

# ANNEX J: COPPER MOUNTAIN CONSOLIDATED METROPOLITAN DISTRICT

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## J.1 Community Profile

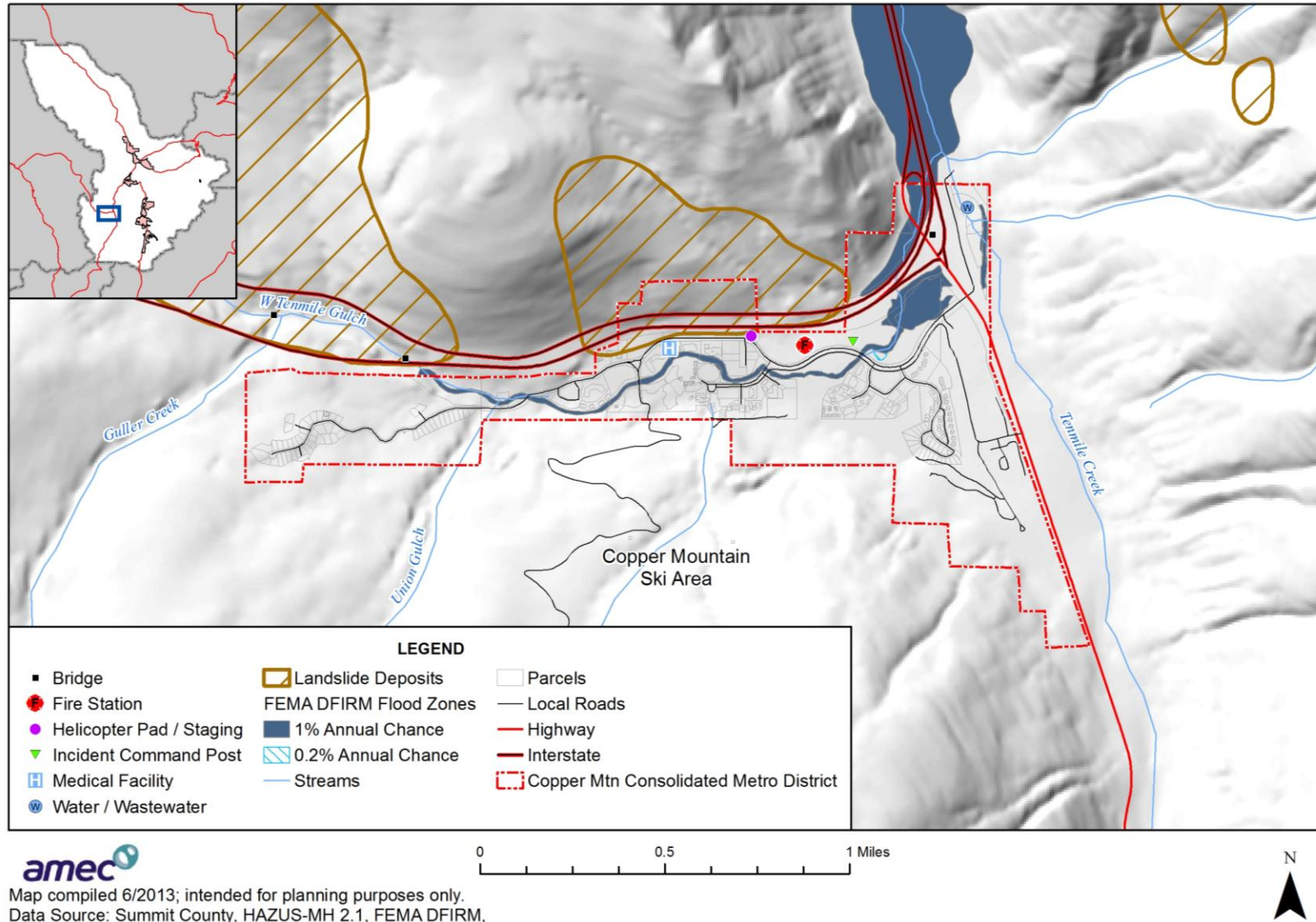
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Copper Mountain Consolidated Metropolitan District (CMCMD) is a special district in Summit County. The CMCMD area was formerly known as Wheeler Junction. The Wheeler Junction settlement was founded in the 1880s and home to miners who worked in the copper mines. As was the case with other areas in Summit County, most of the old settlements decayed as the mining claims dried up. In 1971 Chuck Lewis came to the area and decided to build a ski area with construction beginning that same summer. In 1972 the Copper Mountain Consolidated Metropolitan District was formed to address the needs of the citizens of the area.

