oxygen, pharmaceuticals) to rural areas within the coalition’s region.
- **Black Forest Fire (June 2013)** – Just one year later this community endured a similar experience with thousands evacuated and hundreds of homes destroyed. The coalition dedicated significant effort to contacting healthcare facilities, and especially focusing on home health agencies whose clients resided in the impacted area. Here again, environmental and behavioral health partners were heavily engaged. The coalition refined its regional evacuation assistance plan and improved its information sharing using a medical situation report.
- **Major Flooding (July 2015)** – Due in part to unusually heavy rainfall coupled with deforestation from the 2012 fire, this major disaster was accompanied with landslides and mudslides. Evacuations were ordered and some low-lying buildings were inundated with mud. Thankfully, there were very few casualties in both fires and the flooding.
- **Clinic active shooter incident (November 2015)** – This shooting incident lasted five hours and resulted in numerous casualties. The coalition helped coordinate the behavioral health engagement with all affected by this incident. A local hospital partner treated the casualties.
- **Weston Pass Fire (June/July 2018)** – Wildfire started from a lightning strike 9 miles South of Fairplay on 28 June. Wildfire burned 13,023 acres across Weston pass over the course of a month.
- **Chateau Fire (July 2018)** – This fire was ruled as arson with the suspicion of the source being an unattended campfire approx. 7mi NW of Cripple Creek. The Chateau Fire destroyed at least eight homes and numerous outbuildings and covered a total of 1,423 acres.
- **Colorado Springs Hailstorm (August 2018)** – Softball size hail fell over south Colorado Springs for about 10 minutes causing the evacuation of over 3,400 people from the Cheyenne Mountain Zoo, widespread damage to property, and minor injuries. EMS was dispatched to the Zoo to transport 16 people with injuries. The Zoo reported 5 animal deaths from the storm.
- **Hepatitis A Outbreak (October 2018 – Present)** – Colorado has been managing an outbreak of Hepatitis A since October 2018. Predominately impacted populations include those individuals experiencing homelessness, substance use issues, incarceration, and men having sex with men. As of December 26, 2019, there have been 315 confirmed cases with two (2) deaths and 227 hospitalizations statewide. To date, the NCR has had 149 confirmed cases (47%) across eight (8) of the ten (10) counties¹¹.
- **Decker Fire (September 2019)** – This fire started from a lightning strike and burned 8,959 acres. Behavioral Health coordinated with DHS and ESF#6 to match evacuees with homes following the Red Cross Needs Assessment to avoid having to utilize an overnight shelter. Additionally,

provided direct response to a family who lost their home and ongoing support and psychological first aid to evacuees as needed at various locations, including: the Disaster Assistance Center; and various tagging events that were set up for evacuees to return home. Public Health, attended community briefings providing psychological first aid, initiated public information especially between local and Type 1 team, assisted in set-up of Disaster Assistance Center, Evacuation Center, correspondence with CDPHE, and provided community re-entry information.

- **COVID-19 (March 2020-Present)** – The COVID-19 pandemic reached Colorado on March 5, 2020, when the state's first two cases were confirmed. As of June 29, 2021, Colorado had administered 6,177,682 COVID-19 vaccine doses, 7% more than the state's entire adult population. Since two doses are required for both the Pfizer and Moderna vaccines, the total number considered fully vaccinated is about 3 million residents, representing over 50 percent of the state's adult population. Despite mass vaccination initiatives throughout the state, positivity rates continue to fluctuate regularly hitting undesirable levels; this is partially due to several factors to include virus mutations (most recent strain is omicron), public events and travel, etc. As of December 24, 2021, the state has recorded 886,250 positive COVID-19 cases (approx. 15,325 per 100,000 state residents), with a hospitalization rate of approx. 5.7% and a mortality rate of approx. 1.2%.
- **Pediatric Surge (October 2022 - December 2022)** - On October 28, 2022, CDPHE released a HAN highlighting the increase in RSV activity putting a strain on Colorado's pediatric health care system. This HAN also outlined a concern for co-infections with RSV, SARS-CoV-2, and/or influenza to circulate during the respiratory season. The SCHCC activated a Pediatric Surge Coordination call on October 27, 2022 to obtain situational awareness of pediatric bed capacity, challenges, concerns, and resource needs. During the surge several executive orders were signed (D 2022 044 & D 2022 045) enabling hospitals the ability to apply for waivers to expand scope of practice for medical professionals to allow for additional flexibility to treat patients and to make beds and providers available to treat pediatric patients. Children's Hospital - Colorado Springs received waivers to increase bed capacity by 35 beds utilizing their CCB, sleep and infusion areas to accommodate high acuity RSV and ILI patients, elective surgeries and procedures were canceled, and working with PPROEM an off- site ACS was toured for possible use as an infusion clinic. Additionally, UHealth and Centura hospitals increased their NICU capacity, and received waivers to lower pediatric age to 16 years or 40 kg to allow for transfers from Children's to adult hospitals for care. Information sharing was completed by the SCHCC coordinator to the CDPHE OEPR Medical Operations Coordination Center for state support and assistance. As of December 19, 2022, cases of RSV were declining, pediatric med-surge and ICU beds were increasing in capacity across the region and state and the decision to deactivate the SCHCC Pediatric Surge Coordination call was approved.
- **Club Q Active Shooter:** - On November 20, 2022 an active shooter incident occurred at Club Q in Colorado Springs, CO. Five victims were killed and 25 victims injured. UHealth-South and Penrose St Francis hospitals received victims transported by EMS and CSPD. CSPD in partnership with Diversus Health and ECPH hosted a Community Resource Expo to provide community members with mental health resources, spiritual support, emotional support animals, childcare, emergency financial resources, LGBTQ+ support, meals, and other. As of December 22, 2022, local partners continue to support this community and set up long term resources.
- **St Francis Medical Center Internal Disaster (2024):** St Francis Medical Center informed the SCHCC that they had a disruption in their medical gas manifold and were in need of securing H

Tanks of Medical Air Gas in order to continue providing care for their patients. The SCHCC, through use of the State Hospital MOU, reached out to hospitals within the region to request assistance with supplying St Francis Medical Center with H Tanks of Medical Air Gas in order to provide them with this essential resource. Through the MOU the SCHCC secured seven (7) H Tanks from a partner hospital system that were made available to St Francis within a few hours of the request. The SCHCC remained available and was incorporated into the EOC meetings for situational awareness in the event that other resources were needed.

- Other incidents included landslides and a train derailment with non-toxic chemicals in which a local hospital took all precautionary decontamination actions.
-

SOUTH CENTRAL REGIONAL PRIORITIZED GAPS

The South Central Region’s healthcare system has been building relationships, developing local emergency response plans and procedures, and working collaboratively for many years. As a result, the region has a strong healthcare coalition, dedicated Emergency Support Function (ESF#) 8, Office of Emergency Management, and health and medical branch leads. As such, procedures around health and medical response and support are well documented on a local level. These systems have been tested through exercises and real-world incidents on multiple occasions, resulting in lessons learned and improvement activities, all of which have strengthened the support and response network.

