

SNOQUALMIE PASS
WILDFIRE PLAN
For
Evacuation and Structure Protection



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PURPOSE

This plan has been prepared for the Snoqualmie Pass area of King County, WA. This plan is designed for two audiences. Part I is general information intended for review and implementation during non-emergency periods by local protection units. Part II is a more detailed section intended to provide an incoming Incident Management Team with accurate and valuable information to help reduce the time required to establish an evacuation plan and protect the structural assets within the identified area.

DISCLAIMER

The recommendations made in this plan are based on fire probabilities for the conditions observed at the time of the survey in 2008. It must be understood that all fire scenarios can not be addressed and that this plan is not an absolute. This plan should be used as a guide and implemented in part or in whole as circumstances dictate. The key to continued credibility of this plan is the time and accuracy employed to maintain the information provided here. This document should be reviewed and up-dated on an annual rotation.

PART I

Plan development

INTRODUCTION

The goal of this plan is to provide response agencies with a strategic framework to use for the protection of improved properties or other values at risk in the event of a significant wildfire. This plan is separated into two parts; the first includes general information intended for use prior to an incident. The second is more specific information about each of the sub-sets of this plan. This plan recognizes the capability of the local fire department and the contributions that can be made by local, regional and statewide fire service resources. The information contained in this plan was developed for use with wildfire operations however, an incident management team may find this a valuable tool in any disaster situation.

The need for this plan was identified by the staff at South Puget Sound Region of the Washington State Department of Natural Resources. There was no great moment of epiphany when this need surfaced but rather an increased recognition of the call to action. The challenge of protecting interface areas is increasing due to longer fire seasons and reduced personnel so the Regional staff have taken a proactive approach and developed this document. As more people move into and visit the Pacific Northwest and enjoy the natural beauty of the open spaces there is more probability of wildfire. Added to this, homes are being built in the interface with little or no consideration of the potential for wildfire.

When considering implementation of the evacuation portion of this plan, timing is the most important element required for success. Without adequate time for this plan to perform as intended, failure is a fore drawn conclusion. The potential for confusion and misdirection are ever present threats in any evacuation. Combine these with a rapidly approaching wildfire and the results will usually be panic.

Having a plan that can be quickly initiated by competent people will reduce the chaos to a level which is manageable.

Timely implementation of the Structure protection and/or Evacuation elements of this plan for the Snoqualmie Pass area can save lives and property.

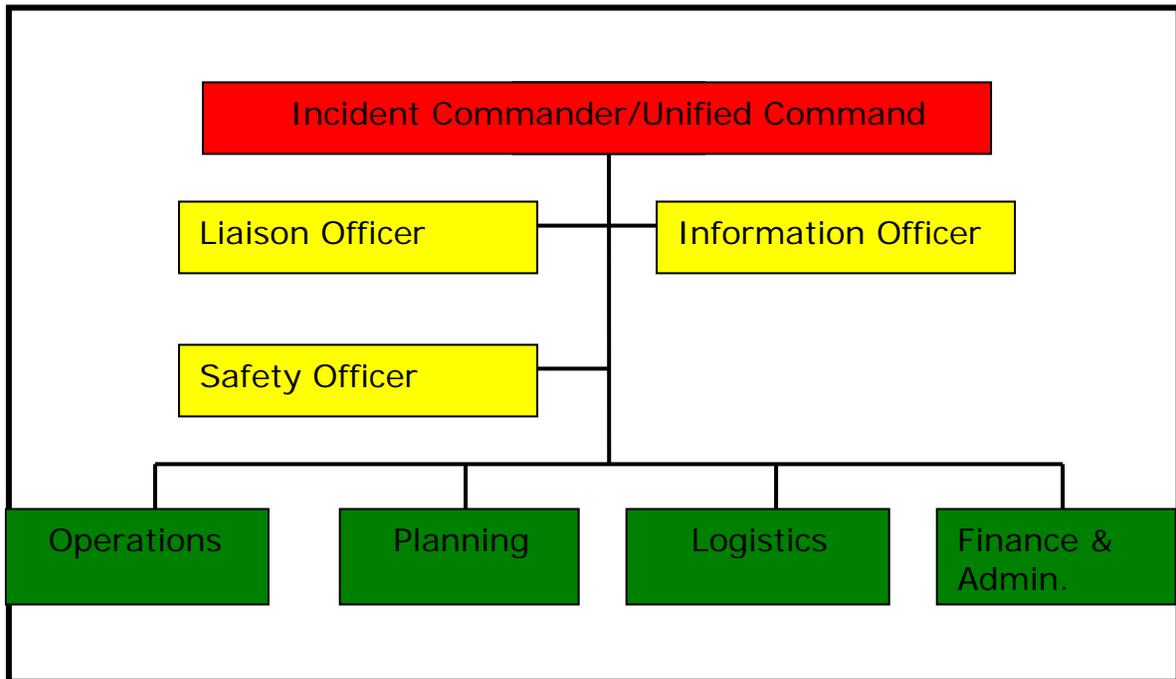
A key element to the success of this plan is a strong command presence that incorporates the input of all of the principal emergency service providers. It is envisioned that the fire service will be the lead agency during a wildfire event. Law Enforcement, Emergency Management and community service organizations like the American Red Cross could also be participants. These additional agencies can be brought into an Incident Management System. This will help integrate the different disciplines and optimize the focus of all participants. Through the use of the Liaison Officer or the incorporation of a Unified Command the blending of different priorities can be accomplished. (See chart below)