The Metro District oversees services such as water, sewer, sanitation, emergency services (including wildfire response), television, parks, and streets. The District operates under the direction of a five person, elected Board of Directors. The Board sets policy decisions, which are carried out by CMCMD staff. The District Manager oversees roughly 22 full-time employees.

Figure J.1 shows a map of CMCMD and its location within Summit County. The map also shows critical facilities, DFIRM, and landslide deposits.

**Figure J.1. Map of CMCMD and Critical Facilities**



**amec**  
 Map compiled 6/2013; intended for planning purposes only.  
 Data Source: Summit County, HAZUS-MH 2.1, FEMA DFIRM,  
 Colton/USGS Earth Data Analysis Center

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## J.2 Hazard Identification and Profiles

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Representatives of CMCMD identified the hazards that affect the District and summarized their geographic location, probability of future occurrence, potential magnitude or severity, and planning significance specific to the Town (see Table J.1). In the context of the countywide planning area, there are no hazards that are unique to CMCMD.

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**Table J.1. CMCMD—Hazard Summary**

<b>Hazard Type</b>	<b>Geographic Location*</b>	<b>Probability*</b>	<b>Magnitude*</b>	<b>Hazard Rating</b>
Avalanche	Isolated	Highly likely	Limited	High
Dam Failure	Large	Unlikely	Catastrophic	High
Drought	Large	Likely	Limited	Medium
Earthquake	Large	Occasional	Limited	Low
Erosion/Deposition	Small	Likely	Limited	Low
Flood	Small	Likely	Limited	Low
Hazardous Materials Release	Isolated	Likely	Critical	High
Landslide, Mudflow/Debris Flow, Rock Fall	Isolated	Likely	Negligible	Medium
Lightning	Large	Highly Likely	Critical	High
Mountain Pine Beetle Infestation	Large	Highly Likely	Limited	High
Severe Winter Weather	Large	Highly Likely	Critical	High
Wildfire	Large	Highly Likely	Catastrophic	High
Windstorm	Large	Highly Likely	Critical	High

\*See Section 3.2 for definitions of these factors

Information on past events for each hazard can be found in Section 3.2 Hazard Profiles in the body of this document.

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## J.3 Vulnerability Assessment

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The intent of this section is to assess CMCMD’s vulnerability separately from that of the planning area as a whole, which has already been addressed in Section 3.3 Vulnerability Assessment in the main plan. For more information about how hazards affect the County as a whole, see Chapter 3 Risk Assessment.

### District Asset Inventory

Table J.2 shows the number of structures, land value, and assessed value of improvements to parcels in CMCMD. Land values have been purposely excluded from the Total Value because land remains following disasters, and subsequent market devaluations are frequently short-term and difficult to quantify. Additionally, state and federal disaster assistance programs generally do not address loss of land or its associated value.

**Table J.2. CMCMD—Building Exposure**

Land Use	Total Parcel Count	Improved Parcel Count	Land Value	Improvements Value	Estimated Content Value*	Total Value**
Commercial	3	1	\$1,022,023	\$564,272	\$564,272	\$1,128,544
Mixed Use	233	159	\$64,902,091	\$550,574,600	\$550,574,600	\$1,101,149,200
Open Space	13	3	\$7,013,874	\$1,734,869	\$1,734,869	\$3,469,738
<b>Total</b>	<b>249</b>	<b>163</b>	<b>\$72,937,988</b>	<b>\$552,873,741</b>	<b>\$552,873,741</b>	<b>\$1,105,747,482</b>

Source: Summit County Assessor 2013

\*Content Value estimated; \*\* Improvements and Contents

Table J.3 lists critical facilities and other community assets identified by the District as important to protect in the event of a disaster.

