

**Lowline Fire
Structure Defense Plan
Primary Threat Zone**

CO-GMF-000176

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Rocky Mountain CIMT 1

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PURPOSE AND INTENT

The purpose of the Lowline Fire Structure Defense Plan is to provide a pre-planned **initial** structure defense plan for the primary fire area (M.A.P. Zone) that was being threatened by uncontained fire during the period of July 27, 2023, through August 8, 2023, in its current status. It should be understood that all management action points, and structure defense actions will be predicated on current and predicted fire weather and behavior when the plan is initiated and should be adjusted accordingly.

The intent of the plan is to provide local resources and future incoming incident management teams a starting point in gathering situation awareness in an effort to identify, assess, and document values at risk, and provide recommended **initial** resource, equipment, and supply needs, in the event the plan is initiated.

Detailed structure assessments were completed by assigned Lowline Fire Structure Group resources. It should be noted that individual assessments are subjective in nature, however, all crews followed the same process, based on ArcGIS Field Maps application data input requirements. The ArcGIS Field Maps application follows guidelines articulated in the PMS 461 Incident Response Pocket Guide, CAL FIRE Structure Defense Guide, and guidelines set forth in the Firescope California Wildland Urban Interface Structure Defense Guide.

OBJECTIVES (UPDATE AS NEEDED):

SHORT TERM:

1. Protect structures within the fire zone.
2. Provide stakeholders, residents, and visitors with accurate updated fire information.
3. Set management action points for evacuations of perimeter defense zones.
4. Provide for resident safety as fire approaches.

LONG TERM:

1. Plan for protection of other structures should fires increase in size.
2. Plan for protection of additional perimeter defense zones as needed.

MANAGEMENT ACTION POINTS MAP (UPDATE AS NEEDED):

An Operations Section Map, that identifies management action points, was developed during the Lowline Fire with suggested action points identified, based on projected fire progression. This product is available as part of the Rocky Mountain CIMT1 close-out package.

ARCGIS FIELD MAPS DATA MAP:

A Lowline Fire map was created in the ArcGIS Field Maps application. This product was uploaded to the Rocky Mountain CIMT1 map collection site that is available for reference to all ArcGIS Field Maps users with the appropriate credentials. Individual structure assessments were completed, that include a hazard rating, with suggested initial resource and equipment/supplies need identified for structure defense.

Highway 727/Mill Creek Corridor Zone

Summary:

The Highway 727/Mill Creek Corridor has numerous structures throughout the corridor, as well as access to several other structures uphill from the corridor. Structure assessments, and suggested actions are available on the Fields Map product and Structure Protection Assessment book being generated from the individual site assessment.

Conditions:

The Highway 727/Mill Creek Corridor is primarily comprised of improved dirt/gravel roads and is suitable for Type 3, and/or Type 4 Engines, with access to all improved structures/infrastructure. Type 6 Engines are well suited for the grassy meadows for perimeter control. and at structures where larger engines may have access issues.

The primary static water source for the area is Mill Creek, and two water supply sites have been established with high volume pumps in place (with location and serial numbers logged in Field Maps), with associated appliances to enable quick fill for tenders and engines. These sites have been identified on the Field Map product.

The area is well suited for point protection/defense, prep, and defend/hold”, as well as bump and run tactics.

Actions:

All actions should be based on current and expected fire behavior and weather. Sprinkler systems have been installed, with associated portable pumps and porta-tanks for a water supply, around the six structures at the end of Highway 727. There is a high-volume pump set up at Mill Creek at the bridge into the area. The bridge has a questionable rating, so heavy trucks have been avoiding the bridge and utilizing a water ford crossing, with no issues.

There is also a sprinkler system in place at the 3051 Mill Creek Road structure that is tied into a porta-tank being supplied by a 35,000-gallon cistern system. Additional mitigation on private properties was completed by insurance contractors, Wildfire Defense Systems and Cheoleta, at their insured properties.

Additional structure defense actions can be taken, based on fire behavior that threatens structures in the corridor, based on the availability of time, resources, and defined management action points.

Needs:

A Type 3 structure protection task force, and a Type 6 perimeter control task force, being supported by two Type 2 hand crews, and water tender support are suitable for structure defense in the area.

Castleton Ranch Zone

Summary:

The Castleton Ranch property is comprised of numerous structures and ranch infrastructure. Structure assessments, and suggested actions are available on the Fields Map product and Structure Protection Assessment book being generated from the individual site assessments.

In Division Alpha, adjacent to the Castleton Ranch, there was one primary cabin structure that required a structure protection plan be implemented. Structure details are available on the Fields Map product and Structure Protection Assessment book being generated from the individual site assessment.

Conditions:

The area is primarily comprised of improved and well-maintained dirt/gravel roads and is suitable for Type 3, and/or Type 4 Engines. Type 6 Engines are well suited for the grassy meadows. There is access to several static water sources on the property.

In Division Alpha there was one primary cabin structure that required a structure protection plan be implemented. An adequate static water source located immediately adjacent (across the roadway), from the property, with a portable pump drafting from the pond. The pond is also suitable for immediate direct drafting by a Type 3 engine, or appropriate tactical tender if needed.

The structure is primarily made of wood siding with a wood shake roof. Vegetation fuel model is primarily grass, shrub, and hard litter, with transition to mixed shrub and timber fuel models. **The structure is well suited for point protection/defense (Prep and Defend/Hold), with the ability to tactically maneuver to TRA's and adjacent grass fields that can be utilized as safety zones and improved by firing grass if fuel moisture conditions warrant it.**

Actions:

All actions should be based on current and expected fire behavior and weather. No actions were taken on the ranch property at-large other than size-up and assessments. The cabin structure located adjacent to the ranch property currently has hand-line and controlled fire-line behind and around the structure. A firing operation was completed to reduce the fuels along the fire-line. The structure property has had the vegetation removed from roughly thirty feet around the around the structure, and a sprinkler system and hose-lines are in place. There is an adequate static water source located immediately adjacent (across the roadway), from the property, with a portable pump drafting from the pond. The pond is also suitable for immediate direct drafting by a Type 3 engine, or appropriate tactical tender if needed. Additional structure defense actions can be taken based on further fire behavior that threatens the structure, based on the availability of time, resources, and defined management action points.

