Northeast All Hazards Region, Colorado

Threat and Hazard Identification and Risk Assessment

December, 2016

Cheyenne County, Kit Carson County, Larimer County, Lincoln County, Logan County, Morgan County, Phillips County, Sedgwick County, Washington County, Weld County, Yuma County

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Chapter 1: Introduction and Process

1.1 THIRA Process

Every community should understand the risks it faces. By understanding its risks, a community can make smart decisions about how to manage risk, including developing needed capabilities. Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences.[1] By considering changes to these elements, a community can understand how to best manage and plan for its greatest risks across the full range of the threats and hazards it faces. The THIRA process helps communities identify capability targets and resource requirements necessary to address anticipated and unanticipated risks.

The THIRA follows a four-step process, as described in Comprehensive Preparedness Guide 201, Second Edition:

1. **Identify the Threats and Hazards of Concern.** Based on a combination of past experience, forecasting, expert judgment, and other available resources, communities identify a list of the threats and hazards of primary concern to the community.
2. **Give the Threats and Hazards Context.** Communities describe the threats and hazards of concern, showing how they may affect the community.
3. **Establish Capability Targets.** Communities assess each threat and hazard in context to develop a specific capability target for each relevant core capability. The capability target defines success for the capability.
4. **Apply the Results.** Communities estimate the required resources per core capability to meet the capability targets.

STEP 1	STEP 2	STEP 3	STEP 4
Identify Threats and Hazards of Concern	Give Threats and Hazards Context	Establish Capability Targets	Apply the Results
List of Threats/ Hazards	Context Descriptions For Threats/ Hazards	Capability Target Statements	Resource Requirements

[1] Figure1. The THIRA Process

1.2   Relationship to Other Risk Assessments

Emergency managers and homeland security professionals use the THIRA process every day through the normal course of their work. The process builds on existing local, state, tribal, territorial Hazard Identification and Risk Assessments (HIRAs) by:

- Broadening the threats and hazards considered to include human-caused threats and technological hazards
- Incorporating the whole community into the planning process, including individuals; families; businesses; faith-based and community organizations; nonprofit groups; schools and academia; media outlets; and all levels of government, including local, state, tribal, territorial, and Federal partners
- Providing increased flexibility to account for community-specific factors

1.3   Core Capabilities

Communities use the core capabilities described in the National Preparedness Goal to organize their capability targets in the THIRA process (see Table 1). The core capabilities provide a common language for preparedness across the whole community. The core capabilities are relevant to all five preparedness mission areas:

- **Prevention:** Prevent, avoid, or stop an imminent, threatened, or actual act of terrorism.
- **Protection:** Protect our citizens, residents, visitors, and assets against the greatest threats and hazards in a manner that allows our interests, aspirations, and way of life to thrive.
- **Mitigation:** Reduce the loss of life and property by lessening the impact of future disasters.
- **Response:** Respond quickly to save lives; protect property and the environment; and meet basic human needs in the aftermath of a catastrophic incident.
- **Recovery:** Recover through a focus on the timely restoration, strengthening, and revitalization of infrastructure, housing, and a sustainable economy, as well as the health, social, cultural, historic, and environmental fabric of communities affected by a catastrophic incident.

1.4   Whole Community Involvement

Developing an effective THIRA requires active involvement from the whole community. When developing and updating THIRAs, jurisdictions should ensure their assessment and planning effort includes representatives and perspectives of the whole community. An informed public is the best advocate for building and sustaining required capabilities and creating a secure and resilient community. THIRAs developed with whole community involvement are more comprehensive and measurable.

Prevention	Protection	Mitigation	Response	Recovery
Planning				
Public Information and Warning				
Operational Cooperation				
Forensics and Attribution Intelligence and Information Sharing Interdiction and Disruption Screening, Search, and Detection	Access Control and Identity Verification Cybersecurity Intelligence and Information Sharing Interdiction and Disruption Physical Protective Measures Risk Management for Protection Programs and Activities Screening, Search, and Detection Supply Chain	Community Resilience Long-term Vulnerability Reduction Risk and Disaster Resilience Assessment Threats and Hazard Identification	Critical Transportation Environmental Response/ Health and Safety Fatality Management Services Fire Management and Suppression Infrastructure Systems Mass Care Services Mass Search and Rescue Operations On-scene Security Protection and Law Enforcement Operational Communications Logistics and Supply Chain Management Public Health, Healthcare and Emergency Medical Services	Economic Recovery Health and Social Services Housing Infrastructure Systems Natural and Cultural Resources

Table 1: The THIRA Process

1.5   Updating Previous THIRAs

When reviewing, revising, or updating an existing THIRA, jurisdictions should examine the success and/or limitations of previous whole community engagement. In particular, jurisdictions should assess whether partners representing the five preparedness mission areas and 31 core capabilities participated. Communities are encouraged to engage representatives from different homeland security and public safety disciplines and from outside government.

For each subsequent THIRA update, communities should also review how the threat and hazard landscape has changed. In particular:

- Include new or emerging threats and hazards, to include future risks (Step 1)
- Update threat and hazard context descriptions based on demographic factors (Step 2)
- Revise capability targets based on current capability levels (Step 3)
- Refine resource requirements based on changes made in previous steps and review how successful preparedness measures, such as protection or mitigation efforts, affect their THIRAs. (Step 4)

1.6   Northeast Region Approach

Each of the eleven counties has already prepared Hazard Mitigation Plans or Pre-Disaster Mitigation Plans. These plans have undergone processes very similar to the THIRA process detailed above. The starting point for the Regional THIRA is to evaluate the hazards previously identified and determine if they are still applicable, then identify any new potential hazards to the region, and finally, identify new technological and man-made threats that may not have been considered previously. 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 region. 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.

Community involvement was obtained through the use of Regional Working Groups. Representatives from the community, healthcare, voluntary organizations and religious organizations (in addition to emergency management personnel) were included in the process of identifying potential threats and hazards, and giving them context.

Chapter 2: Region Geography and Demographics

2.1   Colorado

The State of Colorado Department of Public Safety, Division of Homeland Security and Emergency Management, administers Homeland Security programs for the state. The state is divided into nine All-Hazards Regions, as depicted in Figure 2. Each region is responsible for all-hazards planning within their region, and reports through the state.
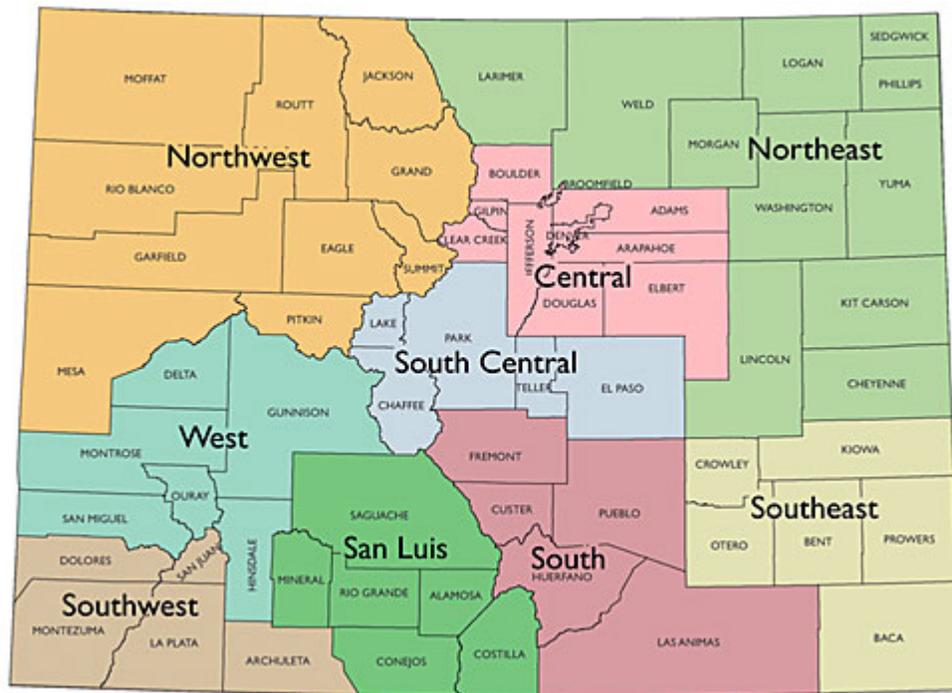
Figure2. Colorado All-Hazards Regions

2.2   Northeast Region

The Northeast Region is comprised of the following eleven counties: Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld and Yuma counties which lay mainly to the east of the Front Range of the Rocky Mountains and encompasses both rural and urban areas. 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. This will be more evident in Chapter 4 as context is applied to the identified threats and hazards. See Table 2 for region geography and demographics.

Table 2. Geography and Demographics for Northeast Region[2]

Demographic Municipality	Population (to nearest 100)	Area in Square Miles	Population Density (persons per square mile)
Cheyenne	1,890	1,778.28	1.0
Kit Carson	8,037	2,160.82	3.8
Larimer County	315,988	2,596.00	115.4
Lincoln	5,430	2,577.63	2.1
Logan County	22,450	1,838.55	12.4
Morgan County	28,404	1,280.43	22.0
Phillips	4,356	687.93	6.5
Sedgwick County	2,360	548.04	4.3
Washington	4,308	2,518.03	1.9
Weld County	269,785	3,987.24	63.4
Yuma	10,151	2,364.41	4.2

Further detail on each county regarding history, demographics, geography and capability can be found in jurisdiction-specific plans.

