

Executive Summary

California National Type 1 Incident Management Team #1 on June 19th was tasked by Area Command on the Hayman Incident to develop a structure protection plan for El Paso County.

The draft protection plan developed on June 21, 2002 is designed to provide an incoming management team with as much local information that could be analyzed in a 24-hour period. Local input was invaluable in analyzing the current wildland threat from the Hayman incident to El Paso County.

The Operations Section on June 20th divided the threaten portions of the county into three major areas. Tri-Lakes Area, Rampart Range and the Hwy 24 corridor. Each of these areas were then sub-divided into logical communities that would be impacted by the Hayman fire at different times based on fire behavior predictions. The teams Division Supervisors and Branch Directors then were assigned and evaluated each area. Recommendations for resources are based on both a worst case (wind driven fire) and best case (backing fire) are provided in this report. Resource needs are based on the team's prior wildland urban interface experience, NWCG guidelines provided in S-205 and guidelines provided in the BLM Redbook, 2002.

Resource needs are also based on the most effective type of equipment, not necessarily what is most available inside of El Paso County.

The Teams Fire Behavior Expert made projections on worst-case weather scenario based on a Northwest wind event. Without the current suppression efforts on the Hayman fire, the most immediate threat to El Paso County from the Hayman incident would be to the Tri-lakes and the northern portion on the Rampart Range area. Operations and Fire Behavior have established a confidence interval of over 90% that the Hayman fire will not reach the southern portion of Rampart Range and the Highway 24 corridor within the next two weeks.

However if such a scenario did occur in only one area at a time, El Paso County cannot supply over 50% of the needed type or amount of engine or water tender resources under the best case scenario and cannot supply over 80% of the needed type or amount of engine or water tender resources under the worst case scenario. Also due to other commitments the number of shifts that county resources can commit to will not be sufficient if any of the areas are affective by the Haymen incident.

This information will be forwarded to Area Command

Scott Vail
Incident Commander
California Incident Management Team #1

FIRE BEHAVIOR ASSESSMENT FOR
WOODLAND PARK AND EL PASO COUNTY
June 20, 2002

HAYMAN FIRE:

The Hayman Fire started on June 8th, 2002 and went to about 50 acres. On the 9th the fire made a rapid advance to the northeast with a 19 mile run from the point of origin. Very low fuel moistures, very low relative humidities, and high windspeeds from the southwest contributed to extreme fire behavior and the major fire run of about 19 miles. Over the next few days the fire made several runs to the west, northwest, east, southeast, and south. Diurnal winds, slope, and plume dominated conditions led to the change in direction of spread with one run reaching approximately 8 miles. Most of the fire runs were around the 1/4 to 1/2-mile and 5 to 6 miles. (A fire progression map is being generated to better provide this information, which isn't available at this time.)

On June 17th - 19th the direction of fire spread moved from predominantly a northeast direction to an easterly direction. This was due to a change in wind direction to a northwest wind with humidities around 6-7%, and temperatures around 80°. The fire ran approximately 3-4 miles to the east slopping over Highway 67 towards the Rampart Ridge area. There is concern that the fire may make a run towards Woodland Park and El Paso County. CIIMT 1 was activated to provide an assessment of the threat to the communities, provide an evacuation plan, and to develop a strategy to protecting the homes and communities of El Paso County in the path of the fire.

On June 20th - 21st, fire behavior moderated after the fire received some rainfall (up to .17" in some areas), and higher daytime and nighttime humidities with lower windspeeds. Crews on the slopover off of Highway 67 are making good progress to holding the fire in place.

VEGETATION/FUELS:

Vegetation in the area includes Gambel oak, Ponderosa pine, Lodgepole, mixed conifer, and western annual grasses. The Gambel Oak is frost-killed at the 7,800 ft. level and above.

FUEL MODELS:

Fuel models in the assessment area include:

Fuel Model	Description	
1	Grass	Annual and perennial grasses. Very little shrub or timber is present, generally less than 1/3 of the area. No live fuel component.
2	Grass	Annual and perennial grasses with open shrub lands and pine stands that cover 1/3 to 2/3 of the area. There is a live fuel component that can influence fire behavior.
5	Shrub	Green, low shrub fields within timber stands or without overstory are typical. Regeneration shrublands after fire or disturbance. Live fuel moisture component can influence fire behavior.
6	Shrub	The shrubs are older than a FM5. This model covers a broad range of conditions. Frost-killed Gambel Oak is included in this. Live fuel moisture component can influence fire behavior.

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8	Timber	Closed canopy stands that have compact litter layer. This layer is mainly needles, leaves, and occasionally twigs because little undergrowth is present in this stand. Live fuel moisture is not a significant component in influencing fire behavior in these stands for surface fires. Aspen and Lodgepole have been modeled in this fuel model for the current conditions.
9	Timber	Closed stands of long-needles pine like Ponderosa pine. Concentrations of dead-down woody material will contribute to possible torching of trees, spotting, and crowning. Live fuel moisture is not a significant component in influencing fire behavior for surface fires. However, live fuel moisture related to foliar moisture is critical as it makes timber stands more susceptible to crown fires.
10	Timber	Any forest type can be considered if heavy down material is present; examples are insect or disease ridden stands, wind-thrown stands, overmature situations with deadfall, and ages light thinning or partial-cut slash.

FUEL MOISTURES:

Fuel moistures in the area are well below normal for this time of year. These are below the 2000 fire season where record low fuel moistures were recorded.

Recent fuel sampling by the local Forest employees indicates that 1,000-hour dead fuel moistures are at 5-8%. These are considered explosive conditions.

Live fuel moistures sampled in the assessment area:

Gambel Oak	local folks have indicated it's around the 90% range
Ponderosa Pine	75-80%
Doug fir	73-78%

Live fuel moistures at 75 - 100% exhibit extreme fire behavior. (Note: Live fuel moistures in Gambel Oak on the Storm King Fire in 1994 were 125%. Estimated rates of spread in Gambel Oak were from 6 - 9 feet/second pushed by strong winds and steep slopes). Extreme rates of spread, and moderate to long range spotting will occur. Fires are too intense to take direct attack at the head by crews, engines and dozers. Engines and dozers may be best used to back up firing operations, and to protect structures. Indirect attack must be used to control these fires. Fires will burn actively through the night. Air turbulence cause by the fire will cause problems for air operations.

In order for crews to provide protection to structures criteria on the "Structure Protection Checklist" in the Incident Response Pocket Guide, the NWCG Publication "Improving Firefighter Safety in the Wildland Urban Intermix", safety zone criteria (safety zone must meet the 4 X the height of the flame lengths), and safety documents provided in this plan must be met for firefighter safety.

PRECIPITATION AND WIND:

Fire Family Plus was utilized to determine wind and precipitation potential. Fire Family Plus is a software system for summarizing and analyzing historical daily fire weather observations and computing fire

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danger indices based on the National Fire Danger Rating System (NFDRS) or the Canadian Fire Danger Rating System (CAN). Fire occurrence data can also be analyzed and cross referenced with the weather data to help determine the critical levels for staffing and fire danger for an area.

Utilizing historical weather from Remote Automated Weather Station (RAWS) from Lake George (years 1965 - 2002) and Bailey (years 1970 - 2002), from June 8th through June 30th there is little or no chance of 0.50" or more of precipitation for 3 days or more. Historically this is the case in this area. Additional work is being done to determine when the monsoonal flow will trigger a "season-ending" event for the activity and fuel conditions that currently exist.

From June 8th through June 30th the most common winds are from the west (17%), southwest (19%), south (13%), and southeast (18%) for an approximate total of 67% of the time. Northwest (17%), north (7%), and northeast winds (5%) happen approximately 28% of the time. Wind speeds are typically stronger from the south than from the north by about 3 - 5 mph.

TRIGGER POINTS:

Extreme fire behavior trigger points developed by Fire Behavior Analysts for the Hayman Fire include:

- ⇒ Relative humidity: 10-15%
- ⇒ Eye level winds: 10 mph and greater
- ⇒ Unstable atmosphere: Haines Index is 6
- ⇒ Nighttime humidity recovery: 2 consecutive nights of 30% or less

Fire behavior associated with these trigger points include quick ignition, aggressive burning conditions, spot fires that occur often and spread readily, moderate to long range spotting distances, extreme fire behavior probable, critical burning conditions. Crowning, spotting, and major fire runs are probable. Control efforts at the head of the fire are ineffective.

Common denominators of crown fires and important conditions leading to crown fires:

- A. Crown conditions
 - 1) Spacing in close proximity is more susceptible to spreading crown fires. (20 feet or less between crowns is a good indicator.)
 - 2) Stocking levels greater than 100 trees per acre create closer spacing, therefore higher potential.
 - 3) Crown closure of 75% or more also indicates a high potential.
 - 4) Ladder fuels
 - 5) Crown height. The lower the crown height the greater the potential. Crown height is also referred to as height to live crown base.
 - 6) Chemical content.
- B. Surface conditions
 - 1) Loading - heavy fuel loading, especially in 0-3" diameter, substantially adds to the ability to crown. Discontinuous fuels with heavy loading can provide the same effect as continuous fuels.
- C. Weather - Winds
 - 1) Strong winds are needed to carry the fire in the crowns, especially on flat ground. However, crowning can occur in plume-dominated fires under low windspeed conditions.
- D. Moisture content

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- 1) Low fine fuel moisture of less than 5%. Indicates the ease of burning. There can be a lot of dead fuels in the crowns.
 - 2) Foliar moisture - low foliar moisture makes crowns more susceptible. 80-90% foliar moisture is an important threshold for crowning. This moisture level is for live green needles only.
- E. Topography
- 1) Steep slopes dramatically increase potential. Heads up during strong down drafts in areas with thunderstorm activity that can push fire downhill. Also in plume dominated fires.
- F. Atmospheric conditions
- 1) Low moisture content in the lower atmosphere can be another factor.
 - 2) Atmospheric instability.