The SARS-CoV-2 and Pediatric Surge response(s) has required response and coordination that has crossed local, regional and state lines since 2019. As such, the SCHCC has had the opportunity to test and review our response plan on a large scale and extended platform. Through these events, multiple after actions reviews (AAR) have been completed and data analyzed to provide direction for needed updates.

As an arm of the south central regional response network, the SCHCC responds through a regional coordination/support system, providing information sharing capabilities in an effort to bridge needs, available resources and capability across member agencies. Planning for such capabilities requires the SCHCC to continue to develop an operating plan that will map out regional coordination for response and recovery of the health and medical system during and after an event. In an effort to close this gap, the SCHCC has identified three primary areas that need to be addressed at the regional level:

- Regional Coordination
- Regional Communication
- Regional Situational Awareness

Regional Coordination

The coordination of local ESF #8 and health and medical branches have been the focus of the region in recent years, as has organization/facility level preparedness. However, over the past year, the focus on local preparedness has shifted to support a broader regional operating picture. Over the course of this year the SCHCC tested our response plan through exercise and real-world events, providing the ability to identify any gaps or procedures that could impact response through conflict or competition of efforts in an individual jurisdiction. In addition, the SCHCC has focused efforts on expanding current plans and actions to include recent concerns spanning the healthcare and medical sector (e.g., cybersecurity, downtime of essential services, and patient movement/distribution during MCI events). It is imperative that the SCHCC continues to identify any procedures that may delay and/or create competition for resources and support across the region to update and ensure the strength of our response capabilities. In addition, the needs of those in more rural parts of the region will be better served if coordination efforts are inclusive in nature. To this end, the SCHCC has worked to align with the new central area structure of the Emergency Preparedness and Response (EPR) coordinator, attending planning sessions, building information sharing capabilities, and partnering with local agencies to address gaps that impact our members across the region.

In addition, further review and discussion are needed to identify and plan for responding to the unique vulnerabilities facing persons at risk in our region. The SCHCC continues to work with and support efforts by the DHSEM Access and Functional Needs Coordinators, as well as lead the Home Health & Hospice Emergency Preparedness Network group, and Colorado Shelter Planning for persons with disabilities, in order to continue educating ourselves and our members in planning and response efforts that meet our whole community. Moreover, a strong focus has been put on building deeper relationships with rural EMS partners to develop greater understanding and alignment with the risks and vulnerabilities of our frontier communities. Further work is needed to expand relationships within our regional hospitals, to include hospital administration leads. The ability to integrate individual and community level approaches within our response operations will enable our region to overcome potential barriers regarding the locating and reaching of residents across all of our communities and jurisdictions before and during an emergency.

Regional Communication

At the local level, communication capabilities within the SCHCC are continually developed, tested, and revised; this includes the regular facilitation of redundant communication drills. With local systems in place, the SCHCC has focused on review and testing regional communication capabilities. Over the past year, the SCHCC has utilized multiple platforms to provide information sharing and situational awareness, however continued work is needed in order to ensure a robust and operating communication system across the South Central Region. Additionally, as the region includes urban, rural and frontier interfaces, each with their own capabilities and obstacles, the SCR endeavors to continue work to identify communication platforms that support all member agencies and jurisdictions. This includes a plan for using and/or creating, in some cases, radio frequencies that are pre-identified for use during a response. Frequencies are continuing to be identified across counties, and these groups are working to build increased capabilities across the region.

Over the course of the last year, the SCHCC has been co-leading an effort to build and guide a task force aimed at finding potential solutions to the challenges faced with patient tracking. A statewide task force was convened in November of 2021 and continues to drive this important work today, implementing a

pilot of new communication capabilities, and developing guidance and structure to support use of such a system across the state of Colorado. The SCHCC leads the way in incorporating the Pilot, which utilized the system, Pulsara for pre-hospital to hospital communication. Through the implementation of the pilot, exercises and drills were completed to test the efficacy, functionality, and training of users on the software. Work will continue with this task force over the coming year, expanding the pilot to full implementation across the South Central Region and state of Colorado, provided funding can be secured.

Regional Situational Awareness

The above two priorities, coordination, and communication are both components of regional situational awareness. Having a plan, and the structure in place to oversee coordination and communication efforts across the region, has a direct positive impact on situational awareness across the affected jurisdictions. Having a high-level view of the region will help to inform planning and response efforts on both the local and regional level.

As we have experienced during several response efforts, the statewide response has required greater coordination across the south central region, neighboring regions, and the state. The ability of the SCHCC to provide situational reports has helped to inform the larger response as well as to support coordination across regions.

The SCHCC continues to revisit how information can be gathered and shared most effectively across necessary partners in a way that benefits both member agencies, responders, surrounding regions and the state. Additional work to streamline situational awareness is needed in order to further develop systems and processes for information sharing within the south central region.

It is important to note that these regional activities are not meant to replace, duplicate, or circumvent standardized processes that already exist within the Incident Command System (ICS), Emergency Operations Center (EOC) structure, or ESF #8 systems. The purpose of creating a regional system is to support and supplement response efforts by providing regional coordination, managing regional communication, and developing regional situational awareness.

SCHCC TOP REGIONAL HAZARDS AND COMMUNITY INTERSECTIONS

Access and Functional Needs (AFN) is a framework that promotes inclusive emergency preparedness and response. Access and functional needs identify five areas that everyone within our population needs to be able to get (access) or do (function) in emergencies. Integrating access and functional needs ensures that our emergency systems support the different ways that Colorado populations achieve these five needs, which are identified through the C-MIST tool: communication; maintaining health; independence; support, safety, and self-determination; and transportation.

Understanding what access and functional needs might be disrupted or challenged during an event is necessary in order to ensure that our community is able to prepare for, respond to, and recover from disasters within our region. The following table outlines the five functional needs (e.g., C-MIST) that are impacted during events and contribute to the health disparities faced by our communities through these events. (See Appendix D: Resilience and Preparedness Tool on Page 38 for additional maps and visuals.)