**Table J.3. CMCMD—Critical Facilities and Other Community Assets**

Name of Asset	Replacement Value (\$)	Hazard Specific Info/Comments
Copper Metro Dist. Building	9,000,000	EOC/ Fire Station
Waste Water Treatment Plant	7,000,000	Critical Facility
Water Pump Houses & Wells	5,000,000	Critical Facility
Repeater Tower (PHQ)	500,000	EMS Communications
Snowmaking (Wildfire water)	5,000,000	Wildfire Fighting Water Source
Snowmaking Control Builds	5,000,000	“ “ “ “
Water Tanks	1,000,000	Domestic/ Fire Fighting Water
Telecommunications Cell Site	1,500,000	Essential Communications
Copper Medical Clinic	1,000,000	EMS Facility
Climax Mine Dam	Unknown	Looming Mudflow/ Flood Hazard
Climax Waste Water Treatment Plant	Unknown	Potential Polluter if Disabled
Century Link Com. Building	Unknown	Essential Communications
Copper Maintenance Shops & Yard	5,000,000	Essential Heavy Equipment
XCEL Gas Pipeline and Power Dist. Lines	Unknown	Essential Energy Distribution
I-70 Transportation System	Unknown	Essential Transportation
Hwy. 91 Transportation System	Unknown	Essential Transportation

Sources: CMCMD

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## Vulnerability by Hazard

This section examines those existing and future structures and other assets at risk to hazards ranked of moderate or high significance that vary from the risks facing the entire planning area and estimates potential losses. These hazards include dam failure, flood, and wildfire.

### Dam Failure

#### *Existing Development*

CMCMD could be impacted by failure of the Clinton Gulch dam. There are also tailings ponds in the southwestern corner of Summit County associated with molybdenum processing at the Climax mine near Fremont Pass. These structures are not ranked as high or significant hazard due to the fact that it holds little water. However, failure of these dams would release a devastating toxic sludge debris flow towards the Copper Mountain Metro District area.

#### *Future Development*

Flooding due to a dam failure event is likely to exceed the special flood hazard areas regulated through local floodplain ordinances. CMCMD should consider the dam failure hazard when planning development downstream of a high or significant hazard dam, particularly critical facilities. Low hazard dams could become significant or high hazard dams if development occurs below them. Regular monitoring of dams, exercising and updating of EAPs, and rapid response to problems when detected at dams are ways to mitigate the potential impacts of these rare, but potentially catastrophic, events.

### Wildfire

#### *Existing Development*

A wildfire threat ranking was developed for the Summit County Community Wildfire Protection Plan by the County, fire protection districts, and U.S. Forest Service. It is based on fuel hazards, risk of wildfire occurrence, essential infrastructure at risk, community values at risk, and local preparedness and firefighting capability and classifies the wildfire threat as low, medium, high, and extreme. The wildfire threat GIS layer, updated in 2011, was used to determine the number of acres in each wildfire threat zone and map the wildfire threat in CMCMD (see Table J.4 and Figure J.2). Figure J.5 shows the wildfire focus areas from the County CWPP and treatment areas in CMCMD.

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**Table J.4. CMCMD—Acreage in Wildfire Threat Zones**

Low		Medium		High		Extreme		Total Acres
Acres	%Total	Acres	%Total	Acres	%Total	Acres	%Total	
108	20%	349	63%	94	17%	-	-	<b>551</b>

Source: Summit County

Based on the methodology described for wildfire in Section 3.3.3 Vulnerability by Hazard, the property values in CMCMD were separated into wildfire threat zones. The breakdown of property values in CMCMD by wildfire threat zone is shown in Table J.5.