Experience has proven that many homeowners will be reluctant to leave their home and belongings when an evacuation is ordered. Fire officials have no authority to force anyone to evacuate an area nor do they have the time to educate evacuees after an order is issued. Preplanning and education of the community prior to an incident is imperative for a successful operation.

Early evacuation will reduce traffic congestion and facilitate ingress by fire suppression forces so structural triage can be started. Early evacuation will also allow suppression crews to leave the area as a fire front passes and return rapidly to resume protection of the values at risk.

EXAMPLE

IMS Chart



Shown above is a sample Command and General Staff chart of a typical Incident Management Team.

SNOQUALMIE PASS PROTECTION AREA

Snoqualmie Pass is a community of approximately 350 year round residents located partially in eastern King County and primarily in western Kittitas County. This small community is strategically located along the Interstate 90 corridor at the summit of the Cascade Range. The principal activity here is winter snow skiing. During a busy winter weekend the population can swell to 4000 people. Situated only 45 minutes east of the greater Seattle metroplex, this recreational area is very popular all year long. In the summer months there is camping, hiking, fishing, biking and any number of other recreational activities to enjoy. A multitude of ski slopes in the area has created a large unshaded landscape on several of the local hillsides. The majority of these non-timbered openings have north east aspects. Most of the vegetation on these slopes is small to medium brush. Given that the base elevation here is 3000 feet, Snoqualmie Pass usually experiences a late fire season that seldom lasts more than 60 – 90 days. Emergency service personnel are faced with the situation of not having assistance close by. Mutual aid must come from as far as 20 miles away.

SNOQUALMIE PASS PROTECTION AREA



FIRE POTENTIAL AND IMPACT REDUCTION

FUELS

The predominate fuel observed in the Snoqualmie Pass community is brush and timber (NFDR model H or NWCG type 8). The timber stands are broken by roadways, parking, ski slopes and some natural barriers. Some of the trees in these stands exhibit subalpine features of stunted growth and structural deformity from months of heavy snow accumulation. Most of the brush fuels are located on the ski slopes. These fuels cure slowly and later in the season than lower elevations. For the purposes of aesthetics many structures have little to no defensible space between them and the wildland fuels.

WEATHER

Located at the crest of the Cascade Mountains this planning unit is subject to heavy rainfall. Wet weather systems moving in from the Pacific Coast must release their moisture to navigate over the mountains. Snoqualmie Pass is the recipient of much of that moisture. This same scenario played out in winter can deliver copious amounts of snow. Snow pockets may linger well into summer providing additional moisture and retarding fuel curing. As a general statement weather patterns at Snoqualmie Pass approach from the West. In those instances when the weather comes from the East a common accompanying feature is warm, dry wind. This wind can rapidly cure the small fuels to a point of easy ignition. This same wind accelerates the cure rate of the larger fuels. Fires supported by an East wind event can be large, fast moving and destructive.