Chapter 3: Threat and Hazard Identification

3.1   Previously Identified Threats and Hazards

Each jurisdiction within the region has previously gone through a Hazard Identification and Risk Assessment (HIRA) process in preparing their mitigation plans. Those plans used historical data, existing plans, neighboring community plans, intelligence assessments, community input and other means to identify the applicable threats and hazards (Table 3). Hazards identified by all 11 counties are highlighted in red, and those identified by most counties are highlighted in yellow, and they will serve as the starting point for further hazard and threat analyses. However, by no means are the non-highlighted hazards excluded from further analysis.

Table 3. Previously Identified Threats and Hazards

Jurisdiction	Cheyenne County	Kit Carson County	Larimer County	Lincoln County	Logan County
Hazards	Floods	Floods	Floods/Flash Floods	Floods	Floods
	Dam Failure	Dam Failure	Dam Failure & Irrigation Ditch	Winter Storms	Dam Failure
	Blizzard & Winter Storms	Blizzard & Winter Storms	Severe Winter Storms	Tornados	Blizzard & Winter Storms
	Tornados	Tornados	Wildfires	Hazardous Materials Fixed Sites	Drought
	Other Wind Hazards	Other Wind Hazards	Hazardous Materials Incidents	Hazardous Materials Transportation	Tornados
	Hail & Summer Storms	Hail & Summer Storms	Tornado/Wind Storms	Mass Casualty Transportation Accidents	Other Wind Hazards
	Wildland & Grass Fires	Wildland & Grass Fires	Earthquake	CBRNE	Hail & Summer Storms
	Hazardous Materials Incidents	Hazardous Materials Incidents	Terrorism/Civil Disturbance	Epidemics	Hazardous Materials Incidents
	Radiological Incident	Radiological Incident		Wildfires	Radiological Incident
Source	Cheyenne County, Northern Colorado Regional Hazard Mitigation Plan 2009	Kit Carson County, Northern Colorado Regional Hazard Mitigation Plan 2009	Larimer County Northern Colorado Regional Hazard Mitigation Plan 2009	Lincoln County, Northern Colorado Regional Hazard Mitigation Plan 2009	Logan County, Northern Colorado Regional Hazard Mitigation Plan 2009

Jurisdiction	Morgan County	Phillips County	Sedgwick County	Washington County	Weld County	Yuma County
Hazards	Floods	Floods	Floods	Floods	Floods	Floods
	Dam Failure	Blizzard & Winter Storms	Dam Failure	Dam Failure	Dam Failure	Dam Failure
	Blizzard & Winter Storms	Drought	Drought	Blizzard & Winter Storms	Blizzard & Winter Storms	Blizzard & Winter Storms
	Drought	Tornados	Tornados	Tornados	Tornados	Tornados
	Tornados	Other Wind Hazards	Other Wind Hazards	Other Wind Hazards	Other Wind Hazards	Other Wind Hazards
	Other Wind Hazards	Hail & Summer Storms	Hail & Summer Storms	Hail & Summer Storms	Hail & Summer Storms	Hail & Summer Storms
	Hail & Summer Storms	Wildland & Grass Fires	Earthquake	Wildland & Grass Fires	Wildland & Grass Fires	Wildland & Grass Fires
	Wildfire	Hazardous Materials Incidents	Hazardous Material Incidents	Hazardous Materials Incidents	Hazardous Materials Incidents	Hazardous Materials Incidents
	Hazardous Materials Incident	Radiological Incident	Radiologic Incident	Radiological Incident	Radiological Incident	Radiological Incident
	Radiologic Incident	Power Failure				
Source	Morgan County, Northern Colorado Regional Hazard Mitigation Plan 2009	Phillips County, Northern Colorado Regional Hazard Mitigation Plan 2009	Sedgwick County, Northern Colorado Regional Hazard Mitigation Plan 2009	Washington County, Northern Colorado Regional Hazard Mitigation Plan 2009	Weld County, Northern Colorado Regional Hazard Mitigation Plan 2009	Yuma County, Emergency Operation Plan 2011 Northeast Colorado Regional Hazard Mitigation Plan 2009 (except Larimer County)

3.2   Additional Threats and Hazards

While most of the plans cited above are recent, today's environment presents ever-changing threats and hazards to our communities. Technology has changed the way we live, and has introduced new potential hazards and threats. The following hazards and threats were also explored in this THIRA:

- Pandemic/epidemic
- Act of terrorism (improvised explosive device)
- Cyber-terrorism
- School shooting/active shooter
- Power failure

3.2.1   Sources of Threat Information

While natural hazard information is readily available through multiple sources, accurate and up-to-date threat information is not readily available. In the NEAHR intelligence analysis is performed at the local, county, state and federal law enforcement centers. Communications between these centers is common and standard briefing documents are designated *Classified* or *Unclassified/For Official Use Only* (*FOUO*). Some of the sources available for NEAHR threat assessment are:

- Colorado Information Analysis Center (CIAC)
- Northeast Colorado Joint Terrorism Task Force

3.3   Threats and Hazards Not Analyzed

Threats and hazards vary greatly by region and geography. For this reason, the following threats were not considered for this study because the plausibility of them a) occurring and b) causing significant damage is minimal. Some of these hazards are:

- Volcanic eruption
- Airplane crash (Could occur, but no history and unless crash is into a populated area, damage will be isolated, and current plans are sufficient)
- Urban conflagration
- Mine accident
- Radiological release
- Chemical/biological/radiological attack

3.4   Factors for Selecting Threats and Hazards

There are two main factors in selecting threats and hazards for further analysis: likelihood and significance. Likelihood is the chance that something will happen (plausible). This analysis only considered threats and hazards that were evaluated as possible, likely or highly likely. Significance is the impact that the event would have on the community. Only those events that would have a significant effect on the community are considered. Threats and hazards that although likely, are easily managed by current plans and assets are excluded.

3.5   Northeast Region Threats and Hazards

3.5.1   Winter Storm

Winter storms are prevalent (likelihood) in the region. Winter blizzards are highly likely in the rural eastern plains while up-slope storms can leave large snowfalls along the Front Range, disruptions of commerce, power grids and other critical infrastructure. It is the highly populated areas of the Northeast Region that are most susceptible to these vulnerabilities due to lack of resources to deal with large snowfalls (significance).

3.5.2   Flood (to include dam and/or levee failure)

In the last eighteen years, there have been three state or federally declared disasters/emergencies that affected the region. Flooding will always be a significant threat in the region due to many factors: Snow volume at high altitudes, steep terrain and valleys (causing a funneling effect), rivers, burn scars and infrastructure. A significant spring or summer storm can bring high rainfall amounts and/or cause excessive melting of snow-pack. A number of towns are located along the banks of the Big Thompson, Cache la Poudre and the South Platte Rivers which are subject to excessive run-off from several recent burn scars (significance).

3.5.3   Severe Storm (including lightning, hail, and winds, straight-line and tornadic)

Severe spring and summer storms are very common in the region (likelihood). Most storms bring hail and wind along with areas of heavy rainfall. Weld County meteorological records show it to be home to the most Colorado tornados in any given year. Tornados vary in intensity and even if intense impact a lot of unpopulated areas. When they do pass through populated areas they have significant impact. Tornados and associated severe weather have a high ranking on the regions THIRA.

3.5.4   Wildfire

The danger of wildfires in the region is ever-present. There have been seven fire management assistance declarations in the last fifteen years (likelihood). Climate change and increasing drought conditions lend themselves to the possibility of more severe wildfires (significance).

3.5.5   Avalanche/Landslide

The terrain and occasional excessive moisture make the region susceptible to landslides and avalanches, and there have been occurrences in the last fifteen years (likelihood). However, given the acute nature of the hazard, affecting limited areas and people, current resources are able to respond to these incidents without requiring extensive outside support (not significant). For that reason, these hazards are not included in the THIRA.

3.5.6   HAZMAT Spill/Train Derailment

The region is not home to many petro chemical refining facilities, however increasing natural gas and oil exploration is building infrastructure for locally produced and transiting (pipelines) systems. There are numerous rail transits through the region that have the potential to carry hazardous material. If a train derailment were to occur, it could result in the release of high amounts of toxic chemicals and other hazardous materials (likelihood). While odds are that if a derailment were to occur it would happen in an unpopulated area due to geography and demographics, a derailment in a populated area could result in significant damage, evacuations and require extensive response assets (significance).

3.5.7   Drought

Drought conditions in the region are always a possibility, and the region has suffered numerous periods of drought. The most significant dangers of drought to the region are economic loss (livestock, farming) and increased chances of wildfires. While many other federal and state programs exist to deal with droughts and the economic impacts, it is increased danger from wildfires that is of most concern in the THIRA. Because wildfires are addressed separately, drought will not be included in the THIRA (not significant).

3.5.8   Pandemic/Epidemic

A pandemic is always a threat to the community, the country, and the world. Virulent strains of influenza (H1N1, H7N9), Ebola, and other communicable diseases and viruses have the potential to infect the local populace and spread rapidly (likelihood). The US government estimates that 40% of the workforce will be absent during a pandemic[3] (significance).