FIRE DANGER:

ENERGY RELEASE COMPONENT:

The Energy Release Component (ERC) for the area is hitting record levels above the 97th percentile (an index level that represents historic weather or fuel conditions, 97th percentile = 3% worst weather conditions). The ERC is an estimate of the potential energy released in the flaming zone of the fire. The higher the ERC, the harder a fire will be to suppress. The ERC traces the seasonal trends in fire danger, rather than short-term fluctuations. As live fuels cure and dead fuels dry, the ERC values get higher, which provides a good idea of drought conditions. Wind is not a component of ERC.

PROJECTED FIRE SPREAD:

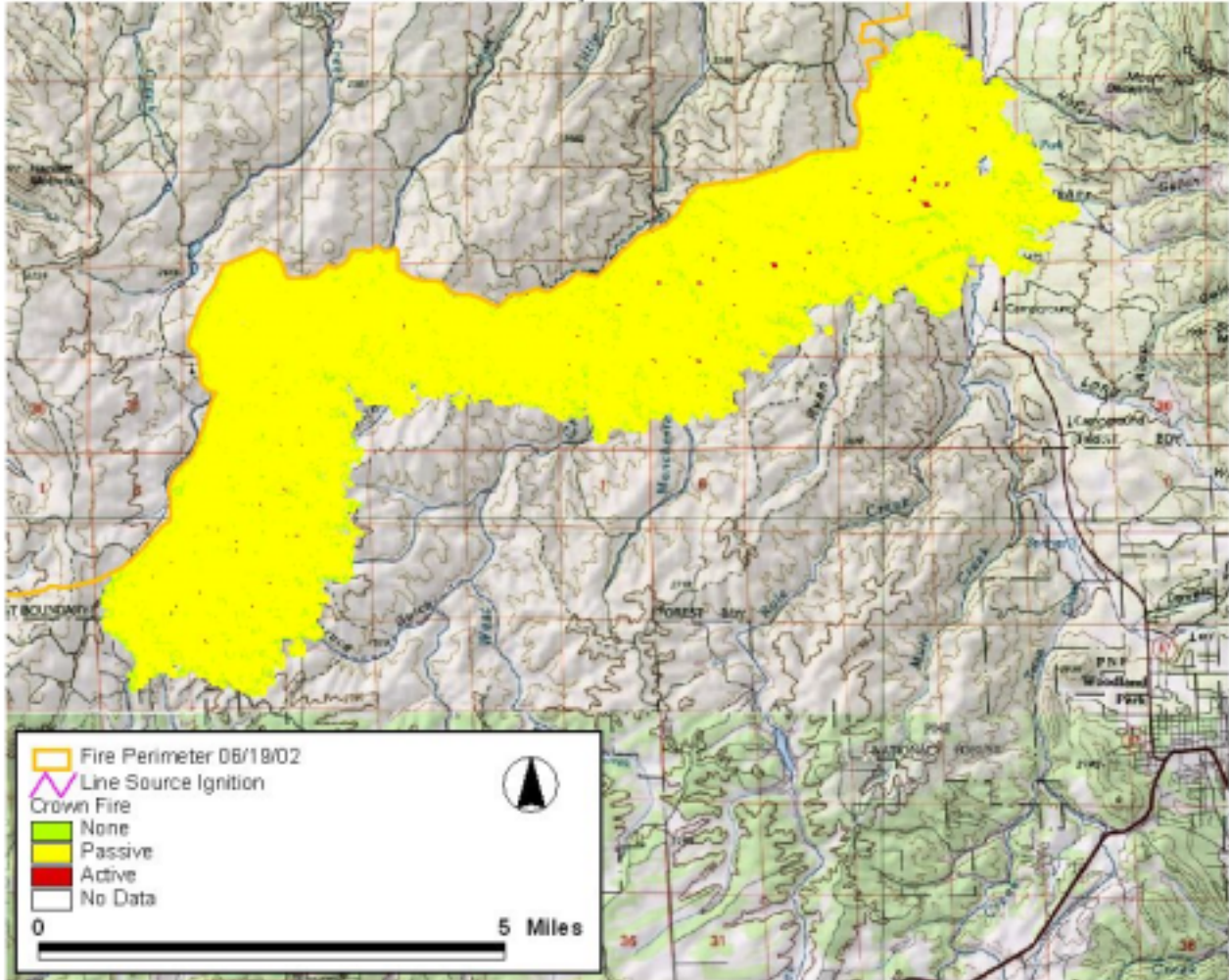
Kelly Close, Fire Behavior Analyst with the Area Command team, ran the fire projection using FARSITE. The FARSITE program was originally developed for management support of prescribed natural fires (PNFs). The model was intended for both planning and operational phases of wildland fires. Among the many potential uses for fire growth simulations (Andrews 1989), the most relevant to FARSITE are short and long term projections of active and potential fires. Fire growth and behavior scenarios can be developed relatively quickly using short-term weather forecasts or long-term weather projections. FARSITE is a model for spatially and temporally simulating the spread and behavior of fires under conditions of heterogeneous terrain, fuels, and weather. These projections assume that there's no suppression action being taken and the surface fire is free burning.

The fire perimeter map of June 19, 2002 was used as a starting point. There has been very little spread after the 19th so this was a logical place to start the projection. Weather parameters used in FARSITE are worst case with a northwest wind. This wind would be the biggest threat to Woodland Park and El Paso County from the Hayman Fire. The period of time used for this run is 0800 - 2200.

Other FARSITE parameters used to develop this projection can be found in the Appendices. Kelly Close has done some verification of his FARSITE runs with the actual fire spread. Utilizing the results of FARSITE, Carol Henson Fire Behavior Analyst with CIIMT 1, interpreted the results for the projection.

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Crown Fire, Worst Case Scenario - Southeast Perimeter
06/21/02, 0800-2200



This projection predicts that it would take approximately 1 burn period (0800-2200) under worst-case conditions for the fire to reach the lower John Gulch, Rupp Gulch, Ryan Gulch, and Manchester Creek areas.

If worst case conditions persisted it would take approximately 2 burn periods to reach upper Manchester Creek, and John Gulch, Rupp Gulch, Ryan Gulch, which would put the fire just into El Paso County. It would take approximately 2-1/2 to 3 burn periods to reach the edge of the community of Woodland Park. It would take approximately 3 to 4 burn periods to reach the community of Green Mountain.

Hayman Incident Trigger Points Specific to El Paso County, Co

Trigger Point	Date Point Breached	Trigger Point Description	Actions	Subdivisions/Areas Affected
AP 5K		Manitou Park Lake on Highway 67.	Advisory for potential evacuation on Highway 24W corridor south and Crystal Park Road.	Green Mountain Falls, Chipita Park, Cascade and Crystal Park.
EP1 AP		North Woodland Park on Highway 67.	Evacuate Green Mountain Falls, Chipita Park, Cascade and Crystal Park. Close Highway 24 south of Cascade and Crystal Park Road at Manitou Springs. Advisory to Manitou Springs for potential evacuation.	Green Mountain Falls, Chipita Park, Cascade, Crystal Park and Manitou Springs.
AP EP-2		Highway 24 north of Chipita Park Road	Evacuate Manitou Springs. Advise Colorado Springs. Evacuate Cedar Heights.	Manitou Springs. Colorado Springs. Cedar Heights
AP3		Rampart Range Road east of Woodland Park	Advisory for potential evacuation in Colorado Springs and Air Force Academy.	Peregrine, Mountain Shadows, Cedar Heights and Air Force Academy.
EP4		Northfield Rd. through Stanley Peak.	Evacuate Colorado Springs north end neighborhoods of Peregrine, Mountain Shadows.	Peregrine, Mountain Shadows.
EP5		Ridge Line 1 mile west of Academy Drive.	Evacuate Air Force Academy.	Palmer Lake, Red Rock Ranch and Monument
AP EP6		Rampart Range Road east of Manitou Lake.	Advisory to Tri-Lakes area of potential evacuation.	Palmer Lake, Red Rock Ranch, Hay Creek and Monument.
EP7		Ridge line 1 mile west of Palmer Lake.	Evacuate Tri-Lakes and Hay Creek areas west of Interstate 25.	

AP= Advisory Point EP= Evacuation Point

BE PREPARED TO EVACUATE

HOMEOWNER: YOU CAN HELP - Review this document with all occupants of your home and post or file it where all occupants know where to locate and refer to it in case of Evacuation.

If you are ordered to EVACUATE due to an oncoming wildland fire, you should do the following:

- **STAY CALM** Pre-plan. Know what valuables you can remove quickly and take with you.
- **WHERE?** Find out where you are to go when you evacuate and how to get there.
- **CLOSE UP!** Close up the house. Close all windows and doors. Cover all vents if you have time. Close heavy draps and blinds. Remove flimsy lace curtains and move furniture away from the windows.
- **Put all flammable** lawn furniture in the house or garage.
- **Turn off** the gas or propane. Leave electricity on.
- Put your ladders and garden hoses outside so Firefighters can use them.
- If you have to leave a vehicle, leave it pointed out with the keys in the ignition.
- **Take** your small pets with you, animal control may help you with your horses. If cows and goats are in a cleared pasture, leave them alone, if not, open the gates.
- **Keep** your driveways clear for fire equipment
- **Leave** a note or spray paint on the gravel or driveway where you went and phone number
- **Locate** and mark hazardous materials, septic tanks, water sources etc.
- Clean up around your house
- **Follow directions** from Sheriff's Dept & Fire Dept
- Leave your porch light on - alerting fire dept that you have evacuated and no one is in the house

Please note: keep the faith that all is not lost, if you have provided the required defensible space and have a non-flammable roof, your home has an excellent chance of surviving.

NFDRS POCKET CARDS

An aid to identifying local fuels conditions that might contribute to severe fire behavior is the NFDRS Pocket Card. The Pocket Card displays a general assessment of the fire potential compared to local fire occurrence and historical fire danger. It is a tool that can be used to track daily outputs of the National Fire Danger Rating System (NFDRS) throughout the fire season for a local area.