TOPOGRAPHY

Snoqualmie Pass is located at the crest of the Cascade Mountains. There is precious little flat ground here. Most of

the inclines are steep and some are very rugged. Many of the drainages and ravines intersect which can cause erratic winds that shift rapidly. Road access to the lowest elevations is generally good. Many of the forest service roads to the higher elevations are poorly maintained. The grade on the ski slopes ranges from moderate to extreme and may allow fires to make rapid runs uphill.

IMPACT REDUCTION

The reduction of wildfire impact in this planning area must be a collaborative effort between local, state and federal agencies. No single entity will usually have the resources to undertake a public education program this extensive. Participation in a Fire Prevention Cooperative is a good means of sharing resources and developing a delivery system that is credible and effective. The Washington Department of Natural Resources is the recognized subject matter expert in wildfire prevention and education and should take the lead in a coop development. Participants should include King County Fire District 51, King County Office of Emergency Management, U.S. Forest Service and the DNR. There may be other groups and agencies interested in participation such as the local water district or the county Fire Marshals' office. The focus of a prevention coop should include traditional education and information elements as well as other activities that are not as familiar. To maximize the impact of reducing wildfire risk to home and business owners, the prevention coop should provide input during the construction permit review process. The input to provide at permit review time should include those measures that would reduce the score of an NFPA 299 review. Specific recommendations in this report for the individual sub-elements are found in those sections.

EVACUATION CONCEPTS

Goal

The goal of any community evacuation plan is to move the requisite number of people in the prescribed amount of time. The temporary relocation of any population can be a large and complicated task which may succumb to any number of circumstances that result in failure or a less than satisfactory outcome. For an evacuation to be successful there is an old emergency management axiom that is well suited to this situation. "No evacuation can be effective without the three p's, Planning, Preaching and Practice." Emergency evacuations from Snoqualmie Pass may be further complicated because the area serves portions of two counties

Planning

In the event of a major wildfire the planning component of this part of the document consists of pre-incident identification of evacuations options available for any given location in this planning area. One of the options may include doing nothing at all based on the predicted behavior of the fire. Another consideration is to allow property owners to remain in the hazard area and shelter in place. At the extreme end of the consideration continuum is an evacuation. This document will attempt to provide information and resources to assist in a safe and orderly evacuation if needed at the time of an incident.

The King County Office of Emergency Management has published an evacuation template which outlines a graduated process for the development of an evacuation plan. There is no intent to duplicate that effort here albeit prudent to remember the use of the guide may help promote commonality in all plans.

The information contained in this plan should not be considered comprehensive but simply an adjunct device to

assist an incident management team. This Plan may also be adapted to other types of emergencies. Although many of the recommendations in this plan are situation and/or site specific, the general concept can be employed universally.

Preaching

The need for an almost evangelical approach to public education and information in evacuation planning can not be over stressed. The ability of the public to respond to a wildfire evacuation notice appropriately is wholly dependent on the ability of the local jurisdiction to educate that same public. In reality there are several audiences that the fire service needs to address and provide information to. First and foremost are the communities we serve. Pre-event training of the residents of any community about the need for response to an evacuation order is critical to a successful operation. Another audience is the elected officials that serve our communities. This is the group that can have an enormous impact on the outcome of a major wildfire, not in specific actions at the time of an incident but with development regulations that favor safety over cost savings. It is incumbent upon the local fire department in conjunction with the Washington State Department of Natural Resources and the King and Kittitas County Office of Emergency Management to form a united voice in addressing these needs.

Practice

Practice makes perfect as the old adage says. There is no substitute for practice. Evacuation drills should be held frequently enough to insure people in the community are familiar with the basic responsibilities of evacuation. Small scale drills and/or table top exercises can be used to hone the skills of everyone involved. Proficiency at the small scale will help to assure the stumbling stones have been identified and addressed so large scale operations will proceed with fewer difficulties.