**Table J.5. CMCMD—Property Values in Wildfire Threat Zones**

<b>Threat Zone</b>	<b>Land Use</b>	<b>Improved Parcel Count</b>	<b>Land Value</b>	<b>Improved Value</b>	<b>Estimated Content Value</b>	<b>Total Value</b>
<b>Low</b>	Mixed Use	34	\$3,074,118	\$221,536,460	\$221,536,460	\$443,072,920
	<b>Total</b>	<b>34</b>	<b>\$3,074,118</b>	<b>\$221,536,460</b>	<b>\$221,536,460</b>	<b>\$443,072,920</b>
<b>Medium</b>	Mixed Use	118	\$53,919,855	\$317,654,531	\$317,654,531	\$635,309,062
	Open Space	3	\$7,004,798	\$1,734,869	\$1,734,869	\$3,469,738
	<b>Total</b>	<b>121</b>	<b>\$60,924,653</b>	<b>\$319,389,400</b>	<b>\$319,389,400</b>	<b>\$638,778,800</b>
<b>High</b>	Commercial	1	\$939,010	\$564,272	\$564,272	\$1,128,544
	Mixed Use	7	\$7,908,118	\$11,383,609	\$11,383,609	\$22,767,218
	<b>Total</b>	<b>8</b>	<b>\$8,847,128</b>	<b>\$11,947,881</b>	<b>\$11,947,881</b>	<b>\$23,895,762</b>
<b>Grand Total</b>		<b>163</b>	<b>\$72,845,899</b>	<b>\$552,873,741</b>	<b>\$552,873,741</b>	<b>\$1,105,747,482</b>