3.5.9   Act of Terrorism (IED)

There has never been an act of terrorism within the region or neighboring regions. There are however, numerous opportunities to impact infrastructure and valuable agricultural centers. Foreign and/or Domestic terrorists have targeted rural areas before (not in this region) and the present regional opportunities still provide rich target potentials.

3.5.10   Cyber-terrorism

Instances of cyber-terrorism have increased in the last decade, even within the Northeast Region. While many attacks have targeted certain sectors (banking, retail, defense), the possibility exists that a large-scale cyber-attack could target multiple sectors at once, paralyzing the region, state and country (likelihood). Attacks could target SCADA systems, traffic systems, power grids, air traffic control and banking, to name a few, which would not only bring the region to a halt economically, but have the potential to create additional, cascading effects such as: flooding; plane crashes; multiple automobile accidents; sheltering issues (significance).

3.5.11   School Shooting/Active Shooter

Instances of school and workplace shootings have increased significantly. While there is no intelligence to suggest the region is a target, there was no intelligence to suggest other schools and workplaces were targets, either (likelihood). Given the isolated nature of these types of events, and the relatively small numbers of potential casualties, the region is currently equipped to deal with this type of instance (not significant), and this threat will not be considered in the THIRA.

3.5.12   Power Failure

While the threat of power failure is real, the effects will be considered within the severe storm and cyber-attacks analyses, and will not be a separate hazard within the THIRA.

Chapter 4: Giving Context to the Threats and Hazards

Context descriptions provide detail to the threat or hazard, outlining conditions (time and place) under which the threat or hazard may occur. Threats and hazards can have different impacts depending on the conditions at the time of the incident. Questions to consider when developing context include:

- How does incident timing affect the ability to respond?
- What time of day/year would have the greatest impact?
- How does incident location affect response capability?
- What locations would have the greatest impacts?
- What other conditions are of particular concern?
- Are there multiple events occurring simultaneously?

Category	Threat/Hazard	Context
Natural	Winter storm	Winter storm bringing extremely low temperatures, excessive snowfall, and high winds. Storm occurs early in the week and lasts for several days, and impacts are first felt mid-day with most people already at work. Storm causes power outages throughout the region, airport closures and road closures. Hundreds of motorists are stranded. Government and businesses are closed for days, causing significant economic impact. Difficult for even first responders to get to work and do their jobs. Storm is region-wide, rendering mutual aid ineffective. The Northeast Regions 673,159 population will be significantly impacted by heavy snows and blizzards.
Natural	Flood	An early spring heat wave brings excessive run-off, coupled with heavy rainfall. Flooding occurs during a weekday in the summer, stranding workers, tourists and motorists. Flood waters carry a lot of debris from recent fires, taking out trees, small buildings and power lines. Hundreds of people stranded in homes and businesses. High economic losses, many buildings and homes are uninhabitable for weeks, some condemned. Flooding has historically cut off communities, reduced transportation and caused major infrastructure damage. Recovery from flood damage can take years to complete. Up to 300,000 people may lose services if large scale flooding occurs.

Natural	Wildfire	During the height of wildfire season, several fires ignite in the region, coupled with hot, dry and windy conditions. Fires are close to urban interfaces. Fires spread to rugged, inaccessible areas. Several major fires in the Rocky Mountain region and the country, decreasing availability of additional assistance and Federal assets. Hundreds of residences can be destroyed and millions of dollars of natural resources lost in sustained large wildfires.
Natural	Epidemic/pandemic	A virulent influenza strain infects a large portion of the global population including 10% to 25% of people across the United States. Introduced into and spread throughout the Northeast Area during flu season. Hospitalizations and deaths increase. Vaccine is available only in limited quantities and not expected to be widely available for 6 months. Medical surge overtaxes healthcare system, high absenteeism in all sectors, school closures, disruption of government services at all levels and economy in general, fatality management system overload. It is estimated that a novel virus strain could equal a 5% to 20% mortality rate over a sustained period. Over 1,000 fatalities occur, creating secondary health issues.
Technological	Train derailment/Hazmat release	Derailment occurs late afternoon on a weekday in a highly populated area, blocking roadways. Fire from the accident quickly spreads to other facilities nearby. Railcars carrying fuel and other toxic chemicals release a large quantity of toxic inhalation hazards such as chlorine or anhydrous ammonia. Several schools and businesses are near the incident and in the "hot zone". Additional businesses and hundreds of residences are in the path of the cloud. The increased movement of Bakken oil transported by rail has increased the potential of incidents.
Human - Caused	Cyber attack	A multi-pronged attack on cyber infrastructure targeting both government and private sector networks. Impacts against data and infrastructure are felt through the following critical infrastructure sectors: Banking and Finance, Communications, Energy, Government Facilities, Information Technology, Transportation Systems, and Water. This is a coordinated strike on supervisory control and data acquisition (SCADA) industrial control systems at water plants, power stations, air traffic control (ATC) infrastructure, and rail signal and switch controls. Commerce interrupted, utility services are interrupted, air travel comes to a halt, local traffic patterns greatly hindered. The Department of Homeland Security has warned that cyber incidents are

		on the increase and the most probable attack methodology of domestic and foreign terrorists and criminal organizations.
Human – Caused	IED attack(s)	A coordinated attack during large social gatherings in downtown Fort Collins, Larimer County and Weld County Fairgrounds kills and injures many. Transportation arteries are congested and block I-25, Highways 14 and 34. Resources available outstripped by requests. Injuries exceed 200 and fatalities exceed 100, over taxing regional facilities.

Chapter 5:   Establishing Capability Targets

Capability targets define success for each core capability based on the hazards and contexts identified in the previous section. By applying capability targets, the region will be able to generate resource requirements and consider preparedness activities, including mitigation opportunities. Impacts and desired outcomes are considered for each threat and hazard, leading to specific and measurable capability targets.

Impacts describe how a threat or hazard might affect a core capability, and are linked to the size and complexity of the threats and hazards. Impacts for response and recovery mission areas describe actions taken to manage an incident after it has occurred (e.g. rescue 300 people, shelter 1,000 people). Impacts for prevention, mitigation and protection describe actions taken prior to an incident (e.g. screen 5,000 visitors, coordinate with other agencies). Impacts should be quantifiable. The following categories can be used as guidelines in defining impacts:

- Size of affected area
- Number of displaced households
- Number of fatalities/injured/ill
- Affected critical infrastructure
- Intelligence needs
- Economic impacts

Desired outcomes describe the timeframe or level of effort needed to achieve success in delivering each core capability. They describe what the region wants to accomplish for each core capability. Outcomes take into account timeframes for completion and percentages of completion (e.g. within 12 hours, ensure 100% search).

5.1   Planning Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter Storm	Review and update the Emergency Management Plan, associated annexes, and supporting plans every 3 years, and the regional all-hazards plans every 3 years.	Some responders unfamiliar with the plans. Plans are incomplete or out of date. Plans are useful as guides, but do not encompass all the objectives of the response.
	Share plan with the community. Involve community in planning cycle every 3 years. Ensure entire community is knowledgeable in the plan and prepared for the event w/ sufficient food, water, generators, etc. Sufficient shelters and feeding for 100% of elderly and other citizens not prepared for the storm and/or stranded at places of business or on roadways.	Over 75,000 homes without power in the region, 5,000 people stranded away from home either at work or on the roads – community not knowledgeable in planning or preparing for emergencies.

	Every 3 years review and update regional and local prevention plans to ensure the plans identify critical objectives, provide the sequence and scope of tasks required to achieve the objectives, and ensure the objectives are implementable.	Plans are severely tested, altered in the course of the response, or out of date.
	Develop and execute 1 TTX/full scale exercise, every 5 years, in coordination with Federal, state, local, and private sector entities in order to evaluate the capability to respond to a severe winter storm.	Many response agencies are unfamiliar with the plan, and do not coordinate well. Coordination with agencies outside the local community is poor or lacking.

Capability Statement: Review and update local and regional plans in accordance with timelines established for each plan; coordinate and de-conflict the development and publishing of catastrophic plans, mitigation plans and operational plans, inclusive of all 11 counties, public and private partners, and volunteer organizations; conduct workshops, seminars, drills and exercises to validate and refine emergency management plans that address identified threats and hazards; share the plans to all extents practicable with the community.

5.2   Public Information and Warning Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter storm	72 hours prior to storm arrival, use indication, notification and warning systems to communicate storm hazards to 300,000 residents and visitors, including first responders and the public.	185,000 people affected by the storm, many unaware of potential impacts and timing of the storm. Over 75,000 homes without power in the region, 5,000 people stranded away from home.
	Every 2 years, conduct 2 public information and warning campaigns to provide 30,000 people within the region with useful and relevant information on the threats and hazards faced by the community and how to prepare for them.	40,000 citizens unaware of pending storm hazards and unaware of how to obtain the latest information on the storm.
	Multiple means of communication available (radio, text, reverse 911, TV, internet, electronic road signs, press release) to get info to the public and to first responders. Practice alternate communication methods regularly.	Local radio and TV stations lose broadcasting capability, cell towers intermittent.