The Pocket Card provides:

- A graph to show the trend and status of the current year's fire season.
- A comparison of current year's conditions to historical worst and average conditions.
- Fire danger values related to past large fires.
- Locally significant values for temperature, humidity, wind speed, and more.

Discuss the following ways to use the Pocket Card:

- Use the Pocket Card to track local fire danger and in so doing increase the safety of your firefighters through increased awareness of fire danger conditions. NOTE: If fire danger is running at or above seasonal highs, be alert to those weather conditions that can lead to extreme fire behavior; e.g., low RH, 1-hour fuel moisture less than 5%, high temperatures, moderate to high winds.
- Use it to track daily fire dangers so that there are no surprises when extreme fire behavior occurs.
- Use it to supplement local experience.
- Use the Pocket Card as a point of reference for firefighters not familiar with the area represented by the card.
- When you receive your fire assignment outside your local area, visit the National Pocket Card website at <http://fire.blm.gov/nfdrs>. Click on the map and locate a Pocket Card for the area to which you are going.
- Put the Card in the Pocket of all your firefighters and keep a copy in your fire vehicle.
- Post the card in dispatch. Use them in briefings. Provide them to incoming crews.

References:

NFDRS Pocket Cards, NWCG, famweb.nwcg.gov/pocketcards

**STRUCTURE PROTECTION PLAN
RAMPART RANGE AREA
EL PASO COUNTY, COLORADO**

RAMPART RESERVOIR

Latitude and Longitude
N38 58.30, W104 57.41

Northfield Water Treatment Plant/Caretakers Residence
Latitude and Longitude

This structure protection plan is designed to quickly and safely assign resources to protect structures. The plan is divided into the following segments:

1. General information
2. Water supply
3. Resources needed
4. Tactics (suggested)
5. Probability of success
6. Safety considerations
7. Map/photos

GENERAL INFORMATION:

The Rampart Reservoir is located off Rampart Range Road (300) and east off access road 306. There are several Forest Service Campgrounds located within the reservoir grounds. The only structures and improvements are campground restrooms, all of which are concrete and require no protection measures. There is a reservoir valve house located at the base of the earthen dam at the east end of the reservoir. Adequate clearance is present around the valve house with a minimum of ground fuels present.

The road across the top of the dam structure can be considered as a large designated safety zone in a "worse" case situation for a large number of people and resources.

THE WATER TREATMENT PLANT:

Located at the outlet of Northfield Reservoir. Two routes can access it. One method is via Northfield Road (303) using the Rampart Range Road (300) and the other is the connector road between Rampart Reservoir past Nichols Reservoir and on to the mouth of Northfield Reservoir.

The treatment plant building is currently abandoned by Colorado Springs Utilities and is vacant. Adequate clearance is present at this time and should stand alone as unprotected.

THE CARETAKERS RESIDENCE:

Located 300 yards south of the water treatment plant on Northfield Road. Access is the same as for the treatment plant.

WATER SUPPLY:

Use the reservoir or water tenders for any water needs.

RESOURCES NEEDED:

No resources will be needed to protect the reservoir area. One engine company can be used to protect the treatment plant and caretakers residence.

TACTICS:

N/A

PROBABILITY OF SUCCESS:

N/A

SAFETY CONSIDERATIONS:

People's Natural Gas line is buried along Sour Doe Road at a depth of up to 3 feet, representatives have stated parts may be above the surface. The gas company will need to be notified if heavy equipment is used along the road.

MAP/PHOTOS:

**STRUCTURE PROTECTION PLAN
RAMPART RANGE AREA
EL PASO COUNTY, COLORADO**

COLORADO SPRINGS MICROWAVE AND QUEST SITE

Latitude and Longitude
N38 59.208, W104 55.236

This structure protection plan is designed to quickly and safely assign resources to protect structures. The plan is divided into the following segments:

1. General Information
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Maps and Photo's

GENERAL INFORMATION:

The City of Colorado Springs and Quest Corporation communication sites are located east of Rampart Range Road off the Northfield Road (303) 1.5 mile northeast of the Northfield Reservoir.

WATER SUPPLY:

There is no water supply at these sites.

RESOURCES NEEDED:

No resources will be needed to protect the communication sites.

TACTICS:

A small non-combustible building is located at each site. Preparation work may be needed to clear downed materials adjacent to the structure to increase the probability of success.

PROBABILITY OF SUCCESS:

Good

SAFETY CONSIDERATIONS:

Ensure that any resources working at the sites have adequate time to get to a safety zone before access is cut off.

MAPS AND PHOTO'S:



**STRUCTURE PROTECTION PLAN
RAMPART RANGE AREA
EL PASO COUNTY, COLORADO**

CARROL LAKES SUBDIVISION

Latitude and Longitude
N39 00.49, W104 59.36

This structure protection plan is designed to quickly and safely assign resources to protect structures. The plan is divided into the following segments:

1. General Information
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Maps and Photo's

GENERAL INFORMATION:

Carrol Lakes subdivision is located east of the Rampart Range Road on Forest Road 312. The road branches in several directions with structures located off each of the branches.

WATER SUPPLY:

There is a series of 5 lakes that will provide an adequate water to supply any structure protection needs.

RESOURCES NEEDED:

5 engines and 1 crew would provide adequate coverage to prep and protect this subdivision.

TACTICS:

Most structures are located at or adjacent to the lakes. Clearance is good around most of the buildings. A minimum of prep work will be necessary to give the buildings a good chance at survival.

PROBABILITY OF SUCCESS:

Good

SAFETY CONSIDERATIONS:

Good safety areas exist due to the topography, lakes and lack of heavy fuel loading.

**STRUCTURE PROTECTION PLAN
RAMPART RANGE AREA
EL PASO COUNTY, COLORADO**

SCHUBARTH TRAIL HOMESITES – FARRISH RANCH AREA

This structure protection plan is designed to quickly and safely assign resources to protect structures. The plan is divided into the following segments:

1. General Information
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Maps and Photo's

GENERAL INFORMATION:

The Schubarth Trail homesites are situated along forest road 307 extending from Rampart Range Road east to the forest boundary.

WATER SUPPLY:

Water is supplied to all residences by domestic wells.

RESOURCES NEEDED:

5 engines, 1 water tender and 1 crew would provide adequate coverage to prep and protect these structures.

TACTICS:

Most structures are located at or adjacent to light fuels with fair to moderate clearance around most of the buildings. Some prep work will be necessary to give the buildings a good chance at survival.

PROBABILITY OF SUCCESS:

Moderate for most structures.

SAFETY CONSIDERATIONS:

Good safety areas exist due to the topography and lack of heavy fuel loading.

MAP/PHOTOS:

**STRUCTURE PROTECTION PLAN
RAMPART RANGE AREA
EL PASO COUNTY, COLORADO**

FRONT RANGE ROAD/TARRYALL LANE/TIMBER RIDGE HOMESITES

Latitude and Longitude
N39 00.12, W105 01.01

This structure protection plan is designed to quickly and safely assign resources to protect structures. The plan is divided into the following segments:

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1. General Information
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Maps and Photo's

GENERAL INFORMATION:

The Front Range Road, Tarryall Lane, Timber Ridge homesites are located along Rampart Range Road just south of the Loy Creek intersection. Approximately a dozen homes and out buildings make up this subdivision.

WATER SUPPLY:

Water is supplied to all residences by domestic wells.

Resources Needed:

3 engines, 1 water tender and 1 crew would provide adequate coverage to prep and protect these structures.

TACTICS:

Most structures are located at or adjacent to light fuels with fair to moderate clearance around most of the buildings. Some prep work will be necessary to give the buildings a good chance at survival.

PROBABILITY OF SUCCESS:

Moderate for most structures.

SAFETY CONSIDERATIONS:

Good safety areas exist in the area due to the topography and lack of heavy fuel loading.

MAP/PHOTOS:

Structure Protection Plan

***El Paso County, CO.
Eagle Lakes Camp***

***Latitude and Longitude
N38 56.11, W104 57.04***

This plan is designed to quickly and safely assign resources to protect the structures in the Eagle Lakes Camp area of Rampart Ridge. The plan is broken up into the following segments:

1. General Narrative of area
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Maps and Photo's

General Information:

Located approximately 7 miles east of the Loy Creek, Rampart Ranch Road intersection. The Eagle Creek Camp is a summer camp facility operating 7 days a week. Camp capacity is 400 campers including staff. Numerous buildings of various sizes are present at the site.

Contact Personnel:

Lynn Engle, Camp Caretaker 472-0415 (home) 385-3892 (pager)
Derek Stricker, Alternate 472-1264 (home) 227-6789 (pager) 337-7132 (cell)

Water Supply:

Located adjacent to Eagle Lake, adequate water supply exists to protect structures. There is a 3,000-gallon water storage tank with 5 hydrants located throughout the grounds. A 30 gpm. Pump supplies the hydrant system. The facility has a back-up generator system to keep the hydrant system supplied. A hook-up is also available at the lake (west side) to supply the hydrant system.

The camp has a trailer with a mounted 300 gallon tank, pump and 1000' of hose available for fire protection.

Resources Needed:

Best Case Scenario:

1 Strike Team engines Type III

Worst Case Scenario:

1 Strike Team Engines Type III
Helicopter and Air tanker support if conditions allow

Tactics:

Review Structural watch outs
Prioritize structures as to values at risk
Implement Structure Triage to determine success

Probability of Success:

The probability of success is dependant on given fire conditions. The camp facilities are located in a hole making susceptibility to slope runs improbable. Camp staff is in the process of implementing hazard abatement on all camp buildings.

Safety Considerations:

NOTE: This facility has a major life risk with 400 people present throughout the summer. Timely evacuation notice is essential to mitigate this risk. Evacuation will take time to accomplish and must be considered when implementing any type of plan. Travel can be either east or west on Rampart Range Road. A 2-mile foot trail is also accessible south of the camp dropping into the Hwy. 24 corridor.

There is a safety zone located at the west side of the lakeshore with space enough to shelter the recommended resources.