Figure 16: C-MIST Hazard and People Intersections

Community Group	Severe Winter Storm	High Wind Event	Wildland Fire	Communicable Disease/ Epidemic	External Flood
Long Term Care / Skilled Nursing	C, M, T	C, T	C, M, I, S, T	M, S	C, M, T
Behavioral Health	C, M	S	C, I, S	S	C, M
Community Health Clinic	C, M, S, T	C, S, T	C, M, S	M, S	C, M, S, T
Home Health	C, M, I, S, T	C, I, S, T	C, M, I, S, T	M, S	C, M, I, S, T
Dialysis	C, M, S, T	C, M, T	C, M, S, T	M, S	C, M, S, T
Hospice	C, M, S, T	C, T	C, M, S, T	M, S	C, M, S, T
Front Range Hospitals	C, T	C, T	C, S, T	M, S	C, T
Rural Hospitals	C, T	C, T	C, T	M, S	C, T

Figure 17: Regional HCC Critical Infrastructure

Critical Infrastructure Sector	Members of the Coalition recognize the need of the health and medical community to build, sustain and improve sector within the region.	Members of the Coalition recognize a significant reliance on sector to conduct business and serve citizens.
Chemical	X	X
Commercial facilities		X
Communications	X	X
Critical manufacturing		
Dams		X
Defense industrial base		
Emergency services	X	X
Energy	X	X
Financial		
Food and agriculture		X
Government facilities		
Healthcare and public health	X	X
Information technology	X	X
Nuclear reactors, materials and waste		
Transportation	X	X
Water and Wastewater systems		X

See [FEMA’s Critical Infrastructure Sectors](#) for additional information about each sector.

CONCLUSIONS / FUTURE WORK

The outputs of the HCC JRA will be used by the SCHCC to structure and prioritize its efforts in planning, training, and exercising. It will also influence the projects that the SCHCC will fund for the current and upcoming fiscal years. Further, the planning, training and exercise efforts will be coordinated with local and regional All-Hazards improvement planning..

The SCHCC will use the information from the JRA to continually update the regional preparedness plan detailing the strategies and tactics that promote communications, information sharing, resource coordination, and operational response planning with HCC core members and other members/stakeholders within the South Central Region.

The Regional JRA will be reviewed annually with the intent of improving and refining the data to represent the hazards and vulnerabilities of the region as well as detail the resources, potential needs and gaps of the health and medical community.

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APPENDIX A: REGIONAL DESCRIPTIONS BY COUNTY

El Paso County lies in east central Colorado and encompasses 2,126 square miles. The altitude ranges from about 5,095 feet on the southern boarder at Black Squirrel Creek to 14,110 feet on the summit of Pikes Peak, near the western boundary. The county seat is located in Colorado Springs. Major cities with the county include Colorado Springs (population of 478,961), Fountain (population of 29,802) and Manitou Springs (population of 4,858).

Teller County lies to the west of El Paso County and encompasses 559 square miles of mountainous terrain and has a population of 24,710. The county seat is Cripple Creek with a population of 1,155 and an elevation of 9,494 feet; the most populous city is Woodland Park with a population of 7,920 and an elevation of 8,465 feet.

Chaffee County lies to the west of Teller County and encompasses 1,015 square miles of mountainous terrain and has a population of 19,476. The county seat is in Salida at an elevation of 7,083 feet and a population of 5,666 (Salida is also the most populous city in the county).

Lake County lies to the north of Chaffee County and encompasses 384 square miles of mountainous terrain and has a population of 7,436. The county seat and only municipality is Leadville with an elevation of 10,152 and a population of 2,633.

Park County lies in the center of the South Central Region (and the state of Colorado) and encompasses 2,194 square miles of mountainous terrain with an average elevation of 9,000 feet. The county seat is Fairplay with a population of 724. The community of Bailey, 40 miles west of Denver, houses the majority of the county's population with 8,807 residents.

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APPENDIX B: RESOURCES FOR DATA

The following resources were used in part to compose this document. Specific quotes and references throughout the document are denoted with a parenthetical number that correlates to this list of resources:

- 1) Colorado Department of Public Health and Environment (CDPHE). Community Inclusion Maps for select counties. http://www.cohealthmaps.dphe.state.co.us/colorado_community_inclusion/ Accessed 24 January 2025.
- 2) CDPHE. Community Level Estimates for select counties. http://www.cohealthmaps.dphe.state.co.us/cdphe_community_level_estimates/ Accessed 24 January 2025.
- 3) United States Census Bureau. American Fact Finder for Colorado and select counties. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> Accessed 4 December 2023.
- 4) CDPHE. Health Care Program (HCP) for Children with Special Needs – located in local public health agencies. <https://www.colorado.gov/pacific/cdphe/hcp> Accessed 11 December 2021.
- 5) State of Colorado, State Demography Office. <https://demography.dola.colorado.gov/> Accessed 11 December 2021.
- 6) Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index for 2018. Database for Colorado and select counties. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html. Accessed on 24 January 2025. (also accessed at <https://svi.cdc.gov/>)
- 7) Federal Emergency Management Agency (FEMA). Data Visualization: Disaster Declarations for State and Counties. <https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties> Accessed 11 December 2021.
- 8) Colorado Demographics. Colorado Populations by County: https://www.colorado-demographics.com/counties_by_population Accessed 4 December 2023.
- 9) Wikipedia. COVID-19 pandemic in Colorado. https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Colorado Accessed 11 December 2021.
- 10) CDPHE. Colorado COVID-19 Positive Cases and Rates of Infection by County of Identification, Colorado COVID-19 Positive Cases and Rates of Infection by County of Identification. <https://data-cdphe.opendata.arcgis.com/datasets/colorado-covid-19-positive-cases-and-rates-of-infection-by-county-of-identification/explore?location=38.985249%2C-105.550873%2C7.71> Accessed 11 December 2021.
- 11) CDPHE. Colorado Health Information Dataset (CoHID). <https://cohealthviz.dphe.state.co.us/t/HealthInformaticsPublic/views/COHIDBirthsDashboardAllYearsExcludesRace/BirthsAllYearsExcludesRace?%3Aembed=y&%3Aiid> Accessed 4 December 2023.
- 12) Resilience Analysis and Planning Tool (RAPT) [Resilience Analysis and Planning Tool \(RAPT\)](#) Accessed 24 January 2025.

APPENDIX C: SOCIAL VULNERABILITY INDEX (SVI)

SVI is ranked using Census tracts within each state and the District of Columbia, to enable mapping and analysis of relative vulnerability in individual states. Tracts are ranked against each other throughout the United States in order to run mapping and analysis of relative vulnerability in multiple states, or across the U.S. as a whole. Tract rankings are based on percentiles. Percentile ranking values range from 0 to 1, with higher values indicating greater vulnerability. For each tract, a percentile rank is generated among all tracts for:

- 1) the fifteen individual variables,
- 2) the four themes, and
- 3) the subject's overall position.

Tracts in the top 10%, i.e., at the 90th percentile of values, are given a value of 1 to indicate high vulnerability. Tracts below the 90th percentile are given a value of 0. For a theme, the flag value is the number of flags for variables comprising the theme. The overall flag value was calculated for each tract as the number of all variable flags.