	Deliver coordinated, prompt, reliable and actionable information within 2 hours after an incident using all possible communication mechanisms (to include TV, radio, phone, message signs, etc.) to 200,000 people in a timely, clear and consistent manner, to enable people to take appropriate measures.	Situation escalates quickly causing road, business and other closures. 200,000 people need up to date information on storm response and expectations.
	Across the region, develop an ongoing public information campaign to communicate to 100% of the population the need to develop personal emergency preparedness plans and strategies.	25,000 people in need of assistance due to no food, water, or electricity – unprepared for an extended storm and response.

Capability Statement: Educate citizens on threats and hazards in the community; provide warning of an impending incident to 200,000+ people; provide early warning of impending storm through all means available; coordinate, within 2 hours after an incident, public information strategy to communicate information such as location of shelters and Family Assistance Centers, and information related to missing persons and fatalities; establish communications within 12 hours after an incident to update community at regular intervals on response efforts and other information relevant to the incident; use multiple platforms, to include private media outlets, public address systems, and social media, to disseminate information to the public during and after the response phase.

5.3   Operational Coordination Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter Storm	Establish and test 100% of the processes and protocols, utilizing integrated communications among appropriate federal, state, and local entities.	Communication interruptions, all agencies called on to respond. 200,000 people affected.
	Within 2 hours, staff the EOC to appropriate level using all local agencies, and ensure operational coordination with all 11 county EOC's, 6 municipal EOC's, state agencies, federal partners, nongovernmental organizations, and private sector organizations.	All 11 counties in the region affected by the storm, all EOCs required.

	Within 1 day of an incident, begin the process to plan for recovery. Ensure proper organizations and leaderships are involved to provide decision-making processes for recovery activities across all local, state and Federal entities. This includes individual recovery and economic recovery.	Regional economy is impacted. Recovery actions integrated into response and begin as soon as possible for entire region. Ensure recovery actions are consistent with local plans and include all applicable organizations.
	Establish and maintain a unified and coordinated operational structure process 24 hours prior to storm arrival that appropriately integrates all partners and supports the execution of core capabilities.	Multiple organizations required to respond over entire region. Warning allows for some pre-staging and establishment of coordination lanes and responsibilities.

Capability Statement: Establish an Incident Command within 2 hours after an incident using Incident Command System (ICS) concepts and principles consistent with the National Incident Management System (NIMS); coordinate the restoration of services and facilities, during the first 24 hours after an incident, of critical infrastructure systems to enable communications, water distribution, power generation, and air operations; activate and maintain Emergency Operation Centers at the local/municipal level in accordance with regional and local response plans; coordinate all requests for federal resources and support through the state for the duration of the incident.

5.4   Forensics and Attribution Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
IED Attack(s)	Collect, examine, and prioritize 100% of evidence to assist in preventing additional attacks/accidents.	Traffic congestion, emergency services are hindered, hospitals are overwhelmed.
	Coordinate with Federal agencies in the course of the investigation.	Local citizens are scared and businesses and schools close for several days.

Capability Statement: Collect, examine and prioritize 100% of evidence at site of the event, transport material to designated collection point, and analyze collected material according to procedures and timelines established by lead agency for the incident; coordinate with Federal agencies as required.

5.5   Intelligence and Information Sharing Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Cyber Attack	Within 3 hours of receipt of actionable intelligence, share actionable information, develop and disseminate appropriate classified/unclassified products, and submit terrorism-related information and/or suspicious activity reports to all appropriate authorities.	Attack is nation-wide. All federal LE agencies are involved. Many threats and clues emanating locally.
	Ensure that all federal, state, local, and private sector partners in the region can submit terrorism-related threat information and/or suspicious activity reports to law.	Hundreds of suspicious activities reports are coming in from citizens, businesses and other government agencies. Difficulty accessing, analyzing and distributing the information.

Capability Statement: Share actionable information within 3 hours of the incident with 100% of designated federal, state, local, and private sector partners; coordinate the dissemination of information bulletins and intelligence reports produced by federal, state, local, and private sector partners to 100% of recipients designated for access to sensitive information regarding threats and hazards; ensure all responding agencies have access to required information and can submit/share information, as required.

5.6   Interdiction and Disruption Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Cyber Attack	Protect against criminal/terrorist activities that threaten the security of critical infrastructure, key resources and key operational activities to assure that information is received, analyzed and disseminated in time.	Attack targets critical infrastructure, crippling banking, transportation and energy sectors. Indications and warnings were present, but not analyzed or acted upon until after the event.
	Interdict persons associated with an imminent threat to the region within 12 hours.	National and local reports indicate potential nationwide threat within the next 24 hours. Intelligence suggests a local cell may be responsible.

Capability Statement: Protect against criminal and terrorist activities directed at critical infrastructure and key resources (CI/KR) within the region; assist in analysis and dissemination of key terrorist or criminal-related activity; interdict 100% of suspects associated with an imminent threat to the region, in cooperation with Federal, State, and local agencies.

5.7   Screening, Search, and Detection Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Epidemic/ pandemic	Within 3 hours of receiving actionable intelligence, determine screening locations (airports, rail and bus stations, hospitals) to minimize spread of disease.	Disease has spread throughout the U.S. Regional effects are 10% of population infected. Need additional screening at high capacity regional egress/ingress points (bus, rail, air) and healthcare facilities.
	Within 3 hours of notification, implement appropriate plans and procedures.	Healthcare system (hospitals, urgent care clinics, primary care physicians (PCPs) are overwhelmed with sick and worried well.

Capability Statement: Within 3 hours of notice, implement system(s) to track potential exposures and screen personnel at ingress and egress points; notify area hospitals and healthcare providers of the potential dangers and the plan to deal with the incident; deploy additional resources to minimize potential spread of the disease; implement pandemic and Northern Colorado Regional Hazard Mitigation Plan 2009s within 2 hours of notification.

5.8   Access Control and Identity Verification Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Cyber Attack	Within 3 hours of the incident, validate identity of all individuals with network access to all CI.	All critical infrastructures are vulnerable to attack. 300,000 people affected regionally, and millions more nationally.
	Verify all individuals monthly through credentialing to authorize or deny physical access to all systems, networks, and CI facilities designated as having significance at the regional, state and/or national levels.	Unknown number of intruders/unauthorized users in the network(s). Access lists for some physical areas and/or networks are out of date or not available.
	Every four years, conduct cyber-security exercise with local, state and Federal partners to identify vulnerabilities in systems and to validate plans.	Local, state and federal partners are also affected by the attack.

Capability Statement: Within 3 hours of an incident (or suspected incident), verify all individuals with access to potentially vulnerable CI/KR systems; every four years, conduct a cyber-security exercise including federal, state and local partners as practicable; monthly, verify individuals with access to critical systems and data.

5.9   Cyber Security Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Cyber Attack	Identify and defend against all cyber activities directed against regional networks and systems. Ensure security, reliability, and availability of critical information and communication systems, including the water, transportation, energy, social service, and public health sectors.	Regional economic activity stops. Hundreds of thousands of people without power and other basic services, air traffic stops.
	Institute measures to detect malicious activity against critical infrastructure and key resources, and networks to protect against failure of critical systems.	SCADA and other control and network systems are vulnerable and have shown intermittent signs of intrusions. Systems have not been upgraded for over 5 years.
	Every four years, conduct cyber-security exercise with local, state and Federal partners to identify vulnerabilities in systems and to validate plans.	Local, state and federal partners are also affected by the attack, 300,000 citizens without power, water, comms.

Capability Statement: Defend against cyber-attacks of all regional critical systems; ensure availability and reliability of critical systems, including power, water, communications, transportation; institute measures and practices to deter, detect and defend against criminal cyber activity within critical networks; every four years, exercise a Cyber Response Plan that outlines procedures for all phases of the emergency management cycle when addressing cyber threats and hazards.

5.10   Physical Protective Measures Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Flood	Twelve hours prior to potential event, ensure all CI/KR susceptible to flooding or flash flooding is protected (culverts, sandbags, etc.) to avoid loss of services. Secondary transportation routes are established prior to emergency.	Flooding affects primary resources (power, telecommunications and transportation).

	Every 4 years, plans are reviewed for environmental impacts/changes and new methods of protection are reviewed. Plan is exercised at least every 6 years.	Environmental and infrastructure changes over the course of years have potential impact on flood areas and assets susceptible to flooding.

Capability Statement: Identify and protect all CI/KR within the Region to the best extent possible, implementing additional protection measures when events is forewarned; ensure maximum availability of CI/KR to the community; implement measures at the regional and local level in cooperation with federal and private partners to reduce risk at highest priority assets; every four years, review plans for protection of CI/KR and exercise at least every six years.

5.11   Risk Management for Protection Programs and Activities Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Flood	Every year, CI/KR are inventoried, and plans are updated for the protection of these assets in case of severe flooding.	CI/KR is at risk of damage and/or loss of ability to provide services to up to 300,000 citizens due to excessive flooding.
	Annually, update the list of CI/KR and conduct risk assessments as to potential vulnerabilities under numerous circumstances.	CI/KR for the region not properly accounted for, and plans have not been updated to reflect latest inventory and potential hazards.