NOTE: There is a set of steel cables stretched across the top of the lake. They are marked with simple flagging material and are invisible from the air. Using the lake as a dip site to support structure protection by rotor wing aircraft is impossible until the cable is removed.

Camp staff can take the cable down with 30-45 minute notice.

Maps and Photo's:

See attached:

Aerial photos
Topographic map
Camp map

Structure Protection Plan

El Paso County, CO. Columbine Canyon Subdivision

*Latitude and Longitude
N38 57.46, W105 01.01*

This plan is designed to quickly and safely assigns resources to protect the structures in the Columbine Canyon Subdivision area. The plan is broken up into the following segments:

1. General Information
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations

General Information:

Located above and north of Crystola. Access is through Crystola on 4th street off the Hwy. 24 corridor at the bottom of the canyon and off the Rampart Range Road on the top end. Approximately 13 homes currently built in the area.

Water Supply:

None. All homes on individual well systems.

Resources Needed:

Best Case Scenario:

1 Strike Team engines Type III

Worst Case Scenario:

1 Strike Team Engines Type III
Helicopter and Air tanker support if conditions allow

Tactics:

Review Structural watch outs
Prioritize structures as to values at risk
Implement Structure Triage to determine success
Aggressive attack on backing fire.
Take defensive actions for fire moving up from bottom of canyon

Probability of Success:

The probability of success is dependant on given fire conditions. A backing fire has a high probability of success as far as structure survivability. Head fire running up canyon will likely result in loss of many of the structures due to flame lengths and fire intensity.

Safety Considerations:

Lack of any adequate safety zones combined with anticipated fire intensities make direct structure protection during head fire conditions questionable if not impossible during extreme fire behavior. Recommend that fire-fighting forces wait until the fire moves through canyon before engaging.

STRUCTURE PROTECTION PLAN

EL PASO COUNTY

TRI-LAKES COMMUNITIES

Latitude and longitude N39 09.44, W104 12.56

Elevation: 8200'

This structure protection plan is designed to quickly and safely assign resources to protect structures. The plan is divided into the following segments:

1. General information
2. Water supply
3. Resources needed
4. Tactics (suggested)
5. Probability of success
6. Safety considerations
7. Map

GENERAL INFORMATION

The Tri-Lakes communities consist of the following subdivisions in the Palmer Lake/ Monument communities: Red Rock Ranch, Forest View Acres, Cloven Hoof Estates, Sundance Estates, Pioneer Lookout and Shilo Pines.

The Palmer Lake, Monument community areas are approximately 5 miles West of I-25. The subdivisions listed above are comprised of approximately 500 buildings, with 200 outbuildings. Most of the structures are wood sided, some are stucco. The majority of the newer structures have comp shingle roofs. All are reasonably accessible by fire equipment, and most of the streets have 1 or more fire hydrants. Within the subdivision, the majority of houses in the valley floor have little vegetation around them and defensible space. Where the terrain changes and begins to climb the vegetation around the structures is mostly composed of Gambel Oak and Ponderosa Pine and most of the structures need a considerable amount of work done to create defensible space. Very little work has been done in fuel modification and several structures have vegetation touching the sides of the building.

Energy to the valley floor is supplied by an underground natural gas pipeline. Most of the structures on the slope have propane storage tanks. Some overhead telephone wires run throughout the area.

The Appendix includes presuppression plans for the area with maps of the subdivisions, water sources with lat/longs, local radio frequencies, cooperators agreements for equipment, a Colorado State Forest Service Wildfire hazard mitigation and response plan, and a Fuelbreak guideline for Forested Subdivisions.

WATER SUPPLY

The main water supply to the area are 2 reservoirs located approximately 1 mile West of the community, access is by a one lane dirt road. Palmer Lake is located at the west end of town and is available as a dip site. Enclosed in the appendix is a list of several ponds that could be used as dip site. Lat /longs are included with the list along with ownership.

Throughout the subdivision there are several hydrants. The pressure at these hydrants is not known.

RESOURCES NEEDED

Best Case Scenario (Backing fire) –	5 strike teams of type III engines 5 Water tenders 3 20-person hand crew Helicopter and air tanker support 4 Dozers
Worst Case Scenario (Wind-driven fire) -	10 Strike Teams of Type 1 engines 5 Strike Teams of Type III engines 5 Water tenders 5 20-person hand crews Helicopter and air tanker support 6 Dozers

There is a USFS Helibase established at the Monument Work Center that is capable of handling three type III helicopters, or two type II's. It is not adequate for type I's but several large meadows in the area could be utilized as temporary helibases.

TACTICS

Review the Watchouts of what you are about to do!

Standard I-Zone tactics.

Structure triage.

Pre-identified Staging area is Palmer Lake Park.

PROBABILITY OF SUCCESS

The current environmental conditions and resource availability, along with the fires relative location to the development or within it, plays a major role in the success of any defense effort made in this development. The current state of defensible space and the existing water supply and its availability are average. Narrow, vegetated access inhibits evacuations or reinforcements during major fire activity. However, once equipment and personnel are committed to a defense of this property, the **probability of success is fair to good.**

SAFETY CONSIDERATIONS

Occupant evacuation is recommended, but must be done early. Access to the property will not allow last-minute action. There are egress options to the north, south and east, and several large meadows which could be utilized as safety zones exist in the area. Palmer Middle School has been established as an evacuation center and the Red Cross is set up there.

Structure Protection Plan

El Paso County, CO. Green Mountain Falls & Chipita Park

This plan is designed to quickly and safely assign resources to protect the structures in the communities of Green Mountain Falls & Chipita Park. The plan is broken up into the following segments:

1. General Narrative of area
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Map and photo's

General Information:

The communities of Green Mountain Falls and Chipita Park are located along the Hwy. 24 Corridor between Colorado Springs and Woodland Park. These communities are comprised of typical urban interface and intermix settings. Their approximately 700 residences and numerous outbuildings. Most of the homes in these communities are primary residences with scattered summer homes and cabins. Most homes are constructed of wood with composite roofs. All are reasonably accessible by type VI engines; however do not recommend anything above a type IV. Vegetation has not been cleared around most the structures and the volume is typical of the area within this fuel type (NFFL Model 9). The area is characterized of mixed conifer with an understory of Gambel Oak. Some pockets of heavier than normal accumulation of dead and downed material are present. There is a minimal buffer of defensible space between most structures and the vegetation.

There are 2 main access points to the communities off of Hwy. 24. One at Chipita Park, one at Green Mountain falls. Each are well marked on Hwy.24. Access in the neighborhood themselves is limited by narrow roads and very few turnouts. Most roads are confined to single lane with little room to pass. Driveways are characterized by limited maneuverability. All roads with the exception of Ute Pass rd. in the Green Mountain Falls area are dirt. There are numerous commercial type structures on the Ute Pass rd.

Most all the residents are on natural gas with the exception of a few that are fueled by propane. Power lines are typical of mountain communities ie; residential lines along with some major power lines supplying the area.

Water Supply:

The main water supply to these communities is supplied by Colorado Springs Utilities. The system is pump fed in some parts as well as gravity fed for some area's. The system is fed by (1) 60,000 gallon treated tank, located above the Belvedere tract area in Green Mountain Falls as well as (2) 300,0000 gallon tanks with ability of 1 million gallons per day replenishing ability located off of Hwy. 24 on Motel X hill. The pumped side of the system has (2) 300 GPM pumps feeding the system the attached maps show water source locations, gallon capacity and replenishing times. [The contact for the water district is Vic Eklund \(719\) 536-7769](mailto:VicEklund@coloradospringsutilities.com)

Resources Needed:

Best Case Scenario (Backing Fire):

4 Strike Teams Engines
2-20 person hand crews
Helicopter and Air Tanker Support
2 Dozers to staging Area (TBA)

Worst Case Scenario (Wind Driven Fire):

20 strike teams Engines
(4-6) 20 person handcrews
Helicopter and Air Tanker support
10 Dozers to Staging Area (TBA)

Tactics:

Review the structural watchouts before engaging
Implement Structure Triage to determine Success
Follow standard Interface Zone Tactics

Probability of Success:

The probability of success depends on given conditions at the time of the fire and the intensity of the fire. The defensible space in these mentioned communities needs improvement, it is imperative to the success of firefighters. The current state of the situation does not dictate this. Narrow one-lane roads, poor defensible space and poor access to structures lend itself to poor success of saving structures in the event of a wildland fire. The probability of defending these structures in a wildland fire event is poor. Under a backing fire scenario the probability for success is a little better depending on resource availability, experience level of the resources, fire behavior and time of year.

Safety Considerations:

Occupant evacuation is crucial do to very limited access and egress to the major portion of in the Green Mtn. Falls and Chipita Park areas. Any two-way traffic congestion during operations would comprise safe operations. Roads in these areas are, narrow, single lane dirt with sharp curves, many dead ends with inadequate turning radius. Structures are almost all wood frame with composite roofing with little to no clearance of natural fuels both on the ground and aerial. Parking in and around the structures is very limited restricting the ability for safe engine placement. Refer to NWCG Incident Response Pocket Guide page 14 for structure protection checklist, also Standards for Fire and Aviation operations 2002(Red Book), chapter 11 Wildland/Urban Firefighting for additional information on structure protection in the wildland urban intermix. Safety Zone considerations can be the ball field located across the street from the elementary school located in Chipita Park. Some of the larger pastures located off of Ute Pass Rd. can also be considered for Public safe refuge area's as well.

Structure Protection Plan

El Paso County, CO. Community of Cascade

This plan is designed to quickly and safely assigns resources to protect the structures in the community of Cascade. The plan is broken up into the following segments:

1. General Narrative of area
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Map and photo's

General Information:

The community of Cascade is located along the Hwy. 24 Corridor between Colorado Springs and Chipita Park. The community is comprised of typical urban interface and intermix settings. Their approximately 300 residences and numerous outbuildings. Most of the homes in this community are primary residences with scattered summer homes and cabins. Most homes are constructed of wood with composite roofs. All are reasonably accessible by type III engines. Vegetation has not been cleared around most the structures and the volume is typical of the area within this fuel type (NFFL Model 9). The area is characterized of mixed conifer with an understory of Gambel Oak. Some pockets of heavier than normal accumulation of dead and downed material are present. There is a minimal buffer of defensible space between most structures and the vegetation.