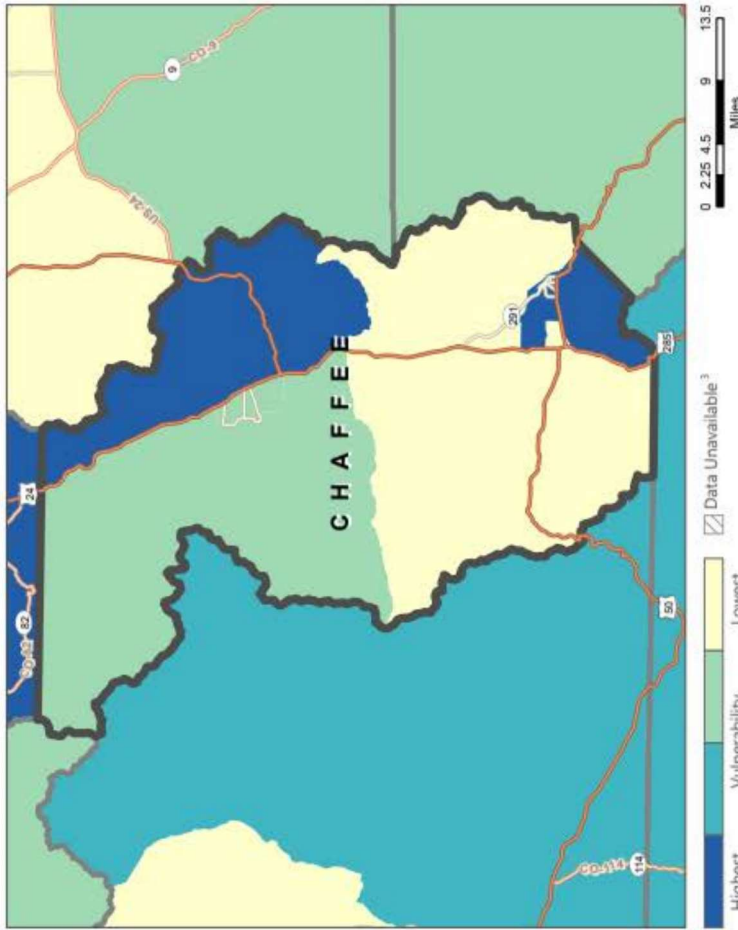
The following graphics are county maps prepared by the CDC intended to summarize the social vulnerability index for each county in the SCR. The summary for the SVI of the SCR and each county can be found beginning on page 33 of this document.

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CDC/ATSDR Social Vulnerability Index 2022

CHAFFEE COUNTY, COLORADO

Overall Social Vulnerability¹



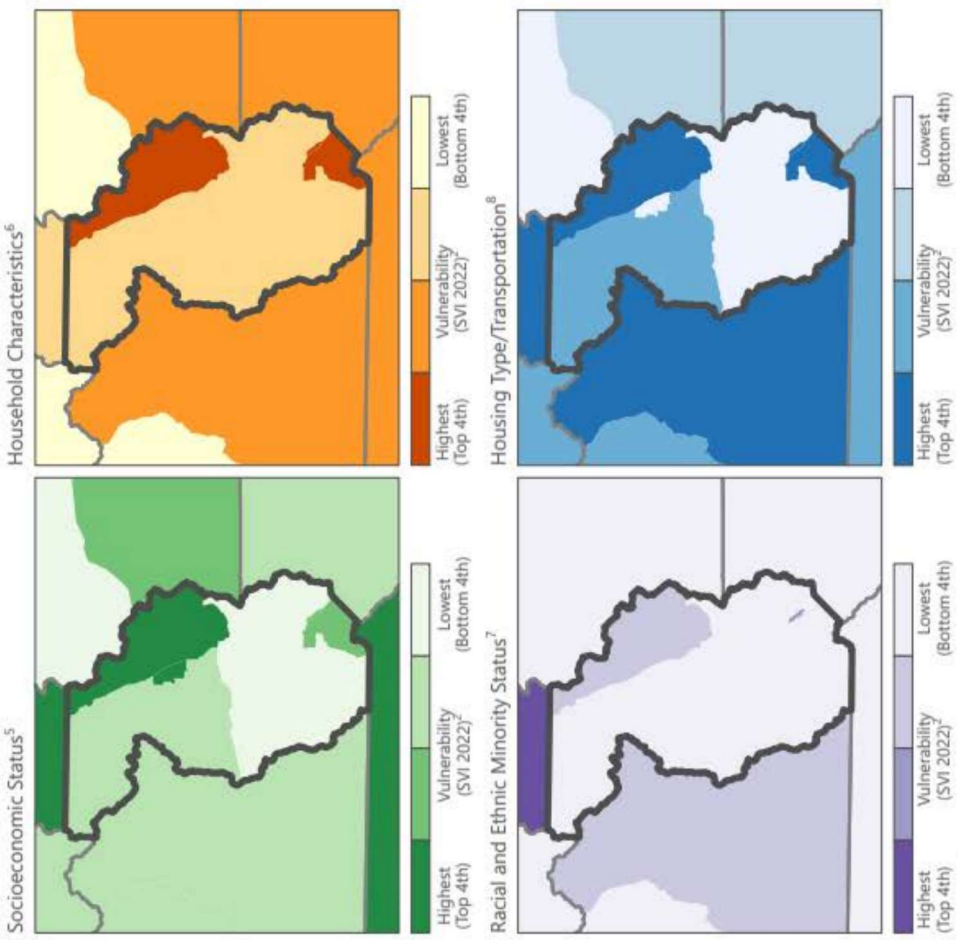
Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)**² County Map depicts the social vulnerability of communities, at all the variables to provide a comprehensive assessment.