Source: AMEC analysis with County data

Figure J.2. Wildfire Threat and Critical Facilities in CMCMD

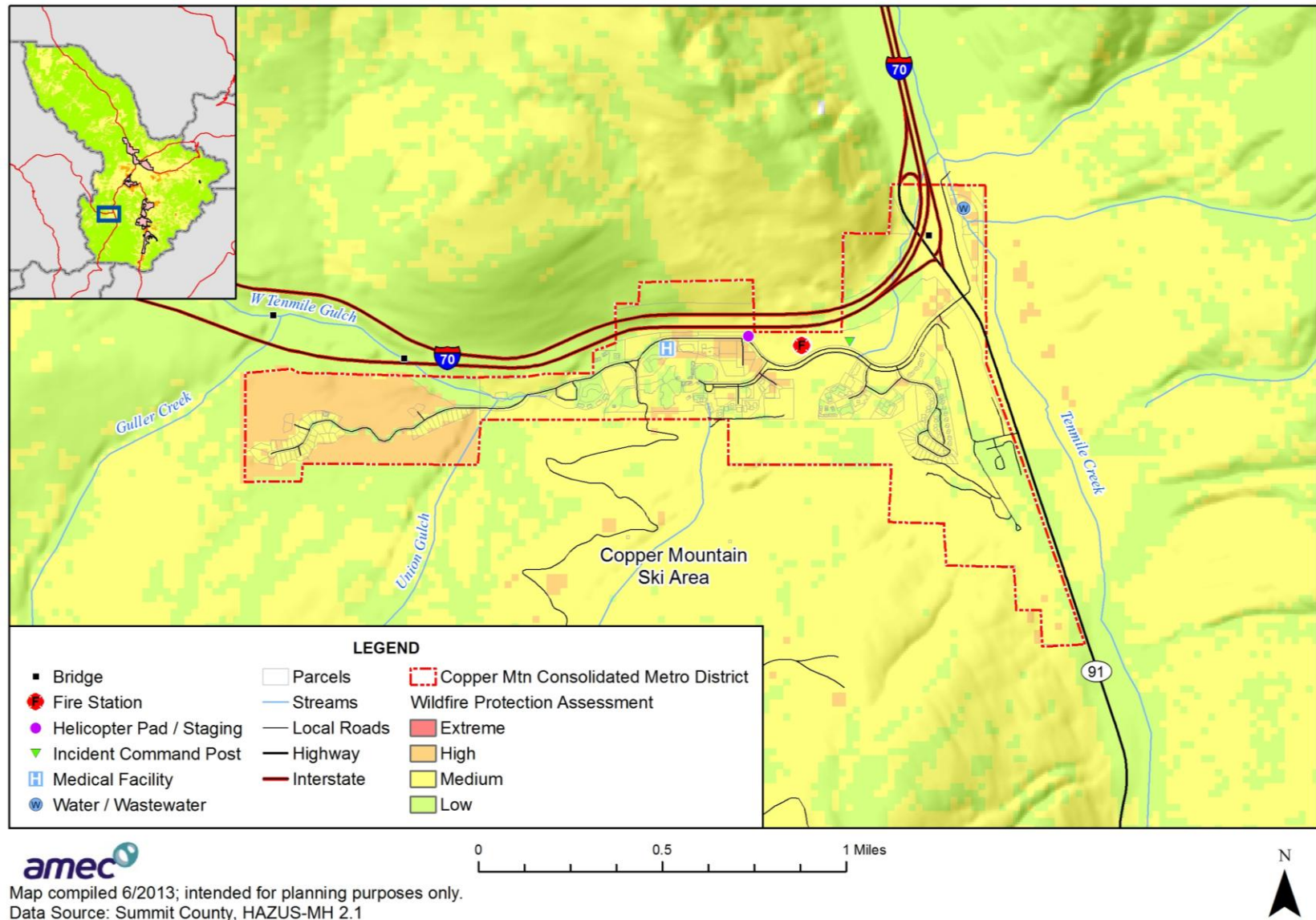
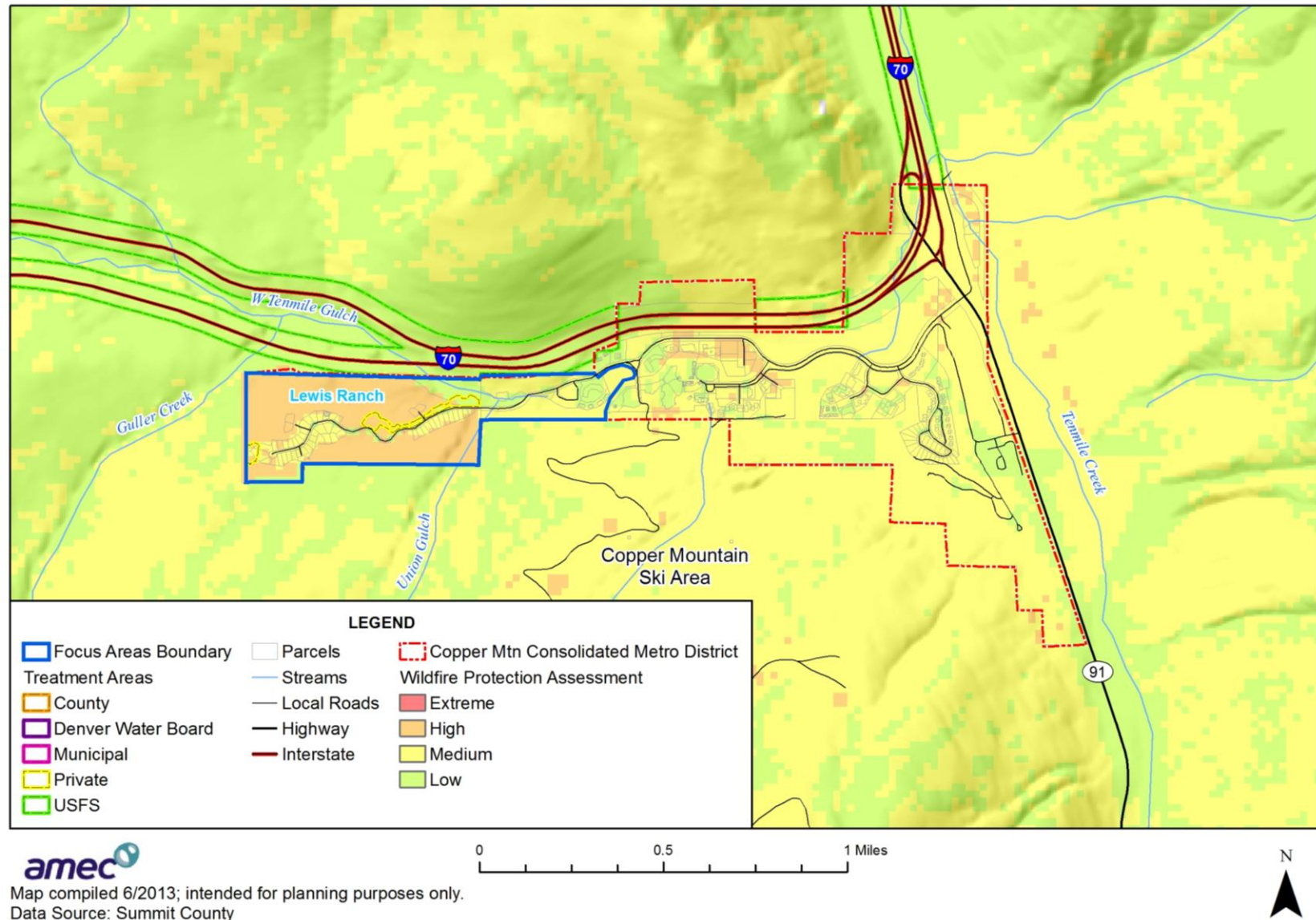