Capability Statement: Identify as part of the Regional THIRA and local Hazard Mitigation Plans, 100% of threats and hazards of concern to all CI/KR; assess impacts posed by identified threats and hazards to regions, at-risk populations, infrastructure sectors and individual critical infrastructure assets; prioritize risk according to existing federal, state, and local risk-based criteria; maintain up-to-date listing of all CI/KR and their potential vulnerabilities in order to mitigate effects of a threat or hazard.

5.12   Supply Chain Integrity and Security Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter Storm	Within 24 hours of storm passage, open all major transportation corridors (I-25, I-70, I-76, US 34, US 287 and US 14) within the region, resume air operations, and implement modified public transportation schedules.	Entire region and surrounding regions affected. Main transportation routes closed, air traffic stopped, economic activity ceases as businesses close and residents cannot get out. Thousands stranded away from home or on the roads.

	Ensure adequate supply of food, water and medicine are on-hand prior to event. Ensure public is aware of impending event and has stocked up on supplies.	Critical supply nodes for food, water and medicine are shut down.

Capability Statement: Execute mitigation planning and annual exercises that examine security and resilience of supply chains to support 300,000 people who will require food and other commodities due to lack of services, loss of residence, or as visitors or commuters stranded by an incident; ensure adequate resources available to open and maintain critical supply routes in event of an emergency; prioritize resources (water, power, fuel, natural gas, transportation and communications) to assist the re-establishment of essential services and movement of critical resources; examine supply chains used by first responders to ensure they can focus on providing aid to the general public.

5.13   Community Resilience Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter storm	Develop and/or increase partnerships to integrate volunteer groups (CERT, ARES, NGOs) and public/private sector entities into response and recovery to improve community resilience.	Local responders overwhelmed, requiring assistance from State, NG and community volunteers.
	Pre-Disaster: Integrate efforts to understand, communicate, plan, and address risks so that the local jurisdictions in the region can develop a set of actions to improve resilience within their communities.	Family emergency kits and disaster supply kits are lacking in the community. Many citizens are not prepared to go for long periods without power or access to essentials (water, food, meds).

Capability Statement: Implement a community resilience strategy that includes a public information campaign concerning resiliency, supports volunteer-based programs and establishes community information systems for mitigation and response; implement exercise plans which coordinate the activities of our communities and private sector partners before, during and after an incident, in order to prevent and mitigate emergencies, expedite response activities, maximize resources, and facilitate a return to normalcy; establish public and private partnerships in order to promote key relationships with private industry.

5.14   Long-term Vulnerability Reduction Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Wildfire	Wildfire related fatalities decreased to zero, and home and infrastructure losses reduced by 50% over a five-year period.	Several of the 11 counties have extensive Wildland Urban Interface (WUI) areas. Any wildfire is a potential danger to life and property.

	Implement annual reviews of CI/KR and the potential risks that all hazards pose, and possible mitigation actions that can be put in place.	Weather, environment, CI/KR change over time, and plans need updating.
	Meet with Federal agencies on a consistent basis, ensure understanding of their capabilities and plans for wildfires; work with USFS in identifying areas most susceptible to fire.	Much of the area susceptible to fire is federal land.
	Conduct public information campaigns annually prior to wildfire season, and ensure citizens implement personal mitigation measures, and are aware of the danger and prepared with disaster kits, evacuation plans, etc.	Evacuation of over 800 residences and businesses.

Capability Statement: Promote business and private practices for limiting susceptibility to wildfire, especially within the WUI, reducing damage caused by 50% and eliminating loss of life to the best extent possible; conduct public information campaigns annually, increasing the knowledge and readiness of the community and increasing personal mitigation responsibility; ensure enough shelters are available and stocked for evacuees; conduct wildfire exercises every four years.

5.15   Risk and Disaster Resilience Assessment Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Wildfire	All 11 counties will update Mitigation Plans and Risk Assessments at least every five years, and share within the region and neighboring regions (where mutual assistance is likely to be requested).	Communities, environment and risks are constantly changing.
	VOADs, public and private sector, NGOs, faith-based organizations and other community partners are involved in planning for response and recovery.	Long-term economic and psychological impact on communities. Requires long-term assistance beyond what the gov't will provide.

Capability Statement: All 11 counties ensure plans are updated at least every five years, and plans are shared with the community and local partners; involve volunteer organizations and public/private sector in community resilience planning and response; establish priorities for recovery operations as part of a review of catastrophic plans or other strategic planning activities; provide risk assessment tools and resilience-related information to jurisdictions to assist in the determination of appropriate resources to be drawn from the whole community.

5.16   Threats and Hazard Identification Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
IED Attack(s)	Update all operations/mitigation plans at least every five years. Ensure community involvement.	Changing community demographics, environment, technology and potential threats/hazards require assessments to be updated.
	Critical systems are reviewed annually to ensure the latest protections and security methods are incorporated.	Technology changes create an ever more present danger for attacks which could affect the entire region.

Capability Statement: At least every 5 years, perform Threat and Hazard Identification and Risk Assessments in concert with federal, state, local, and public partners; ensure latest technology used within CI/KR has incorporated the most up-to-date security and protective measures.

5.17   Critical Transportation Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter storm	All main roads cleared within 24 hours of storm end; secondary routes cleared within 72 hours.	Major transportation routes (I-25, I-70, I-76, US 34, US 287, US 14) are closed.
	Establish routes for first responders to get required supplies and deliver them as needed.	Supply routes for the community and first responders are cut off.
	Rail traffic opened within 24 hours of storm passage.	Rail traffic through the region stops, limiting supply of coal and other goods.
	Airports open within 12 hours of storm passage.	All regional airports are closed.
	Within 8 hours of receiving a request, deliver required resources to save lives and to meet the needs of disaster survivors.	Emergency routes are impassable; many citizens in need of rescue and/or basic supplies.
	Within 96 hours, all roads cleared, businesses can open and citizens can return to work and their daily lives.	Businesses are closed; citizens cannot leave their homes.

Capability Statement: Within 24 hours of storm passage, clear all major traffic routes through the region, and clear secondary routes within 72 hours, and all roads within 96 hours; establish lines of supply within 72 hours to include airports, railroads, and roads in order to supply emergency water and sanitation needs for response operations, and establish emergency power and fuel lines of supply; repair/open all regional airports to assist in transportation of supplies, provide transportation, and serve as an economic boost; clear and open railways within 24 hours to expedite delivery of supplies and boost economy.

5.18 Environmental Response/Health and Safety Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Train derailment/ Hazmat release	Within 2 hours, have sufficient assets on scene to combat fires, deal with injured and begin decontamination. Hospitals have capability to take injured and worried well.	15 dead, 50 injured and 225 civilians in the immediate hot zone. Several toxins released into the air, major fires in and around the area, contaminant will spread over a 6 square mile area in the next 120 minutes.
	Within 12 hours, have decon areas set up outside the hot area and at local hospitals.	Decon required for 80 first responders, 100 victims, and those self-admitting to local hospitals.
	Within 24 hours, clear traffic routes and railway to resume normal operations.	Railway closed and several major cross-streets closed due to accident and contamination.

Capability Statement: Conduct health and safety hazard assessments within 12 hours of the incident by deploying hazardous incident response teams in order to detect, identify, contain, decontaminate, remove, dispose of, or minimize discharges of hazardous materials; prioritize debris clearance and other response efforts for critical supply lines (railway, roads); coordinate decontamination for first responders, equipment, land, buildings and victims.

5.19 Fatality Management Services Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Epidemic/ Pandemic	Within 24 hours of indication of first case, begin preparations to handle up to 2,400 remains per month, including proper care to eliminate further spread of the disease.	Efficiencies of modern travel cause virus to spread rapidly. 60,000 people in the region become ill with a fatality rate of 20% over a 6-month period.
	Additional screening at local health clinics to separate worried-well from infected. Additional counseling and stress management counselors available through local health organizations and voluntary organizations.	Population is stressed and worried, many worried-well reporting to health clinics and hospitals.
	Processes in place to request Disaster Mortuary Operations Response Team (DMORT) assets from Health and Human Services.	Local services overwhelmed requiring state and federal assistance in mortuary operations, dealing with contaminated remains.

Capability Statement: Support the collection, transportation and processing of 1,800-2,400 remains per month, by coordinating additional resources to establish morgue and storage sites and Family Assistance Centers; Deploy resources to implement stress management/crisis intervention strategies; Coordinate deployment of federal teams to support mortuary operations and handling of infected remains.

5.20 Fire Management and Suppression Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Wildfire	Within the first 12 hours, determine need for additional resources and identify homes and businesses at risk over the next 48 hours based on prevailing weather and fire conditions.	Fires in the WUI and grasslands present extreme danger to homes, businesses and lives.
	100 % containment within 48 hours of initial notification	Inability to achieve containment increases chances for loss of life and structures, and results in higher costs to bring in additional resources.
	Handle all incidents up to a Type 3 and perform all functions in order to enable a quick and efficient turnover to incoming crews	Poor management of the incident results in delaying turnover to more effective crews and incident commanders.

Capability Statement: Minimize loss to homes and businesses (including lives) while maintaining an accurate picture of the fire. Achieve containment with own resources while still being prepared to turn over efforts to IMTs as needed.