CDC/ATSDR SVI 2022 – CHAFFEE COUNTY, COLORADO



CDC/ATSDR SVI Themes



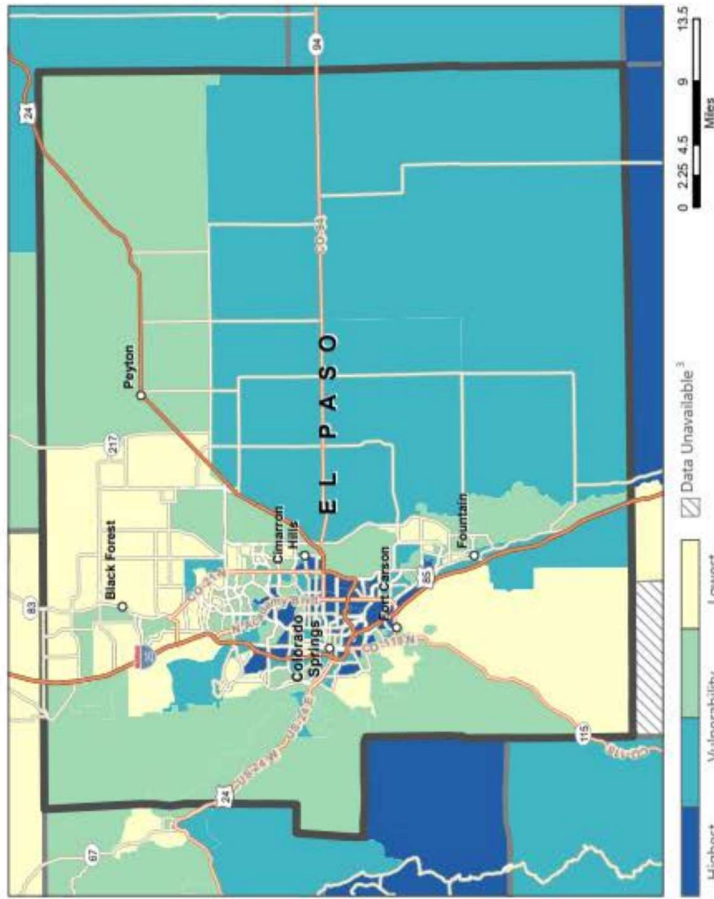
Data Sources: CDC/ATSDR/ATSDR U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: Overall Social Vulnerability at 14 variables. One variable is unavailable at census tract level. The CDC/ATSDR SVI combines percentile rankings of U.S. Census variables. Color scale: Highest (Top 4th) to Lowest (Bottom 4th).
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011, 8(1). CDC/ATSDR SVI web page: <https://www.atdsd.cdc.gov/placelandhealth/svi/index.html>.

CDC/ATSDR Social Vulnerability Index 2022

EL PASO COUNTY, COLORADO



Overall Social Vulnerability¹

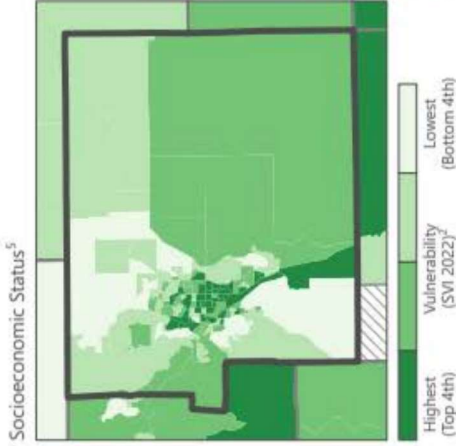


Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)² County Map** depicts the social vulnerability of communities, at census tract level, within a specified county.

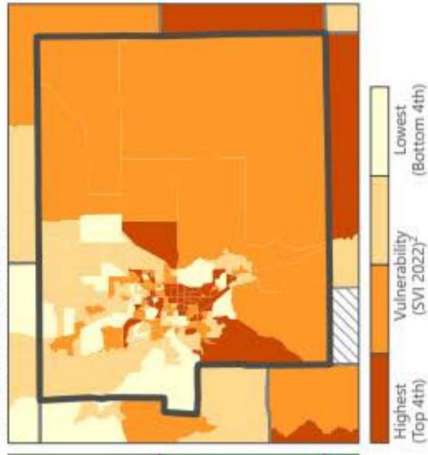


CDC/ATSDR SVI Themes

Socioeconomic Status⁵



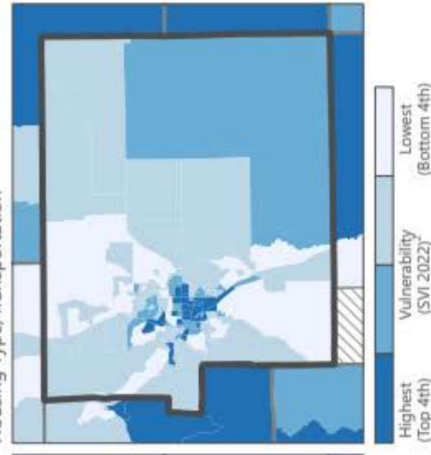
Household Characteristics⁶



Racial and Ethnic Minority Status⁷



Housing Type/Transportation⁸

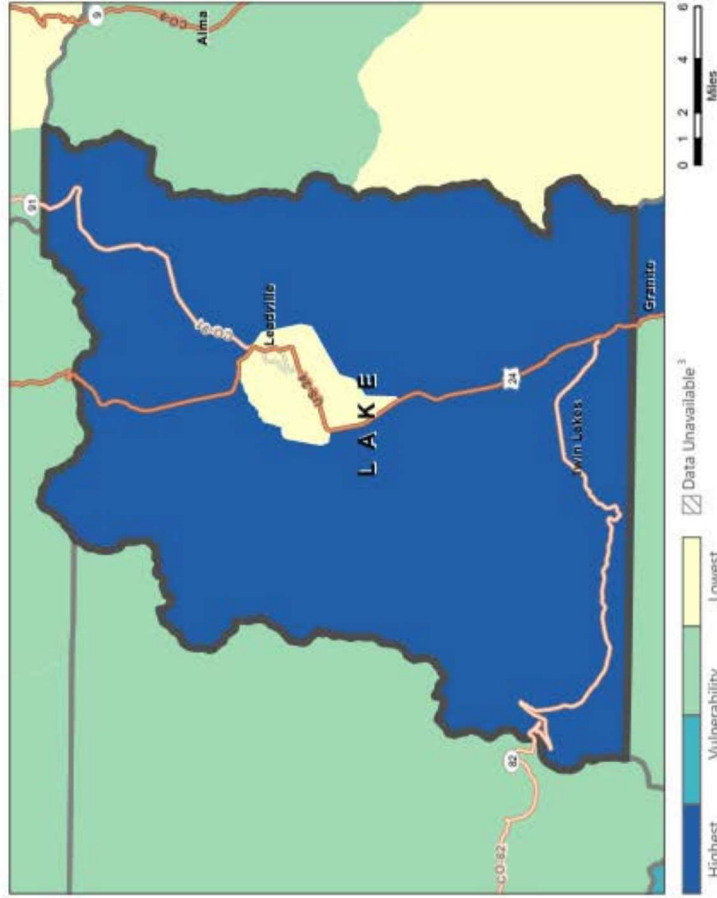


Data Sources: CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: Overall Social Vulnerability: All 15 variables. *One or more variables unavailable at census tract level. **The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. **Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single Parent Household, English Language Proficiency. Race/Ethnicity: Hispanic or Latino (of any race); Black and African American; Not Hispanic or Latino; American Indian and Alaska Native; Not Hispanic or Latino; Asian and Other Pacific Islander; Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Race, Not Hispanic or Latino. Housing Type/Transportation: Multi-Unit Structure, Mobile Home, Crowding, No Vehicle, Group Quarters.
Projections: NAD 1983 StatePlane Colorado Central FIPS 5002
References: Panapan, B.E., et al. A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. (8).
 CDC/ATSDR SVI web page: <https://www.atdsr.cdc.gov/placeandhealth/svi/index.html>.