Figure J.3. Wildfire Focus Areas and Treatment Areas in CMCMD





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The Copper Mountain Fire Department provides fire protection services to CMCMD. CMFD would be the first responders to a wildland fire within CMCMD. CMFD would assume IC until relieved by more qualified personnel. CMFD personnel would remain on scene until dismissed or until the conclusion of the event

### ***Future Development***

Wildland-urban interface issues will continue to be a concern as CMCMD's population and development increase. A Planned Unit Development (PUD) amendment seeks to redistribute density in the District. Growth in existing developed areas, as opposed to new undeveloped areas, would help mitigate wildfire risk in the District.

## **Growth and Development Trends**

Growth in existing developed areas, as opposed to new undeveloped areas, would help mitigate vulnerability to hazards in the District. A new Planned Unit Development (PUD) is in the process of being approved by the County. No increase in overall density numbers is planned from the 2008 PUD. However, existing density will be concentrated more into the core and Union Creek areas of the resort. Structures that are currently 2 stories in height will be increased to 110 feet in height to increase density within that area.

## **J.4 Capability Assessment**

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Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

### **Regulatory Mitigation Capabilities**

Regulatory mitigation capabilities include the planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities. The District is governed under the policies and programs of Summit County, including its building codes and land use planning. Table J.6 lists planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in CMCMD.

**Table J.6. CMCMD—Regulatory Mitigation Capabilities**

<b>Regulatory Tool (ordinances, codes, plans)</b>	<b>Yes/No</b>	<b>Comments</b>
General or Comprehensive plan	Yes	CMDMD's Waste Water/ Water Master Plan is in place and is being updated. With the possibility of more concentrated density certain parts of the infrastructure may have to be updated. The existing water treatment plant is designed to handle full build out of Copper. However, sewer lines and water distribution may have to be augmented to service increased demand. The Fire Dept is preparing a Capital Improvement Plan for inclusion in the CMCMD Master Plan.
Zoning ordinance	Yes	Summit County Government, Copper PUD
Subdivision ordinance	Yes	Summit County Government, Copper PUD
Growth management ordinance	Yes	Summit County Government, Copper PUD
Floodplain ordinance	Yes	Summit County Government
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	Summit County Government
Building code	Yes	Summit County Government
Fire department ISO rating	Yes	4
Erosion or sediment control program	Yes	Summit County Government
Stormwater management program	Yes	Copper Mountain Resort
Site plan review requirements	Yes	Summit County Government
Capital improvements plan	Yes	CMCMD Water/Waste Water in place and being reviewed. Fire Dept. in progress. CMR PUD
Economic development plan	Yes	Summit County Government
Local emergency operations plan	Yes	Summit County has an EOP. CMFD has SOG's. We should set EOP as a goal.
Avalanche Terrain Zoning	Yes	Summit County Government
Flood insurance study or other engineering study for streams	Yes	Summit County Government
Elevation certificates (for floodplain development)	Yes	Summit County Government
Clinton Dam, Climax Tailing Ponds Dam Breach Disaster Plan	Yes	Summit County Government

## **Administrative/Technical Mitigation Capabilities**

Table J.7 identifies the personnel responsible for activities related to mitigation and loss prevention in CMCMD.