Method

When removing people from harms way it is important to provide specific instructions to the evacuees in a timely manner. To simply demand that someone leave the area because of a fire will create confusion, panic, mistrust and a barrage of questions and arguments that may jeopardize the evacuation. The Fire Service is not typically trained or staffed to conduct a large area evacuation. Local Emergency Management and Law Enforcement organizations have this ability and authority. Fire Service may assist when requested but must remember our primary responsibility is fire protection. Even Law Enforcement personnel lack the authority to force anyone to leave their property however, once an individual has left they may be prohibited from re-entering the hazard area. Evacuations will most likely take place in two steps. First, the evacuees will be directed to an assemble point designated and arranged by the Incident Commander. Individual sub-elements of this plan list potential areas to be considered as assemble points. Once these areas have been established, the local office of Emergency Management can arrange for the transportation of evacuees to a shelter point. Each designated assemble point must have an onsite coordinator to provide information and direction to evacuees. King County Office of Emergency Management operates from a decentralized system and has no specific public emergency notification capability. Public notification will be issued through the Emergency Alert System and broadcast from local television and radio stations.

Activation

Initiation of an evacuation will be through a local community Office of Emergency Management. It will be necessary to coordinate evacuation needs with local jurisdiction's abilities. Prior to initiating an evacuation there are several specific considerations that must be evaluated by the Incident Commander.

- Are structural protection resources in place?

- What is the expected fire behavior for the next burn period?
- Is the local Office of Emergency Management current with the fire status?
- What is the community level of awareness of the incident?
- Have specific assemble points been established and confirmed?

When these questions have been answered and the decision to evacuate is made the Incident Commander should contact the local Office of Emergency Management listed in the specific sub-set plans to request assistance. The Incident Commander should be prepared to respond to basic questions such as:

- Why is an evacuation necessary?
- What is the specific area to be evacuated?
- When does the evacuation need to take place?
- Who is making the request?
- What steps have already been taken?
- Where is the designated assemble point?

The preplanning accomplished by local Office of Emergency Management should make evacuations less complex and reduce the Incident Management Teams' work load. It is the responsibility of the local Office of Emergency Management to contact the county office if assistance is needed.

This Evacuation Plan will use three levels of activation. The Incident Commander is responsible for requests to activate and de-activate this plan through the local Office of Emergency Management.

Evacuation levels

- Level 1 (Advisory) - The current status of projected condition of the fire indicates potential threat to life and property are severe. Provide information to residents about the situation but no action is required.
- Level 2 (Watch) - Residents should be advised to prepare to evacuate at a moments notice. Take

- necessary steps to secure valuables, livestock, pets and personal belongings for a short notice evacuation.
- Level 3 (Warning) - Residents are advised to evacuate immediately. The risk of fire is imminent. Grave danger may face those who do not depart.

De-activation

When the potential for loss of life and property from unstable fire condition has subsided, the Incident Commander can recommend to the local Office of Emergency Management to allow residents back into an area and stand down the evacuation notice.

NOTE:

The King County Office of Emergency Management has recently released a document entitled KC UASI Evacuation Template Project. The focus of this document is to provide a uniform and consistent approach to evacuation planning. One of the foreseeable outcomes of this project is a more transparent cross section to individual jurisdictional evacuation plans. This homogeneous characteristic will greatly enhance the ability of an incident management team to function across geo-political lines.

At the time this plan was developed the King County document was less than 60 days old and as such is not incorporated herein. Inclusion of the concept of the King County document should be considered during a subsequent review of this plan.

EMERGENCY NOTICE
LEVEL 1
**AN EVACUATION ADVISORY HAS
BEEN ISSUED FOR THIS AREA**

PERSONS ARE ADVISED THAT CURRENT OR PROJECTED THREATS FROM HAZARDS ASSOCIATED WITH THE APPROACHING FIRE ARE SEVERE.

THIS IS THE TIME FOR PREPERATION AND PRECAUTIONARY MOVEMENT OF PERSONS WITH SPECIAL NEEDS, MOBILE POROPERTY AND (UNDER CERTAIN CIRCUMSTANCES) PETS AND LIVESTOCK.

YOU WILL BE KEPT INFORMED AS CONDITIONS CHANGE. AREA RADIO AND TELEVISION STATIONS HAVE BEED ASKED TO BROADCAST PERIODIC UPDATES.

IF CONDITIONS WORSEN, WE WILL MAKE EVERY ATTEMPT TO CONTACT YOU. IF YOU ARE ABSENT FROM YOUR HOME FOR MORE THAN A SHORT PERIOD OF TIME, PLEASE LEAVE A NOTE WITH YOUR NAME AND

CONTACT PHONE NUMBER IN A VISABLE LOCATION SO WE MAY ATTEMPT CONTACT.