CDC/ATSDR Social Vulnerability Index 2022

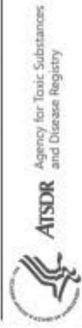
LAKE COUNTY, COLORADO

Overall Social Vulnerability¹



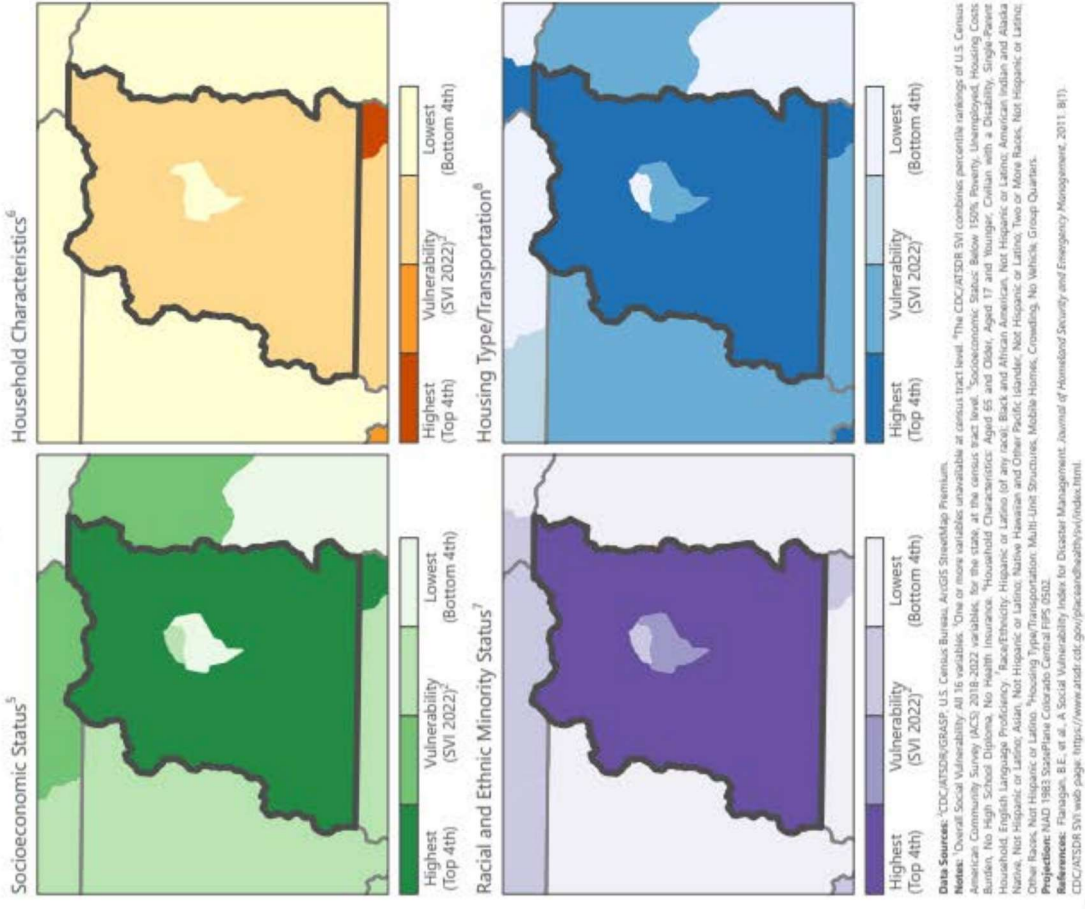
Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022) County Map depicts the social vulnerability of communities, at census tract level, within a specified

county. CDC/ATSDR SVI 2022 groups into **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.



CDC/ATSDR SVI 2022 – LAKE COUNTY, COLORADO

CDC/ATSDR SVI Themes



Data Sources: CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: Overall Social Vulnerability: All 16 variables. One or more variables unavailable at census tract level. The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. Socioeconomic Status: Below 150th; Poverty: Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Childless with a Disability, Single Parent Household, English Language Proficiency, Race/Ethnicity: Hispanic or Latino (of any race), Black and African American, Not Hispanic or Latino, American Indian and Alaska Native, Non-Hispanic, Not Hispanic or Latino, Non-Hispanic, Not Hispanic or Latino, Other Races, Not Hispanic or Latino. Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 StatePlane Colorado Central FIPS 5002.
References: Fauget, B.E., et al. A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1). CDC/ATSDR SVI web page: <https://www.atdsr.cdc.gov/geospatialhealth/vi/index.html>.

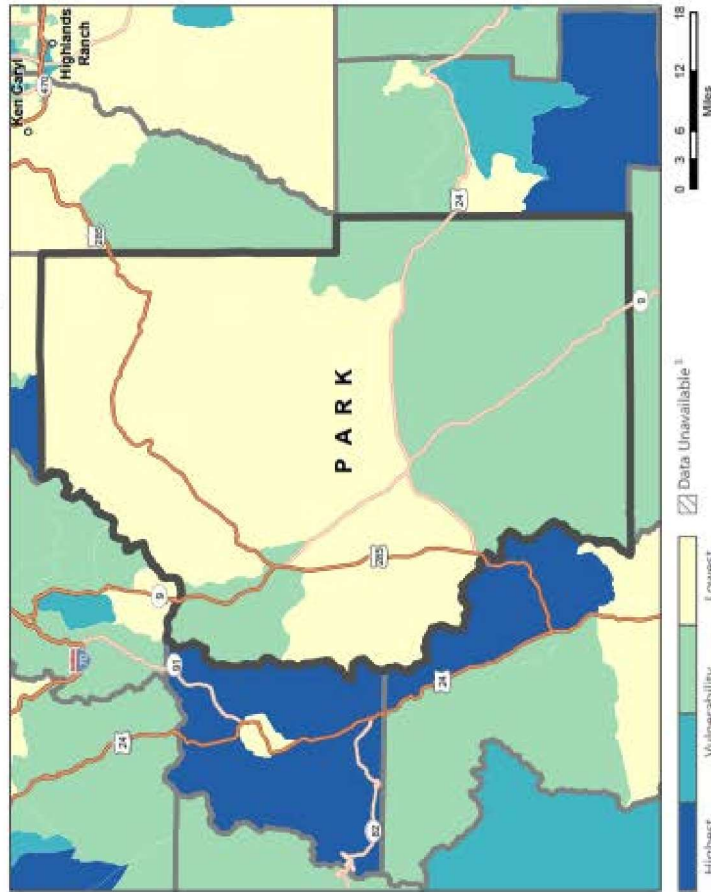
CDC/ATSDR Social Vulnerability Index 2022