Needs:

A Type 3 structure protection task force, and a Type 6 perimeter control task force, being supported by two Type 2 hand crews, and water tender support are suitable for structure defense in the area.

Attachments

1. **CAL FIRE Structure Defense Guide**
2. **FIRESCOPE California Wildland Urban Interface (WUI) Structure Defense Guide**

COMMUNITY AND PROPERTY OWNERS ACTION

It is highly suggested that property owners review their personal defense plans and take steps to mitigate their properties ahead of fire emergencies. It is also recommended that property owners consider adopting “**Firewise USA**” community mitigation guidelines, and “**Ready, Set, Go!**” evacuation programs ahead of the community being impacted by wildfire. The following can be used as minimum guidelines:

- Establish at least a 30-foot defensible space from the structure.
- Remove dead vegetation and high growth vegetation at least 30 feet away from structures.
- Remove wood stacks and all combustible material at least 30 feet away from structures.
- Establish a hose line with sprinklers on all four corners and on roof line of the residence several hours and/or days ahead of advancing fire.
- Register appropriate contact information with county emergency notification systems, to be notified of local emergencies and to receive further instructions ahead of, and during local emergencies.
- Be prepared to evacuate ahead of an evacuation notice and leave when instructed to do so.

NOTIFICATION

When active fire breaches established management action points (MAP) lines (as delineated on incident maps), - **Notification shall be made to the 9-1-1 Dispatch Center** and implementation of this plan will be initiated including the following steps:

- Incident Division/Group Supervisors will immediately notify Branch Directors/Operations Section Chief and the Incident Communications Unit of the need to initiate evacuation warnings and orders.
- Incident communications will give immediate notification to the appropriate county sheriff’s office, and the team Public Information Officer (PIO).
- Co-locate with law enforcement at ICP
- Identify evacuation area utilizing local maps. Include area of incident potential when determining evacuation area.
- Identify traffic control points for entry and exit of resources and civilians

- Identify areas that must be immediately evacuated and label “evacuation order” areas
- Identify areas that are potentially threatened and label “evacuation warning” areas
- Identify community safe refuge areas inside evacuation areas
- Determine and publish evacuation routes
- Identify and clearly communicate the decision points for implementing additional evacuation areas
- Identify areas of special needs population and large animals
- Consider use of public notification systems for evacuations

Community Evacuation System

When active fire breaches established MAP (as delineated on incident maps), **-Evacuation Notification shall be made by the proper authority having jurisdiction (AHJ), which is typically the local county sheriff’s office of emergency management.** Implementation of this plan will be initiated including the following steps:

- The appropriate AHJ is responsible for all evacuation notices to landowners throughout the Perimeter Defense Zone (PDZ) areas.
- The AHJ is responsible for all evacuations of people and their animals, as well as coordinating and requesting the local Red Cross for opening an evacuation reception/shelter facility.

Security of Perimeter Defense Zone

The AHJ will provide security throughout Perimeter Defense Zones (PDZ) and the evacuation of residences.

WATER SUPPLY SYSTEMS

It is highly suggested, upon activation of the PDZ structure defense, that the following be considered:

- Establish and staff strategic water fill sites and develop a water tender shuttle operation from the closest appropriate water source.
- Strategically place portable water tanks throughout the PDZ and when possible, position portable tanks strategically along roadways, to allow for quick water dump times and decrease the need to unnecessarily maneuver ahead of filling water tanks.

- Request the appropriate amount of Type 1 and Type 2 support water tenders to support shuttle operations. Consider ordering additional support water tenders, or tactical water tenders, to support structure defense task forces and/or strike teams.

Consider the following water tender shuttle resource allocation:

- Consider water supply requirements; simply divide 30,000 gallons per hour by 500 gallons per minute equals 60 minutes or 1-hour fire flow.
- Consider a 15,000-gallon portable tank system staging water. 15,000 divided by 500 gallons per minute equals 30 minutes of fire flow availability.

Water Tender Requirements Example:

- Estimate 15 minutes to fill and empty a water tender.
- Estimate 2 minutes per mile on paved roads and 4 minutes per mile on unpaved roads.
- Assume the water source to be 20 miles away on a paved road:
- Water source round trip is 40 miles x 2 minutes per mile = 80 minutes per round trip. Add 15 minutes to fill and empty a 3000-gallon water tender to equal 95 minutes per tender supply time.

RECOMMENDED RESOURCE INITIAL ATTACK ACTION

- Preferred tactics are use of foam, CAFS, and blocking Gels used in direct defense of structures.
- Whenever possible, incorporate natural barriers (i.e. green vegetation, lawn, rock outcroppings, and shoreline) in establishing the perimeter.
- Establish a hose lay with sprinklers and defense lines. Several (2-3) days in advance of the fire, the sprinklers should be operational and additional wetting should be done with defense lines as necessary.
- Use shelter wrap to cover fuel tanks and hazardous materials.
- Use shelter wrap to cover the base of utility power poles, and other vital infrastructure utilities.
- Reduce fuel loading by removing, thinning, or scattering combustible material.
- Establish defensive hose lays.
- Use of fire to burn-out around a structure should only be performed when necessary and by fire personnel experienced in the proper use of ignition equipment.