EMERGENCY NOTICE

LEVEL 2

AN EVACUATION WATCH HAS BEEN ISSUED FOR THIS AREA

CONDITIONS INDICATE A HIGH PROBABILITY THAT HAZARDS ASSOCIATED WITH THE APPROACHING FIRE WILL SEVERLY LIMIT OUR ABILITY TO PROVIDE EMERGENCY SERVICE PROTECTION TO THIS AREA. DANGEROUS CONDITIONS EXIST THAT MAY THREATEN YOUR PROPERTY.

YOU MUST PREPARE TO LEAVE AT A MOMENTS NOTICE

FIRE AND LAW ENFORCEMENT PERSONNEL ARE WORKING IN THIS AREA TO PROVIDE SPECIFIC INFORMATION ABOUT WHEN TO LEAVE AND ROUTES TO BE TAKEN.

THIS MAY BE YOUR ONLY NOTICE

YOU WILL BE KEPT ADVISED AS CONDITIOINS CHANGE. AREA RADIO AND TELEVISION STATIONS HAVE BEEN ASKED TO BROADCAST PERIODIC UPDATES.

EMERGENCY NOTICE

LEVEL 3

AN EVACUATION WARNING HAS BEEN ISSUED FOR THIS AREA

CURRENT CONDITIONS PRESENT SPECIFIC AND IMMEDIATE THREATS TO THE LIVES AND SAFETY OF PERSONS WITHIN THIS AREA.

EVACUATE IMMEDIATELY

FIRE AND LAW ENFORCEMENT PERSONNEL ARE WORKING IN THIS AREA TO PROVIDE SPECIFIC INFORMATION ON THE ROUTES TO USE FOR EVACUATION.

IF YOU CHOOSE TO IGNORE THIS WARNING, YOU MUST UNDERSTAND THAT EMERGENCY SERVICES MAY NOT BE AVAILABLE. VOLUNTEERS WILL NOT BE ALLOWED TO ENTER THIS AREA TO PROVIDE ASSISTANCE.

ROAD BLOCKS AND 24 HOUR PATROLS WILL BE ESTABLISHED IN THE AREA. RESIDENTS WILL NOT BE ALLOWED TO RETURN UNTIL CONDITIONS ARE SAFE.

AREA RADIO AND TELEVISION STATIONS HAVE BEEN REQUESTED TO BROADCAST PERIODIC UPDATES.

STRUCTURAL PROTECTION CONCEPTS

This structural protection plan has been developed for the Snoqualmie Pass and vicinity planning area. This plan is offered as a useable and realistic collection of information for the fire incident manager. The intent is to reduce the loss of structural values at risk. Some of the statements made in this plan may be general in nature but will represent the broadest spectrum of items/tasks contemplated in the discussion at hand.

The initiation of a structural protection plan must be closely associated with the evacuation of at risk persons. The protection of human life is the ultimate priority for all fire service personnel. Not until the safety of exposed persons has been secured can structural protection be implemented.

As is typical, this structural protection plan will assume three levels of risk to exposed structures. Further, consideration may be given to the relative importance of individual structures. The most significant difference in this plan is that the emphasis is on the safety of the firefighter involved in the operation and not the survivability of any given structure or group of structures. The three basic levels of risk to structures from wildfire are closely aligned with the alerting levels for evacuation:

1. SAFETY FACTOR CATEGORY 1 - Those structures or groups of structures that are not directly threatened by a fire and can be defended with minimum risk to firefighters. Because of any number of circumstances which may include; level of protection, location away from the main fire, fire resistive construction and/or preparation of the area prior to the advance of the

- fire, these structures are considered defensible. Frequently, one engine can protect several structures.
2. SAFETY FACTOR CATEGORY 2 - Those structures or groups of structures that are directly threatened by a fire but have not become involved. These structures may be protected without unduly jeopardizing the safety of fire suppression crews working at the scene provided safety zones and escape routes are in close proximity to the structures. Time is a key element in this category of structure protection. There must be sufficient time prior to the advance of the fire front for fire crews to set-up an appropriate level of protection. This level of protection is usually characterized by the assignment of one engine per structure.
 3. SAFETY FACTOR CATEGORY 3 - Those structures or groups of structures that are involved in fire or there is no time available for the safe deployment of a fire crew. These structures are considered outside the acceptable risk parameters.