**Table J.7. CMCMD—Administrative and Technical Mitigation Capabilities**

<b>Personnel Resources</b>	<b>Yes/No</b>	<b>Department/Position</b>	<b>Comments</b>
Planner/engineer with knowledge of land development/land management practices	Yes	Summit County Government	
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Summit County Government CMCMD CMR	Tetra-Tech Engineering
Planner/engineer/scientist with an understanding of natural hazards	No	In house experience and expertise	
Personnel skilled in GIS	No	Summit County Government	
Full time building official	Yes	Summit County Government	
Floodplain manager	No-N/A	Summit County Government	
Emergency manager	Yes	Summit County Government	
Grant writer	No		
Other personnel	Yes	Summit County Government, CMCMD	
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Summit County Government	
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	Reverse 911, Summit County Communications Center	
Other		Summit County Government	

## **Fiscal Mitigation Capabilities**

Fiscal mitigation capabilities are financial tools or resources that CMCMD could or already does use to help fund mitigation activities. CMCMD has identified the Summit County Wildfire Grant Program as a potential source of mitigation funding. Collaborative programs between Copper Mountain Inc., The Village Company, and CMCMD may pool resources to help fund mitigation projects in the future.

## **Mitigation Outreach and Partnerships**

- Ongoing public education programs focusing on residential fire safety
- Ongoing education of Copper Mountain, Inc. (CMI) building managers, HOAs, restaurants, and other personnel on fire safety
- Fire drills at CMI-owned employee housing facilities

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- Yearly fire inspections of all CMI and private buildings

## **Past Mitigation Efforts**

- CMCMD is currently working on Firewise in conjunction with the adoption of the 2012 IFC and amendments.
- Two to three grants have been obtained by The Village Company, with assistance from CMCMD, to mitigate WUI issues in Lewis Ranch. This includes the CMCMD water storage tank and Lewis Ranch Pump House. CMCMD has been working with CMR to establish access to snowmaking water and guns in the summer to protect critical infrastructure from wildfire.

Additional projects may involve selective thinning of vegetation within forest service's permitted resort properties adjacent to privately owned lands and structures.

## **J.5 Mitigation Goals and Objectives**

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CMCMD has adopted the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 4 Mitigation Strategy.

## **J.6 Mitigation Actions**

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CMCMD identified and prioritized the following mitigation actions based on the risk assessment. Background information on how each action will be implemented and administered, such as ideas for implementation, responsible agency, potential funding, estimated cost, and timeline also are included.

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## Mitigation Action: CMCMD—1 WUI Fuels Reduction Program

<b>Jurisdiction:</b>	CMCMD
<b>Action Title:</b>	Copper Mountain WUI fuels reduction program
<b>Priority:</b>	High
<b>Issue/Background:</b>	Fuels reduction utilizing removal of standing dead, dead fall, selective thinning, and creating firebreaks. This will be in conjunction with educational programs for HOAs and individual home owners for fuel reduction on private property.
<b>Ideas for Implementation:</b>	Project will use a combination of CWPP grant monies, HOA funds, Copper Mountain Inc. (CMI) staff and funds, along with volunteer hours by homeowners to identify and remove excess fuels and promote forest health. Educational programs about mitigation and forest health to be implemented for owners and HOAs.
<b>Responsible Agency:</b>	Copper Mountain Inc., CMCMD, Copper Mountain Resort Association
<b>Partners:</b>	CMI, CMCMD, Summit County Wildfire Council, USDS, CSFS, CSU Extension Office
<b>Potential Funding:</b>	Summit County Wildfire Council grants and collaboration among HOAs, CMI, and Copper Mountain Resort Association
<b>Cost Estimate:</b>	\$3,000 - \$5,000 per acre
<b>Benefits: (Losses Avoided)</b>	Reduction in risk to life safety and structural loss
<b>Timeline:</b>	5 years
<b>Status:</b>	New in 2013