5.21 Infrastructure Systems Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Flood	During the first 12 hours of an incident, stabilize immediate critical infrastructure impacts to include 3 majorly damaged hospitals, 10 fire stations, and 12 police stations.	Healthcare and first responder facilities affected by flood waters throughout the region.
	Within 12 hours, begin power restoration for critical services and then citizens. Ensure adequate shelters are available and stocked.	Loss of power to 75,000 residences and businesses. 1,500 people forced to evacuate.
	Within 24 hours after the incident, conduct health and safety inspections of the affected areas, including water, wastewater treatment and homes and businesses.	Many areas, homes and businesses are infected with mold, sewage, etc., and not safe to inhabit.

Capability Statement: Ensure emergency services are restored within the first 12 hours of the incident, including hospitals, fire and police; stabilize critical infrastructure functions to include energy, transportation, and telecommunications; minimize health and safety threats.

5.22   Mass Care Services Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Wildfire	Shelter provided for 100% of evacuees requiring shelter, including pets and livestock. All basic needs are met (food, water, sanitation, mental and physical health).	Throughout the region, 10,000 people forced to evacuate homes and businesses.
	100% of shelters are inspected and operational before evacuees arrive.	25 total shelters required to provide services to evacuees.

Capability Statement: Mobilize, within 48 hours of an incident, resources and capabilities to provide life-sustaining services to the affected population, including animals, consisting of shelter for an estimated 10,000 people in need of potable water, sanitation disposal, security, mental health treatment, functional needs assistance and veterinary services, as well as support for reunifying families; Inspect 20 potential temporary shelter structures within the first 48 hours after an incident prior to placing them into operation.

5.23   Mass Search and Rescue Operations Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter Storm	Within 24 hours, initiate search and rescue operations, rescuing 100% of stranded motorists.	Reports of 180 stranded motorists throughout the region.
	Within 24 hours, initiate search and rescue of 100% of collapsed structures and rescue 100% of personnel.	8 roof collapses of homes and businesses.
	Initiate search within 24 hours and rescue 100% of personnel trapped in back-country areas.	50 trapped/stranded back-country skiers, hikers, and hunters.

Capability Statement: Coordinate the deployment of law enforcement, fire, and search and rescue assets within the first 24 hours after an incident with the capability to search for and rescue 180 stranded motorists across the region; conduct search and rescue for 8 collapsed structures, accounting for 100% of personnel; within 24 hours initiate search and rescue for personnel trapped/stranded in back-country areas, rescuing 100%.

5.24   On-scene Security and Protection Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Train derailment/ Hazmat release	During the first 2 hours of an incident, establish security across an affected area of 6 square miles with 180 people, preserve evidence for collection for human-caused incidents, and provide security for response personnel.	12 dead, 60 injured and 150 civilians in the immediate hot zone. Several toxins released into the air, major fires in and around the area, contaminant will spread over a 6 square mile area in the next 120 minutes.
	During the first 4 hours of an incident, establish a process for verifying and credentialing first responders.	Hundreds of responders from local, regional, state and federal agencies respond.
	Ensure sufficient security/police personnel available to maintain cordon around evacuation area, and direct traffic as required.	Evacuation areas cover 6 square miles, and are in effect for 2 days.

Capability Statement: Coordinate the deployment of local, state, and federal law enforcement resources within the first 12 hours after an incident to conduct life-safety, security, and public order activities; Sustain post-incident security for up to several days after the incident through coordinated mutual aid from jurisdictions outside the affected region using local, state and federal law enforcement assets to control access and maintain order in the affected areas; Coordinate with local law enforcement and private security companies to update Memoranda of Agreement (MOA) and contracts to support security and protection efforts in affected areas; ensure credentialing system or process is in place for first responders.

5.25   Operational Communications Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Cyber Attack	Within 12 hours, determine source of issue and re-establish secure communications. Ensure all emergency services can still communicate.	All internet services are disabled among local, state and federal government. Cell services are inoperable.
	Within 12 hours, restore power to critical nodes including law enforcement, hospitals and emergency services. Within 24 hours, restore power to 50% of affected population, 75% within 48 hours, and 100% within 96 hours.	Power lost to 75,000 people throughout the region, including businesses, law enforcement, emergency services and hospitals.
	Conduct either a stand-alone communications exercise, or make it part of a larger exercise, to test emergency communications capabilities in the event of loss of primary comms.	25% of responders are unfamiliar with alternate methods of communication.

Capability Statement: Ensure sufficient stand-alone communications methods are available for first responders in order to effectively respond in the event of telecommunications outage; prioritize restoration of services to ensure first responders, hospitals and other critical services are restored first; restore power to citizens and businesses in under 96 hours; conduct communications exercises annually to train responders and civilian aid groups, and to identify gaps in communications systems.

5.26 Public and Private Services and Resources Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter Storm	Within 12 hours, restore power to critical nodes including law enforcement, hospitals and emergency services. Within 24 hours, restore power to 50% of affected population, 75% within 48 hours, and 100% within 96 hours.	Power lost to 75,000 people throughout the region, including businesses, law enforcement, emergency services and hospitals.
	Within 24 hours after an incident has occurred, identify community needs, mobilize and deliver governmental, nongovernmental and private sector resources within the 22,300 square mile affected area to save lives, sustain lives, meet basic human needs, stabilize the incident and transition to recovery. This includes delivering services to 2,000 residences, 10,000 displaced people, pets, livestock, and service animals.	Long term road and business closures result in 5,000 citizens requiring assistance for food, water and/or fuel.

Capability Statement: Implement a program to identify and use state, local and private sector services and resources for community-wide deployment of assets to re-establish essential services disrupted by a disaster, continue maintenance of essential services during the response to the disaster, and restore full services following a disaster; exercise program every four years; coordinate triage of critical systems by regional, local, tribal and private sector partners, working together to restore infrastructure capabilities; begin reestablishment of essential public and private services and resources to the affected population and surrounding communities during the first 24 hours after an incident.

5.27   Public Health and Medical Services Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Epidemic/ Pandemic	8 hospitals and all other healthcare facilities institute screening and isolation procedures.	50,000 people in the region are infected, plus another 15,000 worried-well.
	Plans in place providing for sufficient resources and personnel available to cover any gaps created by loss of first responders.	25% of emergency responders are affected by the pandemic.
	Within 24 hours, identify any potential shortages of personnel, supplies or space. Provide authorized alternate healthcare sites for processing.	Regional healthcare facilities unable to handle patient load.
	Update Pandemic plan at least every five years and exercise at least every five years; work with regional healthcare coalition.	Plans are out of date or have not been fully exercised.
	Integrate local plans and response with overall Federal Government plan and response.	Federal assistance will be required.

Capability Statement: Provide screening and isolation/quarantine facilities for up to 65,000 infected and/or worried-well citizens; provide contingency plans for loss of 25% of first responders; update and exercise pandemic plans at least every five years; work with the regional healthcare coalition on planning and exercises, as applicable; identify shortages of medical equipment, health supplies and personnel; provide resources to establish Government-Authorized Alternate Care Sites and other mechanisms for treatment within 72 hours of an incident; Integrate state, regional, local, and federal pandemic plans and protocols to improve rapid, prioritized medical counter measure deployment.

5.28   Situational Assessment Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Winter storm	Within 2 hours, provide all decision makers with information regarding the nature and extent of the hazard, cascading effects, and the status of the response to inform decision making regarding immediate lifesaving and life-sustaining activities. Update every 12 hours.	185,000 people affected over 22,300 square miles. 90% of businesses closed, all schools closed, local, state and federal governments are closed. 5,000 people stranded on highways or at work.
	Engage governmental, private, and civic sector resources within and outside of	Local governmental resources are overwhelmed.

	the affected area to meet basic human needs and stabilize the incident.	
	Exercise plans at least every two years, and update plans every five years.	

Capability Statement: Within 2 hours, provide all decision makers with information regarding the nature and extent of the event by completing an impact assessment that includes all of the critical information requirements needed by emergency operations centers in accordance with local catastrophic and operations plans; update every 12 hours; share information to all authorized first responders, emergency managers, and public/private partners concerning potential or ongoing incidents through designated tools, to include internet accessible databases, geospatial information systems (GIS), and standardized report formats; design plans to enhance the situational awareness of the emergency managers affected by an incident; exercise plans every two years, and update plans at least every three years.

5.29 Economic Recovery Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Flood	Within 24 hours after an incident has been stabilized, conduct an initial assessment of economic issues and develop a recovery plan in conjunction with whole community partners that will return affected areas to a sustainable economy. Restore 50% of economic activity within 1 week and 100% within 1 year.	Flood impacts dispersed over 22,300 square miles (in numerous areas throughout the region), 900 business closed, tourism decreases, 2,500 homes affected.
	Within 30 days, develop alternate means of funding and effecting business recovery.	125 businesses condemned or destroyed due to flood damage.
	Within 2 weeks, together with local business leaders, public and private sector, and volunteer organizations, develop an economic recovery plan for the region.	Long-term economic impacts include loss of businesses, decreased tourism/ foot traffic in flood-affected areas.

Capability Statement: Within 24 hours, identify, in collaboration with community partners, infrastructure sites and businesses that contribute to resilience, accessibility, and sustainability that are in need of restoration; develop economic recovery plan for areas affected by the flood; make U.S. Small Business Administration's disaster loans available via Disaster Loan Outreach Centers within one month after an incident across affected areas.