There is 1 main access point to the community off of Hwy. 24. Access in the neighborhood themselves is limited by narrow roads and very few turnouts. Most roads are confined to single lane with little room to pass. Driveways are characterized by limited maneuverability. There are numerous commercial type structures on the Ute Pass rd.

Most all the residents are on natural gas with the exception of a few that are fueled by propane. Power lines are typical of mountain communities ie; residential lines along with some major power lines supplying the area.

Water Supply:

The bulk water supply to these communities is supplied by Colorado Springs Utilities. The system is pump fed in some parts as well as gravity fed for some area's.

The contact for the water district is Duane Shormand (719) 684-9651.

Resources Needed:

Best Case Scenario (Backing Fire): 4 Strike Teams Engines
2-20 person hand crews
Helicopter and Air Tanker Support
2 Dozers to staging Area (TBA)

Worst Case Scenario (Wind Driven Fire): 20 strike teams Engines
(4-6) 20 person handcrews
Helicopter and Air Tanker support
10 Dozers to Staging Area (TBA)

Tactics:

Review the structural watch outs before engaging
Implement Structure Triage to determine Success
Follow standard Interface Zone Tactics

Probability of Success:

The probability of success depends on given conditions at the time of the fire and the intensity of the fire. The defensible space in these mentioned communities needs improvement, it is imperative to the success of firefighters. The current state of the situation does not dictate this. Narrow one-lane roads, poor defensible space and poor access to structures lend itself to poor success of saving structures in the event of a wildland fire. The probability of defending these structures in a wildland fire event is limited to the experience of the resources assigned. Under a backing fire scenario the probability for success is a little better depending on resource availability, experience level of the resources, fire behavior and time of year.

Safety Considerations:

Occupant evacuation is crucial do to very limited access and egress to the major portion of Cascade. Any two-way traffic congestion during operations would comprise safe operations. Roads in these areas are, narrow, and single lane dirt with sharp curves, many dead ends with inadequate turning radius. Structures are almost all wood frame with composite roofing with little to no clearance of natural fuels both on the ground and aerial. Parking in and around the structures is limited restricting the ability for safe engine placement. Refer to NWCG Incident Response Pocket Guide page 14 for structure protection checklist, also Standards for Fire and Aviation operations 2002(Red Book), chapter 11 Wildland/Urban Firefighting for additional information on structure protection in the wildland urban intermix.



View of Cascade area from camera point on Pikes Peak tollway.

Structure Protection Plan

**Teller County, Co
Quaker Ridge Camp
East of Hwy 67**

This plan is designed to quickly and safely assign resources to protect the structures in the Quaker Ridge Camp. The plan is broken up into the following segments:

1. General Narrative of area
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Map and photo's

General Information:

There approximately 25 structures within the compound of this camp. Most homes are constructed of wood with composite roofs. All are reasonably accessible by type VI engines; however it is not recommended anything above Type IV engines. Vegetation been cleared around most the structures and the volume is typical of the area within this fuel type (NFFL Model 9). The area is characterized of mixed conifer with an understory of Gambel Oak. Some pockets of heavier than normal accumulation of dead and downed material are present. There is a minimal buffer of defensible space between most structures and the vegetation.

There is one main access point to the camp off of Hwy. 67. It is approximately 2 miles off the Hwy.

Most all the structures are on propane gas. Power lines are typical of mountain communities ie; residential lines along with some major power lines supplying the area.

Water Supply:

The water is supplied by an underground well system. There is also a pool and a pond in the middle of the camp (n39° 03.721 w105° 03.692).

Resources Needed:

Best Case Scenario (Backing Fire):

2 Strike Teams Engines
2-20 person hand crews
Helicopter and Air Tanker Support
2 Dozers to staging Area (TBA)

Worst Case Scenario (Wind Driven Fire):

4 strike teams Engines
3- 20 person handcrews
Helicopter and Air Tanker support
3 Dozers to Staging Area (TBA)

Tactics:

Review the structural watchouts before engaging
Implement Structure Triage to determine Success
Follow standard Interface Zone Tactics

Probability of Success:

The probability of success depends on given conditions at the time of the fire and the intensity of the fire. The defensible space in these mentioned communities needs improvement, it is imperative to the success of firefighters.

Safety Considerations:

Occupant evacuation is crucial do to very limited access and egress. Any two-way traffic congestion during operations would comprise safety. Roads in these areas are narrow, single lane dirt with sharp curves. Structures are almost all wood frame with composite roofing with little clearance of natural fuels both on the ground and aerial. Refer to NWCG Incident Response Pocket Guide page 14 for structure protection checklist, also Standards for Fire and Aviation operations 2002(Red Book), chapter 11 Wildland/Urban Firefighting for additional information on structure protection in the wildland urban intermix. Safety Zone considerations can be within the center of the camp near the pool and pond.

Structure Protection Plan

**Teller County, Co
Sky High Ranch
East of Hwy 67**

This plan is designed to quickly and safely assign resources to protect the structures in the Sky High Ranch Girl Scout Ranch. The plan is broken up into the following segments:

1. General Narrative of area
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Map and photo's

General Information:

There are approximately 15 structures with numerous out building within the camp. Most homes are constructed of wood with composite roofs. Most of the out buildings are tent type buildings. All are reasonably accessible by type VI engines; however we do not recommend anything above a type IV. Vegetation has been cleared around most the structures and the volume is typical of the area within this fuel type (NFFL Model 9). The area is characterized of mixed conifer with an understory of Gambel Oak. Some pockets of heavier than normal accumulation of dead and downed material are present. There is a minimal buffer of defensible space between most structures and the vegetation.

There is one main access to the camp off of Hwy. 67. It is approximately 1 1/2 miles off the Hwy.

Most all the structures are on propane gas. Power lines are typical of mountain communities ie; residential lines along with some major power lines supplying the area.

Water Supply:

The water is supplied by an underground well system. There are numerous water hydrants within the camp with 4" mains, there is a small lake on the compound (N 39 04.862 W105 03.778)

Resources Needed:

Best Case Scenario (Backing Fire):

2 Strike Teams Engines
2-20 person hand crews
Helicopter and Air Tanker Support
2 Dozers to staging Area (TBA)

Worst Case Scenario (Wind Driven Fire):

4 strike teams Engines
3- 20 person handcrews
Helicopter and Air Tanker support
3 Dozers to Staging Area (TBA)

Tactics:

Review the structural watchouts before engaging
Implement Structure Triage to determine Success
Follow standard Interface Zone Tactics

Probability of Success:

The probability of success depends on given conditions at the time of the fire and the intensity of the fire. The defensible space in this camp around the main structure is good. The tent structures are non-defensible as they are scattered throughout the trees on the camp compound.

Safety Considerations:

Occupant evacuation is crucial do to very limited access and egress to the major portion of in the Green Mt. Falls and Chipita Park areas. Any two-way traffic congestion during operations would comprise safe operations. Roads in these areas are, narrow, single lane dirt with sharp curves, many dead ends with inadequate turning radius. Structures are almost all wood frame with composite roofing with little to no clearance of natural fuels both on the ground and aerial. Parking in and around the structures is very limited, restricting the ability for safe engine placement. Refer to NWCG Incident Response Pocket Guide page 14 for structure protection checklist, also Standards for Fire and Aviation operations 2002(Red Book), chapter 11 Wildland/Urban Firefighting for additional information on structure protection in the wildland urban intermix. Safety Zone considerations can be the ball field located across the street from the elementary school located in Chipita Park. Some of the larger pastures located off of Ute Pass Rd. can also be considered for Public safe refuge area's as well.

Structure Protection Plan

El Paso County, CO. Green Mountain Falls & Chipita Park

This plan is designed to quickly and safely assign resources to protect the structures in the communities of Green Mountain Falls & Chipita Park. The plan is broken up into the following segments:

1. General Narrative of area
2. Water Supply
3. Resources Needed
4. Tactics
5. Probability of Success
6. Safety Considerations
7. Map and photo's

General Information:

The communities of Green Mountain Falls and Chipita Park are located along the Hwy. 24 Corridor between Colorado Springs and Woodland Park. These communities are comprised of typical urban interface and intermix settings. Their approximately 700 residences and numerous outbuildings. Most of the homes in these communities are primary residences with scattered summer homes and cabins. Most homes are constructed of wood with composite roofs. All are reasonably accessible by type VI engines; however do not recommend anything above a type IV. Vegetation has not been cleared around most the structures and the volume is typical of the area within this fuel type (NFFL Model 9). The area is characterized of mixed conifer with an understory of Gambel Oak. Some pockets of heavier than normal accumulation of dead and downed material are present. There is a minimal buffer of defensible space between most structures and the vegetation.

There are 2 main access points to the communities off of Hwy. 24. One at Chipita Park, one at Green Mountain falls. Each are well marked on Hwy.24. Access in the neighborhood themselves is limited by narrow roads and very few turnouts. Most roads are confined to single lane with little room to pass. Driveways are characterized by limited maneuverability. All roads with the exception of Ute Pass rd. in the Green Mountain Falls area are dirt. There are numerous commercial type structures on the Ute Pass rd.

Most all the residents are on natural gas with the exception of a few that are fueled by propane. Power lines are typical of mountain communities ie; residential lines along with some major power lines supplying the area.