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## Mitigation Action: CMCMD—2 Enhanced Public Notification

<b>Jurisdiction:</b>	CMCMD
<b>Action Title:</b>	Enhanced public notification through cable network
<b>Priority:</b>	High
<b>Issue/Background:</b>	The Copper Mountain Resort Area does not have an Emergency Alert System to warn and inform residents and guests of an emergency. By utilizing software/hardware upgrades that would enable emergency messaging across the cable TV network, faster notification could occur.
<b>Ideas for Implementation:</b>	Software/hardware improvements and installation at the cable system's "head end" will upgrade the ability to notify residents and guests of emergencies.
<b>Responsible Agency:</b>	CMCMD – Dave Arnesan, Resortnet
<b>Partners:</b>	Summit County Alert, Resortnet, CMCMD
<b>Potential Funding:</b>	Grants, CMI, CMCMD
<b>Cost Estimate:</b>	\$10,000 - \$20,000
<b>Benefits: (Losses Avoided)</b>	Quicker notification for life safety emergencies
<b>Timeline:</b>	1 year
<b>Status:</b>	New in 2013

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## Mitigation Action: CMCMD—3 Replace Culverts

<b>Jurisdiction:</b>	CMCMD
<b>Action Title:</b>	Replace Copper Road West Tenmile culverts and Copper Circle West Tenmile culverts
<b>Priority:</b>	High
<b>Issue/Background:</b>	Replace culverts with designed free span bridges. Ice buildup has plugged the culverts on the upstream side and spring runoff flows can produce too much stream flow for the culverts to handle leading to over topping and flooding across Copper Road and Copper Circle. Both hazards have required sand bagging to prevent overtopping and pavement damage.
<b>Ideas for Implementation:</b>	Collaborative improvements will involve CMCMD, Copper Mountain Inc., and Summit County Road and Bridge. Existing and new structures may have to be re-designed to prevent potential flooding issues. Also road and bridge weight limits need to reflect requirements as set by the International Fire Code.
<b>Responsible Agency:</b>	Summit County Road and Bridge
<b>Partners:</b>	Powdr Corp./Copper Mountain and CMCMD
<b>Potential Funding:</b>	Summit County Road and Bridge
<b>Cost Estimate:</b>	\$500,000 - \$600,000
<b>Benefits: (Losses Avoided)</b>	Reduce or eliminate ice buildup and flooding potential both during the winter and at spring runoff
<b>Timeline:</b>	Two to five years
<b>Status:</b>	New in 2013

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## Mitigation Action: CMCMD—4 Community Wildfire Protection Planning

<b>Jurisdiction:</b>	CMCMD
<b>Action Title:</b>	Community wildfire protection planning
<b>Priority:</b>	High
<b>Issue/Background:</b>	Educating the public on how to mitigate their property. Encouraging the public on creating and maintaining defensible space. Raise community awareness on wildland urban interface.
<b>Ideas for Implementation:</b>	Participate in the Ready, Set, Go and FIREWISE programs. Create an annual community educational event. Attend Copper Events to increase public interaction at such affairs. Website information access as well as use of our newsletter. Solidify relations with property management companies to train their employees on wildfire awareness.
<b>Responsible Agency:</b>	Copper Mountain Fire Department (Steve Boyle)
<b>Partners:</b>	CSU Extension Program/ Copper Homeowners Association/ Copper Mountain Incorporated/ Summit County/ Summit County Wildfire Council
<b>Potential Funding:</b>	Summit County Wildfire Council/ CMCMD/ CMI/ Copper Mountain Resort Association/ Copper Chamber
<b>Cost Estimate:</b>	\$5,000
<b>Benefits: (Losses Avoided)</b>	Reduction in loss of life and property.
<b>Timeline:</b>	Ongoing
<b>Status:</b>	New in 2013