5.30   Health and Social Services Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Epidemic/ Pandemic	Within 24 hours of evidence of a pandemic, work with the regional Healthcare Coalition to complete an assessment of community health and social service capabilities.	8 hospitals and all other healthcare facilities serving 185,000 citizens over 22,300 square miles are impacted.
	Within 48 hours, identify critical areas of need for health and social services for 100% of at-risk individuals (such as children, those with disabilities and others who have access and functional needs).	Provide health screenings and social services for 1,800 at-risk individuals.
	Within 24 hours, provide screening operations at regional mass transportation hubs (train, air, bus) and healthcare facilities to minimize spread.	21,000 people per month travel through the region via mass transit and must be screened. All incoming patients at 8 regional hospitals and all other healthcare facilities must be screened.

Capability Statement: Within 24 hours, develop a comprehensive list of available resources, using the regional Healthcare Coalition; restore social service networks; within 48 hours, develop a plan for providing health and social services to at-risk individuals; within 24 hours, develop and execute a plan for screening at regional airports and healthcare facilities.

5.31   Housing Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Wildfire	Within 24 hours of incident, review community housing recovery plans, address interim housing needs, assess options for permanent housing, and define a timeline for achieving a resilient, accessible, and sustainable housing market.	300 homes destroyed, 900 more temporarily uninhabitable due to fire damage or smoke damage.
	Ensure sufficient temporary housing is available until long-term solutions can be achieved.	Potentially, 4,000 citizens without a home (due to evacuation, destruction and minor damage).
	Within 14 days after the incident, assess structural damage to 100% of homes and businesses within the affected area.	Over 1,000 homes and businesses in the affected area over 250 square miles.

Capability Statement: Determine, prior to an incident, the number/type of housing units impacted in regions under various threats and hazards; create MOA with private establishments and other government agencies that can provide temporary housing and update them every two years; assess post-incident structural damages to 100% of affected residential housing within 14 days; provide immediate sheltering for 5,000 people and 600 animals with provisions to last at least 60 days; effect transition, within 60 days after an incident, to temporary housing, including rebuilt or repaired homes or other temporary housing.

5.32   Natural and Cultural Resources Core Capability

Desired Outcomes and Impacts

Threat/Hazard	Desired Outcomes	Impacts
Flood	Within 6 hours of potential event, implement measures to protect and stabilize records and culturally significant documents, objects, and structures.	Flooding affects numerous areas of cultural and natural significance including Rocky Mountain National Park, Estes Park, Downtown Fort Collins, Loveland and Greeley.
	Within 24 hours after the event, complete an assessment of affected natural and cultural resources and develop a timeline for addressing these impacts in a sustainable and resilient manner.	Some areas/resources impacted will require longer-term recovery operations.

Capability Statement: Collaborate with State Agencies, private and federal partners to assess 100% of natural and cultural assets within the affected area, and mitigate impacts to these sites; address recovery efforts within one year after the event for natural resources including watershed protection, reforestation and ecosystem restoration, and within two years, repair and restore affected resources.

Chapter 6:   Effects on Critical Infrastructure

While some critical infrastructure effects of the identified threats and hazards are defined within the 31 Core Capabilities above, the true effects on all critical infrastructures are difficult to determine. The interdependencies within the sectors create uncertainty and cascading problems that may or may not be able to be anticipated. Taking just the first hazard into account, one can assume that a severe winter storm will knock out power, but what are the ensuing problems and severity of those problems once power is lost?

- Will communications be lost or degraded?
- How widespread will the power outage be?
- Will the transportation sector come to a halt?
- How will emergency services respond with communications degraded and transportation stopped?
- Maybe there will be a positive effect on agriculture in six months since there will be plenty of water.
- What about water treatment and delivery services? Financial sector?

Furthermore, simply understanding and anticipating that a critical infrastructure sector will likely be affected by a particular hazard or threat is insufficient. For example, anticipating that a winter storm will knock out power does not necessarily allow for the proper mitigation or response procedures to be undertaken since the impact of the loss of power is unclear. Are hospitals without power or do they have sufficient emergency back-up power? Which residents are in danger if they don't have power and which ones can survive for days? How long will the power be out? Do 911 and dispatch services still work?

Given all of these unknowns (and many more), where does one best apply resources to mitigate the effects of these threats and hazards?

Chapter 7: Applying the Results

Core Capabilities

7.1   Planning

Resource Requirements: NIMS Tier I Resources – None required

Resource Requirements: Other Resources

Resource	Category	Number Required
Planning Section Chief Training (E/L962 course)	NA	7 courses
L548 COOP Planning	NA	1 course
G358 Evacuation and Re-entry Planning	NA	2 courses
G291 JIC/JIS Planning	NA	2 courses
G366 Planning Needs of Children in Disaster	NA	1 course
G131 Exercise Evaluation and Improvement Planning	NA	1 course
MGT346 EOC Operations and Planning for All Hazards	NA	2 courses
HSEEP	NA	1 course

7.2   Public Information and Warning

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Public Information Officer	3	2

Resource Requirements: Other Resources

Resource	Category	Number Required
Public Information Officer Training (Basic G290 and Advanced E388)	NA	3 courses
Social Media Training	NA	3 courses
Workshops, TTXs, Exercises that include PIO participation	NA	9 courses
Camera/video equipment for PIO	NA	6 courses
Lectern, mic, white boards for JIC	NA	6 courses
PCs and monitors for JIC	NA	6 courses
Television for JIC	NA	6 courses

7.3 Operational Coordination

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Communications Support Team	3	2
Incident Management	EOC Management Support Team	3	2
Incident Management	Incident Management Team	3	1

Resource Requirements: Other Resources

Resource	Category	Number Required
EOC Connectivity and Functionality (communications, computers, displays, printers, tables, iPads/tablets, etc.)	NA	11 (each EOC)
TTX/Exercise Winter Storm response	NA	11
Dispatch upgrades, vehicle locator systems, GPS	NA	11
Radios, repeaters, charging stations, batteries, training	NA	varies
Generators	NA	11
Mobile repeaters	NA	unknown
Radio programming training	NA	1
MGT404 Sports and Special Events Incident Management	NA	1 course
G775 EOC Management and Operations	NA	2 courses
ICS 200 ICS for Single Resource and Initial Action Incidents	NA	11 courses
G402 ICS Overview for Executives and Senior Officials	NA	11 courses
G191 ICS/EOC Interface	NA	3 courses

7.4 Forensics and Attribution

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
Portable X-Ray	NA	1
Carbon Fire Disruptors	NA	1

7.5 Intelligence and Information Sharing

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
CIAC Support	NA	NA
Cybersecurity training	NA	3
AWR 135 Promoting Community Cybersecurity	NA	4
AWR 136 Essentials of Community Cybersecurity	NA	4
AWR 384 Community Preparedness for Cyber Incidents	NA	4
MGT 452 Physical and Cybersecurity for Critical Infrastructure	NA	4

7.6 Interdiction and Disruption

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
CIAC Support	NA	NA
Cybersecurity training	NA	3
AWR 135 Promoting Community Cybersecurity	NA	4
AWR 136 Essentials of Community Cybersecurity	NA	4
MGT 384 Community Preparedness for Cybersecurity	NA	4
MGT 452 Physical and Cybersecurity for Critical Infrastructure	NA	4

7.7 Screening, Search and Detection

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Medical and Public Health	Specialty Services Team	2	1
Medical and Public Health	Public Health Disaster Assessor	2	1
Medical and Public Health	Epidemiologist	2	1
Medical and Public Health	Isolation and Quarantine	2	1
Public Works	Electronic Boards, Arrow Boards	1	11
Public Works	Electronic Boards, Arrow Boards	3 or 4	11

Resource Requirements: Other Resources

Resource	Category	Number Required
Credentialing equipment	NA	11

7.8   Access Control and Identity Verification

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
Credentialing equipment	NA	11

7.9   Cybersecurity

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
Cybersecurity training	NA	30
AWR 135 Promoting Community Cybersecurity	NA	4
AWR 136 Essentials of Community Cybersecurity	NA	4
MGT 384 Community Preparedness for Cybersecurity	NA	4
MGT 452 Physical and Cybersecurity for Critical Infrastructure	NA	4

7.10 Physical Protective Measures

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Public Works	Civil/Field Engineer	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Shoring	NA	varies by jurisdiction

7.11 Risk Management for Protection Programs and Activities

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
Up to date critical infrastructure listings	NA	11
THIRA for each CI/KR asset	NA	varies
Determine flood vulnerability of CI/KR assets	NA	varies

7.12 Supply Chain Integrity and Security

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Public Works	Snow Blower (Chassis Mounted)	1,2	2
Public Works	Snow Blower (Loader Mounted)	1,2	2
Public Works	Generators	1-3	11
Public Works	Snow Cat	1-3	4

Resource Requirements: Other Resources

Resource	Category	Number Required
Exercise, TTX	NA	5
Training with local businesses	NA	varies

7.13 Community Resilience

Resource Requirements: NIMS Tier I Resources - None

Resource Requirements: Other Resources

Resource	Category	Number Required
Community training and Town Halls	NA	11
Exercises with community involvement	NA	11
MGT324 Campus Emergencies, Prevention, Response and Recovery	NA	1 course
G270.4 Recovery from Disaster/Local Government Role	NA	2 courses
Community Disaster Prep Booklets	NA	500
L/G202 Debris Management for State, Tribal and Local Officials	NA	2 courses