Water Supply:

The main water supply to these communities is supplied by Colorado Springs Utilities. The system is pump fed in some parts as well as gravity fed for some areas. The system is fed by (1) 60,000 gallon treated tank, located above the Belvedere tract area in Green Mountain Falls as well as (2) 300,0000 gallon tanks with ability of 1 million gallons per day replenishing ability located off of Hwy. 24 on Motel X hill. The pumped side of the system has (2) 300 GPM pumps feeding the system the attached maps show water source locations, gallon capacity and replenishing times. [*The contact for the water district is Vic Eklund \(719\) 536-7769*](#)

Resources Needed:

Best Case Scenario (Backing Fire): 4 Strike Teams Engines
2-20 person hand crews
Helicopter and Air Tanker Support
2 Dozers to staging Area (TBA)

Worst Case Scenario (Wind Driven Fire): 20 strike teams Engines
(4-6) 20 person handcrews
Helicopter and Air Tanker support
10 Dozers to Staging Area (TBA)

Tactics:

Review the structural watchouts before engaging
Implement Structure Triage to determine Success
Follow standard Interface Zone Tactics

Probability of Success:

The probability of success depends on given conditions at the time of the fire and the intensity of the fire. The defensible space in these mentioned communities needs improvement, it is imperative to the success of firefighters. The current state of the situation does not dictate this. Narrow one-lane roads, poor defensible space and poor access to structures lend itself to poor success of saving structures in the event of a wildland fire. The probability of defending these structures in a wildland fire event is poor. Under a backing fire scenario the probability for success is a little better depending on resource availability, experience level of the resources, fire behavior and time of year.

Safety Considerations:

Occupant evacuation is crucial do to very limited access and egress to the major portion of in the Green Mt. Falls and Chipita Park areas. Any two-way traffic congestion during operations would comprise safe operations. Roads in these areas are, narrow, single lane dirt with sharp curves, many dead ends with inadequate turning radius. Structures are almost all wood frame with composite roofing with little to no clearance of natural fuels both on the ground and aerial. Parking in and around the structures is very limited restricting the ability for safe engine placement. Refer to NWCG Incident Response Pocket Guide page 14 for structure protection checklist, also Standards for Fire and Aviation operations 2002 (Red Book), chapter 11 Wildland/Urban Firefighting for additional information on structure protection in the wildland urban intermix. Safety Zone considerations can be the ball field located across the street from the elementary school located in Chipita Park. Some of the larger pastures located off of Ute Pass Rd. can also be considered for Public safe refuge area's as well.

EL PASO CO. STRUCTURE PROTECTION AIR OPERATIONS SUMMARY

There are several accessible helicopter dip sites in the Rampart Ridge area. Most of the sites are administered by Colorado Springs Utilities (contact Vic Eklund, cell - 719-651-7770, work – 719-536-7769). Of these sites two are potential mobile retardant sites with the Rampart Reservoir having the most room for the plant while also being the nearest water source to the interface area. The second possible site would be at the North Catamount Reservoir. Both of these reservoirs are administered by Colorado Springs Utility, Vic Eklund as the contact. The U.S. Air Force Academy in Colorado Springs has also been identified as a possible site with ample space and adequate water supply. Contact for the Air Force Academy site will be Major Bill Weaver Director of Operations (719) 333-9316 address 9206 Airfield Dr. Colorado Springs CO 80840. These multiple dip sites provide for pilot discretion due to smoke or weather conditions.

Potential Helibase sites includes the Air Force Academy and an area identified on the map on the Rampart Ridge Rd. near Bald Mt. This is a large range area with ample space for multiple helicopters.

Resource needs and availability from El Pasco County												
Available Resources	Engine Type 1	Engine Type 2	Engine Type 3	Engine Type 4	Engine Type 5	Engine Type 6	3 Person Minimum Staffing	Duration	Wildland Trained	Water Tender Type 1	Water Tender Type 2	Water Tender Type 3
Agency North												
Palmer Lake Vol.	1		1				Yes	2 shifts	Yes			1
Palmer Lake Fire							2 Yes	1 shifts	Yes			
Woodmoor/Monument							1 No	1 shifts	Yes			
Black Forest							1 No	2 shifts	Yes			
Westcott							1 No	2 shifts	Yes			
Woodmoor/Monument	1						No	2 shifts	Yes			
Green Mountain							2 Yes	2 shifts	Yes			
Agency South												
Colorado Springs	10						3 Yes	2 Shifts	Yes	1		
Agency East												
Falcon							2 No	1 Shifts	Yes			
Stratmoor	1						Yes	1 Shifts	Yes			
Fountain	1						Yes	1 Shifts	Yes			
Hanover	1						No	1 Shifts	Yes			
Calhan							1 No	1 Shifts	Yes			
Ellicot							1 No	1 Shifts	Yes			
Totals	15	0	1	0	0	14				1	0	1
Resources Needed												
Area	Engine Type 1	Engine Type 2	Engine Type 3	Engine Type 4	Engine Type 5	Engine Type 6	3 Person Minimum Staffing	Duration	Wildland Trained	Water Tender Type 1	Water Tender Type 2	Water Tender Type 3
Rampart Ridge												
Wind Driven Fire		15	5								3	
Backing Fire Required												
Have	15	0	1	0	0	14				1		1
Wind Driven Needs	-15	15	4	0	0	-14		0	0	-1	3	-1
Backing Fire Needs	-15	0	-1	0	0	-14		0	0	-1	0	-1
Area	Engine Type 1	Engine Type 2	Engine Type 3	Engine Type 4	Engine Type 5	Engine Type 6	3 Person Minimum Staffing	Duration	Wildland Trained	Water Tender Type 1	Water Tender Type 2	Water Tender Type 3
Highway 24 Corridor												
Green Mountain/Chipita Park												
Wind Driven Fire			100									
Backing Fire Required			20									
Have	15	0	1	0	0	14				1		1
Wind Driven Needs	-15	0	99	0	0	-14		0	0	-1	0	-1
Backing Fire Needs	-15	0	19	0	0	-14		0	0	-1	0	-1
Cascade												
Wind Driven Fire	50		25									
Backing Fire Required	5		20									
Have	15	0	1	0	0	14				1		1
Wind Driven Needs	35	0	24	0	0	-14		0	0	0	0	-1
Backing Fire Needs	-10	0	19	0	0	-14		0	0	-1	0	-1
Area	Engine Type 1	Engine Type 2	Engine Type 3	Engine Type 4	Engine Type 5	Engine Type 6	3 Person Minimum Staffing	Duration	Wildland Trained	Water Tender Type 1	Water Tender Type 2	Water Tender Type 3
Tri Lakes												5
Wind Driven Required	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backing Fire Required	50		25									5
Have	15	0	1	0	0	14				1		1
Wind Driven Needs	35	0	-1	0	0	-14		0	0	-1	5	-1
Backing Fire Needs	35	0	24	0	0	-14		0	0	-1	5	-1
Resource needs are shown as a positive number												
Resource excess are shown as a negative number												
Resource request are based on best possible equipment for the situation												

Area	Engine Type 1	Engine Type 2	Engine Type 3	Engine Type 4	Engine Type 5
Tri Lakes					
Wind Driven Fire					
Backing Fire Required					
Have	15	0	1	0	0
Area					
Hwy 24 Cooridor					
Wind Driven Fire					
Backing Fire Required					
Have	15	0	1	0	0
Area					
Rampart Ridge					
Wind Driven Fire					
Backing Fire Required					
Have	15	0	1	0	0

Engine Type 6 3 Person Minimum Staffing Duration Wildland Trained Water Tender Type 1

11

11

11

Water Tender Type 2 Water Tender Type 3

1

1

1

DRAFT – DO NOT RELEASE

**PEOPLE IN <INSERTNAME OF AREA> SHOULD STAY TUNED TO
AIR QUALITY REPORTS FOR SMOKE INFORMATION**

DATELINE – Residents living in the area of the **<INSERT NAME OF FIRE>** fire should listen to local air quality forecasts to help them plan their daily activities.

Wildfire smoke can pose a particular risk for people with heart and lung diseases, as well as for children and the elderly. At high enough levels, even healthy people can experience problems.

One of the biggest dangers of smoke comes from *particulate matter* – solid particles and liquid droplets found in the air. The particles in smoke often are tiny – nearly 1/30th the diameter of the average human hair.

These particles can build up in the respiratory system, causing burning eyes, runny noses and illnesses such as bronchitis. These particles also can aggravate heart and lung diseases, such as congestive heart failure, chronic obstructive pulmonary disease, emphysema and asthma.

Check your local air quality forecast to help plan your activities. Many communities report the Environmental Protection Agency’s Air Quality Index, or AQI. As smoke gets worse, the index for particles changes. And so do the guidelines for protecting yourself.

If your area doesn’t monitor particle levels, use common sense to protect your health. When it’s smoky outside, keep your children indoors. Instead of going for a run, go to the gym, or work out at home. If you have asthma, make sure you take your medications. And when smoke reaches hazardous levels, everyone should stay inside.

If you begin experiencing symptoms, such as coughing, burning eyes or a runny nose, contact your doctor or your county health department – especially if you have heart or lung disease.

For more information about smoke from the **NAME OF FIRE**, call **INSERT CONTACT OR WEB INFORMATION HERE**

For information on the Air Quality Index, go to <http://www.epa.gov/airnow/aqibroch/> .

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FOR FIRE INFORMATION INTERNAL USE ONLY

Wildfire Smoke & Health
Communication Plan for the **<INSERT NAME OF FIRE HERE>**

NOTE: This is a generic communication plan to be used as a framework for developing a smoke communication plan for your fire. Please update this to reflect local situations and needs and to include phone numbers and information from your particular incident.

Issue: *<Insert smoke issue summary for local fire here. The following is a general issue that you could use early in the fire -- to alert residents that smoke may become a problem.>*

Wildfires frequently are accompanied by heavy smoke, which can persist in local communities for days or even weeks, posing a risk to public health and prompting a number of questions and complaints from residents.

Goals:

1. Help residents protect themselves from smoke.
2. Prevent/reduce confusion
3. Educate public about PM and health risks.

Key Message: Wildfire smoke can be a health hazard, especially for children, the elderly, and people with heart and lung diseases. Residents should keep track of local air quality reports and forecasts, and should use prudence when planning their daily activities until the smoke has dissipated. People at particular risk should contact their doctors to determine steps they should take to protect their health, including whether and when they should leave the area. (*Note: This message will change in areas where local governments may order evacuations because of smoke.*)

Overall Strategy: Distribute news releases and PSAs via local media and the Web. Distribute fliers and other available material through local health departments, the Web and other locations that residents regularly visit or go for information. (These will vary by community but may include post offices, general stores, libraries, local restaurants, etc.)