PARK COUNTY, COLORADO

CDC/ATSDR SVI 2022 – PARK COUNTY, COLORADO



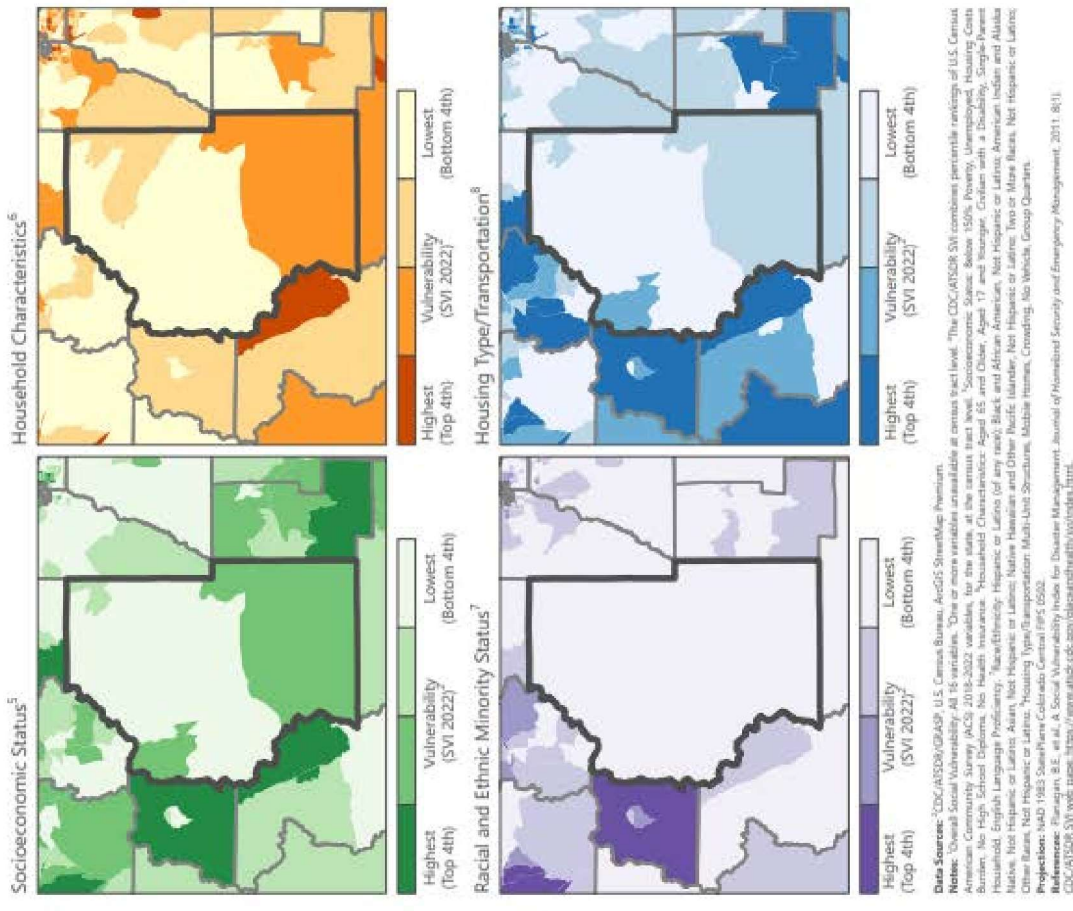
Overall Social Vulnerability¹



Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)** County Map depicts the social vulnerability of communities, at census tract level, within a specified comprehensive assessment.

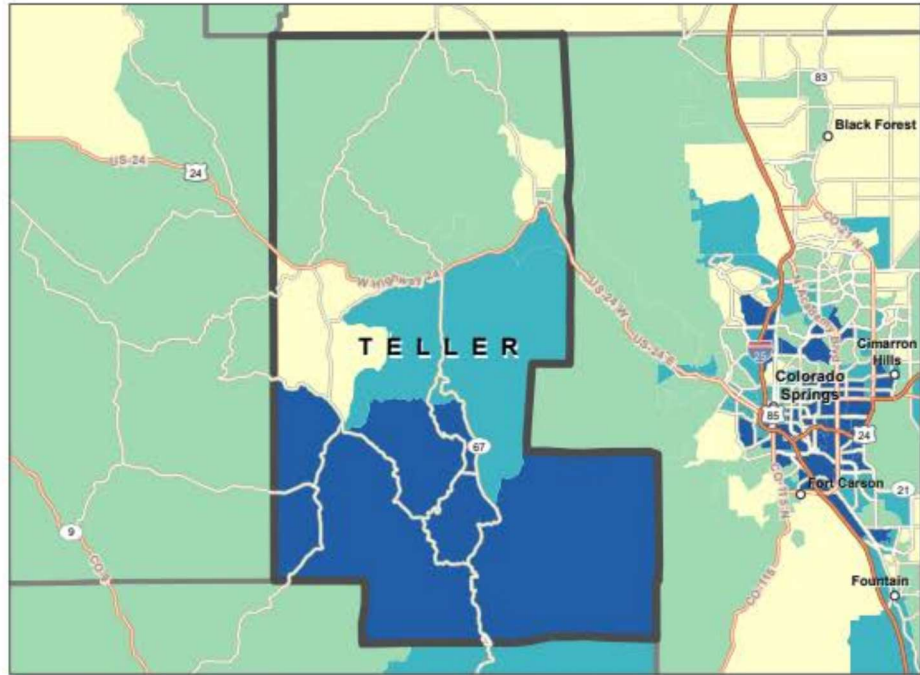


CDC/ATSDR SVI Themes



Data Source: CDC/ATSDR/GRSIP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: Overall Social Vulnerability: All 15 variables. One or more variables unavailable at census tract level. The CDC/ATSDR SVI combines percentile rankings of U.S. Census Bureau's 15 variables: (1) Population Density at Risk, (2) Minority Population, (3) Housing Instability, (4) Household Crowding, (5) Housing Type/Transportation, (6) Vehicle Access, (7) Household Income, (8) Health Insurance, (9) Household Characteristics: Social 65 and Older, Social 17 and Younger, (10) Single-Family Units, (11) Household Language Proficiency, (12) Race/Ethnicity: Hispanic or Latino (of any race), Black and African American, Not Hispanic or Latino, American Indian and Alaska Native, Not Hispanic or Latino, Asian, Not Hispanic or Latino, Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino, Two or More Races, Not Hispanic or Latino, Other Race, Not Hispanic or Latino. "Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters."
Projection: NAD 1983 StatePlane Colorado Central FIPS 5002.
Reference: Paragiani, B.E., et al. A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
 CDC/ATSDR SVI web page: <https://www.atdsr.cdc.gov/areasofhealth/svi/index.html>.