7.14 Long-term Vulnerability Reduction

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Fire/Hazardous materials	Wildland/Urban Interface Protection Specialist	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Training and Exercises	NA	Varies
Community education	NA	Varies
G 318/G0393 Mitigation for Emergency Managers	NA	2

7.15 Risk and Disaster Resilience Assessment

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Fire/Hazardous materials	Wildland/Urban Interface Protection Specialist	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
TTX Exercises	NA	Varies
G0548 Continuity of Operations Managers Training Course	NA	1

7.16 Threats and Hazard Identification

Resource Requirements: NIMS Tier I Resources - none

Resource Requirements: Other Resources

Resource	Category	Number Required
National level threat assessments, CIAC information	NA	Varies
Local/regional THIRA	NA	11

7.17 Critical Transportation

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Airborne Transport Team	1	1
Public Works	Truck, Plow	1 or 2	12
Public Works	Snow Cat	1, 2 or 3	4
Public Works	Snow Blower (Chassis Mounted)	1,2	2
Public Works	Snow Blower (Loader Mounted)	1,2	2

Resource Requirements: Other Resources

Resource	Category	Number Required
High-wheeled vehicles for transport and SAR	NA	4

7.18 Environmental Response/Health and Safety

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Fire/Hazardous materials	HazMat Safety Officer	1	1
Fire/Hazardous materials	HazMat Entry Team	3	1
Medical and Public Health	Public Health Disaster Assessor	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Portable Chem ID eqpt	NA	1
Dosimeters	NA	50
TruDefender Spectrometer	NA	1
Decontamination equipment	NA	5
Training and exercises	NA	5
Chempro	NA	3
Air Monitoring Equipment - Multi Sensor (Chem/Bio/Rad)	NA	2
Regional HAZMAT TTX/exercise	NA	1
HAZMAT Suits	NA	10

7.19 Fatality Management Services

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Emergency Medical Services	Ambulance Task Force	1	1
Emergency Medical Services	Air Ambulance (Rotary Wing)	1	1
Medical and Public Health	Isolation and Quarantine	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Refrigerated Truck	NA	4
Coroner assistance (state)	NA	3
Decon teams (for alive and deceased)	NA	3
Stretchers	NA	120

7.20 Fire Management and Suppression

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Fire/Hazardous Materials	Wildfire/Urban Interface Protection Specialist	1	1
Public Works	Generators	2,3	2
Incident Management	Communications Support Team	1,2	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Collapse Truck	NA	1
Extrication Tools	NA	6
Concrete Core Drill	NA	1
Thermal Imagers	NA	6
ICS 300/400 Intermediate and Advanced ICS	NA	3 courses annually

7.21   Infrastructure Systems

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Public Works	Emergency Management Support Team – Water/Wastewater	1	2
Public Works	Damage Assessment and Repair Team – Sewer Mains	2	1
Public Works	Damage Assessment and Repair Team – Water Pump Facilities	2	1
Public Works	Damage Assessment, Repair, Start-Up team – Wastewater Lift and Pump Station	2	1
Public Works	Damage Assessment, Repair, Start-Up team – Wastewater Treatment Facilities	2	1
Public Works	Debris Removal Manager	1	1
Public Works	Generators	1,2	11
Fire/Hazardous Materials	Portable Pump	1,2	9
Incident Management	Communications Support Team	2	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Up to date critical infrastructure listings	NA	11
THIRA for each CI/KR asset	NA	varies
Determine flood vulnerability of CI/KR assets	NA	varies
Generators	NA	11
Assistance with power restoration	NA	varies
Assistance with gas lines	NA	varies
Portable Cell Towers	NA	5

7.22 Mass Care Services

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Mass Care Services	Shelter Management Team	1	1
Mass Care Services	State Mass Care Coordinator	1	1
Medical and Public Health	Behavioral Health Specialist, Licensed	1	1
Medical and Public Health	Public Health and Medical Support Team Leader in a Shelter	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Family Assistance Center/Reunification Center Training with ARC	NA	2
TXX or Functional Exercise held alongside ARC	NA	2
G0108 Community Mass Care and Emergency Assistance	NA	2
G0288 Local Volunteer and Donations Management	NA	2

7.23 Mass Search and Rescue Operations

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Search and Rescue	Canine Search and Rescue Team – Avalanche Snow Air Scent	1	1
Search and Rescue	US&R Incident Support Team	1	1
Search and Rescue	Wilderness Search and Rescue Team	1	1
Public Works	Snow Cat	1,2	4

Resource Requirements: Other Resources

Resource	Category	Number Required
GPS units	NA	varies
Training and exercises in Search and Rescue operations	NA	6
4WD vehicles w/ high passenger capacity	NA	4
Thermal Imagers	NA	11
PER 213 Wide Area Search	NA	3

7.24 On-scene Security, Protection and Law Enforcement

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Fire/Hazardous Materials	HazMat Safety Officer	2	1
Incident Management	Evacuation Coordination Team	2	1

Resource Requirements: Other Resources

Resource	Category	Number Required
TXX Including Railroad Representatives	NA	Varies
G0311 Hazardous Materials Contingency Planning	NA	1
G0358 Evacuation and Re-Entry Planning Course	NA	2

7.25 Operational Communications

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Communications Support Team	2	1

Resource Requirements: Other Resources

Resource	Category	Number Required
AWR 135 Promoting Community Cybersecurity	NA	4
AWR 136 Essentials of Community Cybersecurity	NA	4
MGT 384 Community Preparedness for Cyber Incidents	NA	4
MGT 452 Physical and Cybersecurity for Critical Infrastructure	NA	4
E0969 NIMS All-Hazards Communications Unit Leader	NA	1
TTX with ARES based on Alternate Communications Methods, or Functional EX with ARES in the EOC	NA	Varies
CIAC/CBI/FBI Support Activities	NA	Varies

7.26   Public and Private Services and Resources

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Rapid Need Assessment Team	1	1
Incident Management	Planning Section Chief	3	2

Resource Requirements: Other Resources

Resource	Category	Number Required
L962 Planning Section Chief	3	2
G0556 Local Damage Assessment	NA	3
G0557 Rapid Needs Assessment	NA	3

7.27 Public Health and Medical Services

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Medical and Public Health	Specialty Services Team	2	2
Medical and Public Health	Receiving, Staging and Storing (RSS) Task Force	1	1
Medical and Public Health	Public Health Disaster Assessor	1	1
Medical and Public Health	Epidemiologist	1	1
Medical and Public Health	Isolation and Quarantine	1	1
Medical and Public Health	Isolation and Quarantine	2	1
Medical and Public Health	Mass Dispensing Team Leader	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
MGT-900 Pandemic Planning and Preparedness	NA	1
MGT 433 Isolation and Quarantine for Communities	NA	2
Co-Host Pandemic TTX with Local/State Public Health	NA	1

7.28 Situational Assessment

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Individual Assistance Disaster Assessment Team Leader	1	2
Incident Management	Rapid Need Assessment Team	1	1
Public Works	Damage Assessment and Repair Team – Sewer Mains	1	2
Public Works	Damage Assessment and Repair Team – Water Pump Facilities	1	2
Public Works	Civil/Field Engineer	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
4G Tablets/Pads for Transmitting Data and Pictures from Fields to EOC	NA	11
WebEOC Training	NA	2 courses
ICS300/Intermediate and Advanced ICS	NA	4 courses
ICS400 Advanced ICS	NA	2 courses
G250.7 Rapid Needs Assessment Workshop Course	NA	1 course

7.29 Economic Recovery

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Public Assistance Coordinator	1	1
Incident Management	Individual Assistance Disaster Assessment Team Leader	1	1
Incident Management	Rapid Needs Assessment Team	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Exercise/Coordinate with Local Business Alliances	NA	11

7.30 Health and Social Services (Epidemic/Pandemic)

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Medical and Public Health	Behavioral Health Specialist, Licensed	1	2
Incident Management	Critical Incident Stress Management Team	1	1
Medical and Public Health	Social Worker	1	2

Resource Requirements: Other Resources

Resource	Category	Number Required
TTX with Included Mental Health Professional	NA	3
MGT 900 Pandemic Planning and Preparedness	NA	4

7.31 Housing

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Mass Care Services	State Mass Care Coordination	1	1
Incident Management	Critical Incident Stress Management Team	1	1
Mass Care Services	Shelter Management Team	2	1
Incident Management	Volunteer Agency Liaison	2	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Exercise with VOAD/NGO	NA	11
Attend Pre-Incident Planning Meetings with VOAD/NGO	NA	11
Establish/Review Sheltering IGA with ARC Every Year	NA	11

7.32 Natural and Cultural Resources

Resource Requirements: NIMS Tier I Resources

Category	Resource	Type	Number Required
Incident Management	Rapid Needs Assessment Team	1	1

Resource Requirements: Other Resources

Resource	Category	Number Required
Good Inventory and Risk Assessments for Natural and Cultural Resources	NA	11
Exercises Include Natural and Cultural Resources Implications	NA	5