**Things to do *before*
you distribute messages:**

- 1) *If there is a local air quality or public health agency in the area of your fire, be sure to contact that agency before distributing materials to ensure that your messages do not conflict.* The messages in this packet have been endorsed by the U.S. Environmental Protection Agency for the 2000 fire season. If your messages do not conflict, consider jointly distributing materials.
- 2) In areas with no local air quality or public health agency, make personal contacts, as appropriate and possible, with key stakeholders in affected communities *before* you distribute these messages. These include mayors, county or city managers, sheriffs, local health departments, hospital administrators, school administrators and local air quality agencies. Let these leaders know that you are planning to distribute information, and ask them for any information you need to tailor these materials to local situations. In areas with local air quality agencies, those agencies should be the lead in making these contacts.
- 3) *Find out whether the communities affected by the fires are or are not likely to order evacuations because of smoke. If evacuations are a possibility, this will change your message.* If evacuations are a possibility, make sure you contact the public information officer in the agency responsible for evacuations to get the correct information for tailoring the message, and to get contact telephone numbers for people with evacuation questions.
- 4) Are multiple counties/towns affected? How do their local policies differ? In instances where one county has monitors and an alert system and a neighboring county does not – residents in the neighboring county may be confused by news reports. Be prepared to answer their questions.
- 5) Provide Qs & As and other materials to the lead FIO, so they will have them to use in answering questions from the media and/or public.

Note: The materials provided in this packet focus primarily on *public* risk from wildfire smoke. They do not address *firefighter* risk in detail.

(more)

Materials distribution and contact assignments
Update this table to help you track your communication

Materials	Distribution	Person responsible for updating, distributing	Status
EPA approved wildfire smoke and health Q&As	<Fill in locations, agencies, etc. This is a good item to make available at places local residents commonly visit, such as post offices. Also useful for community meetings.>	<assign>	
News releases (Use in conjunction with state/local air agency.) Distribute early during fire, and again as smoke is forecast to be heavy.	Local papers Radio Television Popular local Internet sites - Don't forget to post on your fire site!	<assign>	
Live-read PSAs	Radio stations. Call before you distribute these. Don't just fax or e-mail them. Ask for help – most people will gladly provide it.	<assign>	
<i>Add your own materials as appropriate</i>			

(More)

Contact Assignments

Use general message -- smoke may be heavy and may persist, posing a risk to some members of the public, and prompting a number of questions and complaints from residents. Let the person you are calling know that you have EPA-approved information you will be distributing. It's particularly important that local leaders not be caught off-guard, and local health officials need to be prepared for the additional calls they may received. Enlist their help in distributing materials!

Agency/Person	Person Responsible	Status
Local Air Quality Agencies		
Mayors		
Town/county managers		
Sheriffs		
Local Health Departments		
School Administrators		
Daycare operators		
Local Congressional Offices		

Local Lung Association (may be able to help you distribute materials).		
Area churches - contact if need help distributing materials		
Add additional as needed.		

Appendix
Components of a Generic Agency Evaluation
Outreach and Public Information Group

The Outreach and Public Information Group agreed that one of the best ways to improve responding agencies' future performance was to standardize an evaluation process that would be undertaken following any fire response.

The agency evaluation would be built around six general questions:

1. Was there a plan for inter-agency collaboration? Which agencies?
2. What did your agency do best? What worst?
3. Was there a media plan/strategy? Which media involved?
4. Was there a public outreach plan or community assessment done early in the response? Who was contacted? What materials were used and/or produced?
5. How much public exposure to particulates (other contaminants) occurred? How many people were exposed? What levels of exposure (min. max. ave.)? Over what duration?
6. What were the agency's costs of response?

A client evaluation would be built around four questions that could be administered through a phone bank, mailing, or person-to-person interview:

1. Did you have knowledge of public advisories during the fire (knowledge that they existed; knowledge of their content; ability to recall specific language)?
2. Did you do any of the things that were recommended during the fire? What did you do? If you didn't do anything recommended, why not?
3. Did you know which agencies were involved and what they did during the fire?
4. Were you satisfied with a specific agency response? What would you have liked in addition?

A simple tool like this would allow for community input and improve agency performance over time. Work group members suggested that a pilot evaluation could occur in Montana in the areas of last year's extensive fires.

WILDFIRE SMOKE CAN AFFECT YOU EVEN INDOORS

DATELINE – When smoke levels from wildfires stay high for a long period, smoke can affect you even indoors.

The tiny particles in wildfire smoke can easily get inside your home. Over time, the particles can build up and can cause you problems – especially if you have a heart disease, such as congestive heart disease, or lung diseases such as chronic obstructive pulmonary disease, emphysema or asthma. The elderly and children also are more susceptible to the effects of smoke.

If you are advised to stay indoors, there are a number of steps you can take to keep the air inside your home as smoke-free as possible:

- Keep your windows and doors closed.
- Run your air conditioner, if you have one. Be sure to keep the fresh air intake closed and the filter clean.
- Use an indoor air filtration device with a HEPA filter. Make sure to change the filter regularly. Do not use air cleaners that work by generating ozone: They put more pollution inside your home.
- Avoid using anything that burns, including wood stoves and gas stoves, if possible, and even candles.
- Don't smoke. That just puts more pollution in your lungs – and those of the people around you.

If you have symptoms of smoke exposure indoors (coughing, stinging and watering eyes, runny nose, etc.) call your doctor or your county health department. This is particularly important for people with heart or respiratory diseases, the elderly and children.

For more information on particles and health, go to <http://www.epa.gov/airnow/aqibroch/>

For information on local air quality, call <INSERT NUMBER OF LOCAL AIR AGENCY, HEALTH DEPARTMENT OR OTHER AGENCY REPORTING AIR QUALITY>

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**Wildfire Smoke and Health
Live Read PSAs**

WILDFIRE SMOKE AND YOUR HEALTH

:30 SECONDS

HAVE YOU WONDERED WHY THE SMOKE FROM <NAME OF> FIRE MAKES YOU FEEL BAD? SMOKE CONTAINS MILLIONS OF TINY PARTICLES THAT CAN MAKE YOUR EYES WATER, MAKE YOUR NOSE RUN AND MAKE YOU COUGH. FOR MOST HEALTHY FOLKS, THESE SYMPTOMS WILL GO AWAY AFTER THE SMOKE IS GONE. BUT FOR SOME PEOPLE, WILDFIRE SMOKE CAN BE DANGEROUS. IF YOU'RE AROUND SMOKE AND YOU HAVE ANY TYPE OF HEART OR LUNG DISEASE, SUCH AS CONGESTIVE HEART FAILURE, EMPHYSEMA OR ASTHMA, CALL YOUR DOCTOR OR YOUR COUNTY HEALTH DEPARTMENT TO LEARN MORE ABOUT PRECAUTIONS YOU SHOULD TAKE. FOR MORE INFORMATION ABOUT SMOKE FROM WILDFIRES, CALL <INSERT LOCAL AQ OR FS #>.

REDUCE SMOKE POLLUTION INDOORS

:30 SECONDS

HAVE YOU BEEN TOLD TO STAY INSIDE BECAUSE OF SMOKE FROM THE <INSERT NAME OF FIRE> FIRE? OVER TIME, THE TINY PARTICLES IN SMOKE CAN BUILD UP INDOORS. TAKE THESE STEPS TO HELP KEEP LEVELS LOW:

- KEEP WINDOWS AND DOORS CLOSED.
- RUN YOUR AIR CONDITIONER, IF YOU HAVE ONE. BE SURE TO KEEP THE FILTER CLEAN, AND CLOSE THE FRESH AIR INTAKE.
- AVOID USING ANYTHING THAT BURNS, INCLUDING WOOD STOVES -- AND EVEN CANDLES.
- DON'T VACUUM.
- AND DON'T SMOKE. THAT JUST PUTS MORE POLLUTION IN YOUR LUNGS – AND IN THE LUNGS OF YOUR FAMILY.

FOR MORE INFORMATION ABOUT SMOKE IN YOUR AREA, CALL
(INSERT NUMBER OF LOCAL AIR AGENCY OR HEALTH DEPT,
WHICHEVER IS APPROPRIATE)

PROTECT YOURSELF FROM WILDFIRE SMOKE

:15 SECONDS

WILDFIRE SMOKE ISN'T GOOD FOR ANY OF US, BUT IT'S ESPECIALLY BAD FOR PEOPLE WITH HEART OR LUNG DISEASE. WITH THE <INSERT NAME OF FIRE> BURNING NEAR OUR AREA, HEAVY SMOKE LEVELS ARE A POSSIBILITY. FOR INFORMATION ON STEPS YOU CAN TAKE TO PROTECT YOURSELF, CALL <INSERT LOCAL NUMBER>

STAY TUNED TO LOCAL AIR FORECASTS

:15 SECONDS

WITH THE <INSERT NAME OF FIRE> BURNING NEAR OUR AREA, HEAVY SMOKE LEVELS ARE A POSSIBILITY. PROTECT YOUR HEALTH BY REDUCING THE AMOUNT OF SMOKE YOU BREATHE. WHEN SMOKE IS FORECAST TO BE HEAVY, PLAN ACTIVITIES INDOORS. TO GET YOUR LOCAL SMOKE FORECAST, CALL <INSERT NUMBER>

Wildfire Smoke and Your Health

What's in smoke from a wildfire?

Smoke is made up small particles, gases and water vapor. Water vapor makes up the majority of smoke. The remainder includes carbon monoxide, carbon dioxide, nitrogen oxide, irritant volatile organic compounds, air toxics and very small particles.

Is smoke bad for me?

Yes. It's a good idea to avoid breathing smoke if you can help it. If you are healthy, you usually are not at a major risk from smoke. But there are people who are at risk, including people with heart or lung diseases, such as congestive heart disease, chronic obstructive pulmonary disease, emphysema or asthma. Children and the elderly also are more susceptible to smoke.