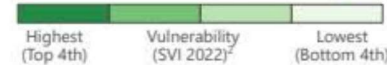
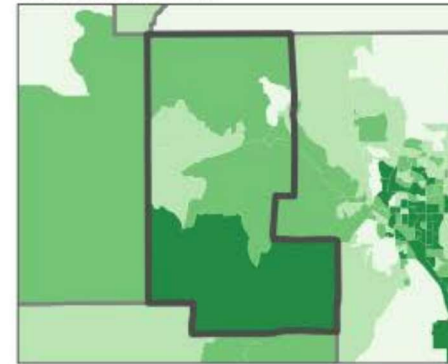
Overall Social Vulnerability¹



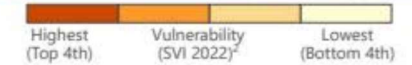
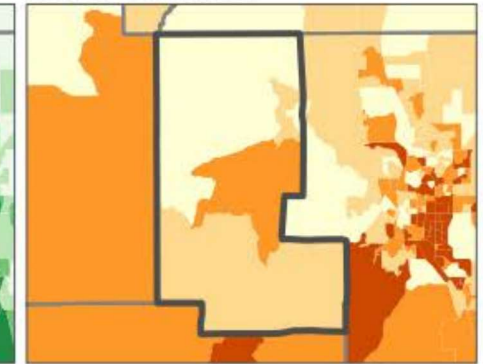
Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)**¹ County Map depicts the social vulnerability of communities, at census tract level, within a specified county. CDC/ATSDR SVI 2022 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

CDC/ATSDR SVI Themes

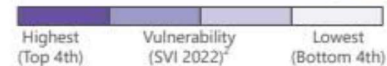
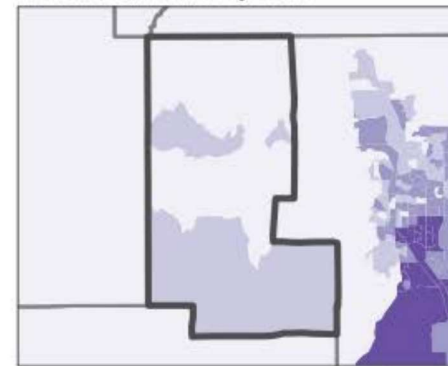
Socioeconomic Status⁵



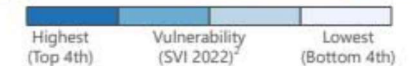
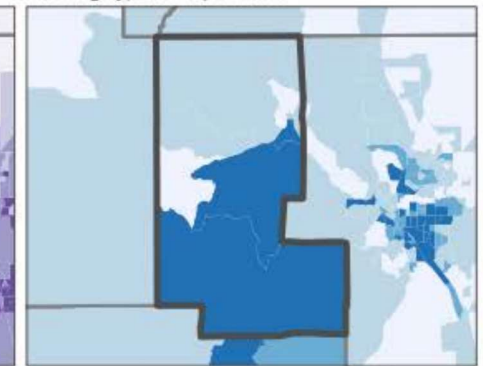
Household Characteristics⁶



Racial and Ethnic Minority Status⁷



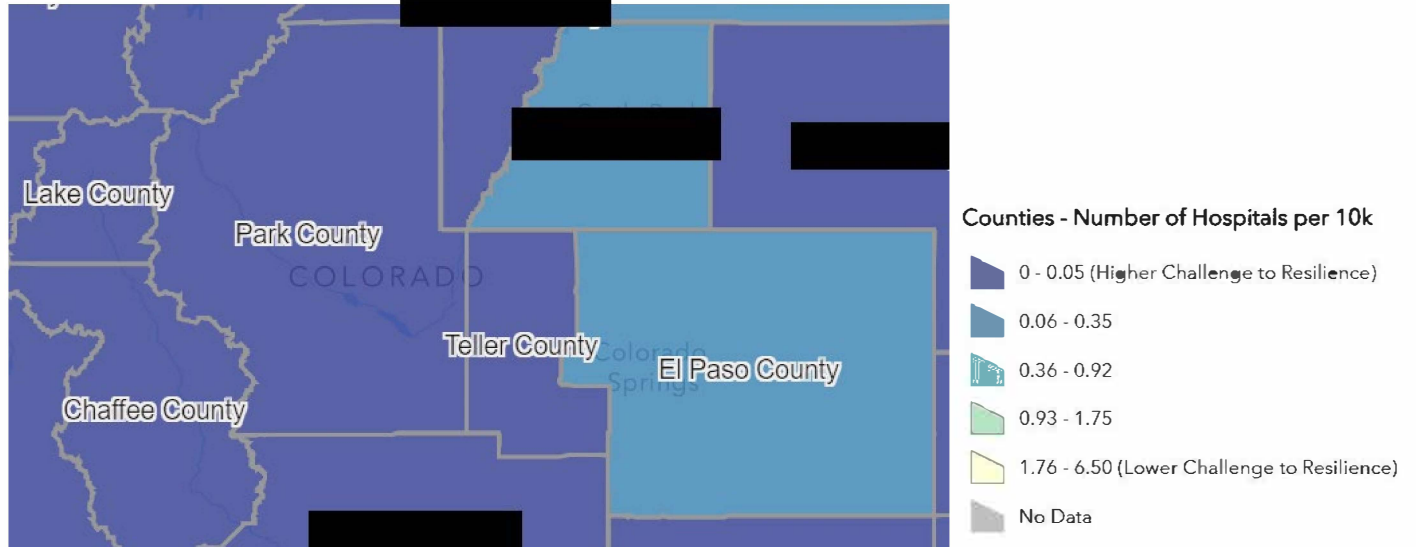
Housing Type/Transportation⁸



Data Sources: ¹CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: ²Overall Social Vulnerability: All 16 variables. ³One or more variables unavailable at census tract level. ⁴The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. ⁵Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. ⁶Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single-Parent Household, English Language Proficiency. ⁷Race/Ethnicity: Hispanic or Latino (of any race); Black and African American, Not Hispanic or Latino; American Indian and Alaska Native, Not Hispanic or Latino; Asian, Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Race, Not Hispanic or Latino. ⁸Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projections: NAD 1983 StatePlane Colorado Central FIPS 5002.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011, 8(1).
 CDC/ATSDR SVI web page: <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>.

The Resilience Analysis and Planning Tool (RAPT) gives everyone access to powerful data and GIS mapping that can help everyone understand their community. RAPT demographic indicators are pulled from U.S. Census American Community Survey (ACS) 2018–2022 five-year estimates. RAPT utilizes People and Community Indicators, Infrastructure Indicators, and Hazard and Risk Indicators to create data layers. For the purpose of SCHCC, People and Community Indicators were utilized to generate the regional maps below:

Counties: Number of Hospitals Per 10k People



Counties: Population with a Disability