What can I do to protect myself?

- Many areas report EPA's Air Quality Index for *particulate matter, or PM*. PM (tiny particles) is one of the biggest dangers from smoke. As smoke gets worse, that index changes -- and so do guidelines for protecting yourself. So listen to your local air quality reports.
- Use common sense. If it looks smoky outside, that's probably not a good time to go for a run. And it's probably a good time for your children to remain indoors.
- If you're advised to stay indoors, keep your windows and doors closed. Run your air conditioner, if you have one. Keep the fresh air intake closed and the filter clean.
- Help keep particle levels inside lower by avoiding using anything that burns, such as wood stoves and gas stoves -- even candles. And don't smoke. That puts even more pollution in your lungs -- and those of the people around you.
- If you have asthma, be vigilant about taking your medicines, as prescribed by your doctor. If you're supposed to measure your peak flows, make sure you do so. Call your doctor if your symptoms worsen.

How can I tell when smoke levels are

dangerous? I don't live near a monitor.

Generally, the worse the visibility, the worse the smoke. In Montana and Idaho, the Departments of Environmental Quality is uses visibility to help you gauge wildfire smoke levels. For a guide, go to <http://www.deq.state.mt.us/FireUpdates/index.asp> and click on the link labeled "Forest Fire Smoke Categories." For Idaho go to http://www2.state.id.us/deq/air/dailyreports/aqi_visrange.htm.

How do I know if I'm being affected?

You may have a scratchy throat, cough, irritated sinuses, headaches, runny nose and stinging eyes. Children and people with lung diseases such as asthma may find it difficult to breathe as deeply or vigorously as normally, and they may cough or feel short of breath. People with diseases such as asthma or chronic bronchitis may find their symptoms worsening.

Should I leave my home because of smoke?

The tiny particles in smoke do get inside your home. If smoke levels are high for a prolonged period of time, these particles can build up indoors. If you have symptoms indoors (coughing, burning eyes, runny nose, etc.), talk with your doctor or call your county health department. This is particularly important for people with heart or respiratory diseases, the elderly and children.

Are the effects of smoke permanent?

Healthy adults generally find that their symptoms (runny noses, coughing, etc.) disappear after the smoke is gone.

Do air filters help?

They do. Indoor air filtration devices with HEPA filters can reduce the levels of particles indoors. Make sure to change your HEPA filter regularly. Don't use an air cleaner that works by generating ozone. That puts more pollution in your home.

Do dust masks help?

Paper "comfort" or "nuisance" masks are designed to trap large dust particles -- not the tiny particles found in smoke. These masks generally will not protect your lungs from wildfire smoke.

How long is the smoke going to last?

That depends on a number of factors, including the number of fires in the area, fire behavior, weather and topography. Smoke also can travel long distances, so fires in other areas can affect smoke levels in your area.

I'm concerned about what the smoke is doing to my animals. What can I do?

The same particles that cause problems for people may cause some problems for animals. Don't force your animals to run or work in smoky conditions. Contact your veterinarian or county extension office for more information.

How does smoke harm my health?

One of the biggest dangers of smoke comes from *particulate matter* -- solid particles and liquid droplets found in air. In smoke, these particles often are very tiny, smaller than 2.5 micrometers in diameter. How small is that? Think of this: the diameter of the average human hair is about 30 times bigger.

These particles can build up in your respiratory system, causing a number of health problems, including burning eyes, runny noses and illnesses such as bronchitis. The particles also can aggravate heart and lung diseases, such as congestive heart failure, chronic obstructive pulmonary disease, emphysema and asthma.

Where is the smoke coming from?

It depends on where you are. To find out about smoke in your area, check with your local smoke management unit or health department. In Montana and Idaho, call 406-329-4905. On the Internet, go to http://www.fs.fed.us/r1/fire/nrcc/Smoke_web_pages/intro.htm

What about firefighters?

Firefighters do experience short-term effects of smoke, such as stinging, watery eyes, coughing and runny noses. Firefighters must be in good physical condition, which helps to offset adverse effects of smoke. In addition to being affected by particles, firefighters can be affected by carbon monoxide from smoke. A recent Forest Service study showed a very small percentage of firefighters working on wildfires were exposed to levels higher than occupational safety limits for carbon monoxide and irritants. If you are working on a fire and you're concerned about your health, see the medical unit or contact your safety officer. If you're not working on a fire, call your doctor.

Why can't the firefighters do something about

the smoke?

Firefighters first priorities in fighting a fire are, by necessity, protecting lives, protecting homes and containing the wildfire. Sometimes the conditions that are good for keeping the air clear of smoke can be bad for containing fires. A windy day, for example, helps smoke disperse. But it can help a fire spread.

Firefighters do try to manage smoke when possible. As they develop their strategies for fighting a fire, firefighters consider fire behavior and weather forecasts, topography and proximity to communities -- all factors that can affect smoke.

Why doesn't it seem to be as smoky when firefighters are working on prescribed fires.

Land managers are able to plan for prescribed fires. They get to choose the areas they want to burn, the size of those areas and the weather and wind conditions that must exist before they begin burning. This allows them to control the fire more easily and limit its size. Those choices don't exist with wildfires. In addition, wildfires that start in areas that haven't been managed with prescribed fire often have more fuel, because vegetation in the forest understory has built up, and dead vegetation has not been removed.

How do you measure the quality of the air?

Local air agencies (or sometimes federal land managers) use monitors to measure the amount of particulates in the air. That amount, measured in micrograms per cubic meter, is compared to a national index designed to protect public health.

Will the smoke be this bad every summer?

That depends on where you live and the weather each year. If you live in an area where fire has always been part of the ecosystem, you can expect fire and smoke. The amounts will depend on weather and the amount of fuel (trees, brush, etc.) available to be burned. You can protect yourself and your property by following good fire prevention measures. But we never will eliminate fire and smoke from these natural systems.

This document was prepared by the Air Program, U.S. Forest Service -- Northern Region, with assistance from the Office of Air Quality Planning & Standards in the US Environmental

Protection Agency. For more information, call 406-329-3493. August 2000.



TIPS TO REDUCE SMOKE EXPOSURE AND IMPACTS

For the Firefighter

Firefighters do experience short-term effects of smoke, such as stinging, watery eyes, coughing and runny noses. Firefighters must be in good physical condition which helps to offset adverse effects from smoke.

Previous studies have showed a small percentage of firefighters exceed occupational exposure limits for carbon monoxide and respiratory irritants. **However, this is not a typical fire season.** It is always a good practice to follow some basic tips to reduce the health stress that smoke exposure causes firefighters.

To Minimize Exposure to Smoke:

- Locate camps and incident command posts in areas that are not prone to inversions.
- Reduce dust by watering roads at the incident, on drier roads leading to the incident, and in the base camp.
- Rotate personnel out of heavy smoke areas.

Additional commonly used tactics to minimize exposure to smoke:

- Use flank attack as opposed to head attack, where appropriate, in heavy smoke situations.
- Minimize mop-up when possible.
- Use time and patience instead of water to put the fire out: use burn piles, allow areas to burn themselves out. Rely on burn-up instead of mop-up.
- In heavy smoke situations, remove crews from the line when possible.

Health Maintenance to Reduce Smoke Exposure Impacts:

- Monitor personnel for signs of fatigue and illness.
- Ensure firefighters are properly equipped for anticipated conditions (cold nights, rain, etc.).
- Provide for good rest and sleeping conditions.
- Encourage a high fluid intake during and after work for all personnel.

- Provide for adequate nutrition and supplements (e.g. antioxidants) if needed.
- Allow sick firefighters time to recover.
- Provide washing facilities near food lines and toilets.
- Limit close contact among firefighters by providing personal sleeping tents.
- Discourage sharing of canteens except in emergencies
- Encourage personnel to cover their mouth and nose when they cough or sneeze to avoid the spread of infection.
- Segregate infected personnel when possible
- Demobilize crews that have a large number of sick personnel.
- When symptoms are above the neck (stuffy nose, sneezing, scratchy throat), it is safe to continue to work if personnel continue to practice health maintenance tips mentioned above. If symptoms include fever, aching muscles, nausea, or diarrhea, hard work should be reduced or curtailed.
- When symptoms are respiratory in nature (lung congestion, expelling of phlegm, chronic cough) it may be appropriate to reduce or curtail hard work. If symptoms persist and become severe, the medical unit leader should consult a qualified physician to determine the appropriate treatment that may include a rest period in a clean air environment. This clean air environment could include a nearby motel or fire camp that is smoke free or a school auditorium with a closed, filtered circulation system.

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Smoke Management Talking Points

Prepared for the National Fuels Meeting
December 1999

- The Forest Service recognizes the need to increase the use of fire as a tool to restore and maintain healthy ecosystems.
- The Forest Service is committed to healthy air and the Clean Air Act.
- The Forest Service is committed to working with our cooperators, and Federal State and local Air Quality Managers.
- The Forest Service adheres to all regulations administered by the Environmental Protection Agency (EPA) as well as State and local Air Quality agencies.
- The 1969 National Environmental Policy Act (NEPA) requires the Forest Service to document and analyze environmental effects of a proposed project; use of prescribed fire may be a tool used in the project. The potential effects of project implementation, including impacts on air quality, are analyzed during the NEPA process. The Forest Service solicits comments during this process.
- Burning techniques used by the Forest Service are Reasonably Available Control Measures (RACM), and Best Available Control Measures (BACM).
- Prescribed fires are burned under good burning and smoke management conditions; wildfires occur naturally, and often burn under severe burning and smoke management conditions.
- Smoke from prescribed fires is often less than what would be expected from a large wildfire.
- Forest Service researchers are known for their expertise in smoke modeling.
- Fire Use Message (NWCG Fire Use WT)
- Fire Ecology Message (NWCG Fire Use WT)
- The Forest Service strives to minimize the amount of emissions produced from prescribed fire programs, and to minimize the impacts on local communities.