Other contributing factors for these three conditions are typical of those found in training on interface fires and are not the focus of this plan.

In the event of a major wildfire in the Snoqualmie Pass and vicinity planning area the availability of resources will be a critical challenge. It is important to consider ordering structural protection resources well in advance of the need. Many of these resources may be traveling from other parts of the state and could be 10-12 hours away especially for crews effected by work/rest issues.

Given the level of risk (Moderate) associated with most of the Snoqualmie Pass and vicinity planning area the most logical means of protecting structures is to designate a structural protection group. Resource requests made for the structural protection group should be heavily influenced by the availability of water for fire protection. In Snoqualmie

Pass, there is a municipal type water systems with strategically placed fire hydrants. Strike teams of types 1, 2, and/or 3 Structure engines would be effective in this area. Outside of this communities in the areas without water a request for Structural Task Forces, with water tender support, will be a better choice. Again, be reminded that many of the closest resources may already be committed to an incident in this area through mutual aid agreements.

Structure protection resources should be deployed based on the results of a triage and categorizing of exposed structures. Maximum effort should be aimed at those structures in the acceptable risk category. The goal should be to improve the survivability of these structures by reducing the ignition factors of the structure and surroundings. Time permitting, an engine crew can have a valuable impact on the survivability of a building by reducing the ignitibility of the structure and the immediate area around it. Without that time, crews may only be able to pre-treat with foam and evacuate. Regardless of the actions of the engine crew, the engine boss or team leader must remain vigilant and aware of the fire situation.

ALWAYS REMEMBER-SAFETY FIRST

To facilitate the timely response of additional resources Trigger Points for the activation of this plan must be established well in advance. A Fire Behavior analyst should work with the planning section to identify trigger points based on observed and predicted fire activity.

Special consideration should be given to the structural protection resources that are working the incident during the initial burn period. Many of these resources may have been working for several hours without proper rest or nourishment. The rehabilitation of these forces is a top priority for the success of any operation in the near term.

Another critical point of structural protection is the ability to convey to the public the decision making process for selecting structures for protection. Many citizens will become irate if told their house is not worth saving however, on the other hand, they may exhibit more understanding if told the area presents too many risks to firefighter safety. Any incident that contemplates the need for structural protection should include a response by the King and/or Kittitas County Office of Emergency Management.

One of the more critical parts of structural protection is the reconnaissance and evaluation of individual properties. Given the time and resources this is best accomplished by the initiation of a physical review of each parcel that contains structures at risk. This review should result in specific documentation for each property. The preferable recording format is the Structural Protection Checklist, See appendix B.

Some structures may require individual attention during the evaluation process. Using local resources to help identify structures that may have an economic, cultural or historic significance is valuable.

Activation

At any point in an incident that the fire reaches a pre-designated trigger point the structural protection plan should be initiated. The activation of this portion of the plan will utilize a 3 (three) level approach that mirrors the evacuation plan. It is the responsibility of the Incident Commander to activate and de-activate this plan.

Structure protection levels

- LEVEL 1, Advisory - Size-up the structural protection challenges and begin to identify the resources available that can be deployed for the task of protection. Order

additional resources needed to protect the values at risk. Continue to gather intelligence. Provide information to local residents.

- LEVEL 2, Warning - Provide for the safety of firefighters and residents. Assign resources to structural protection and carry out pre-fire actions to reduce the ignitability of structures and surroundings. Assist with evacuation if requested. Identify and record locations of residents not evacuating.
- LEVEL 3, Watch - Immediately and safely initiate structural protection when fire threat is imminent. Deploy resources to safely protect lives, improved property, infrastructure and or environmental values at risk.

De-activation

Identify and release or redeploy resources from areas no longer threatened by fire activity.

PART II

Planning area sub-sets

SNOQUALMIE PASS

Snoqualmie Pass streets



Snoqualmie Pass overhead



Not to Scale

STRUCTURE PROTECTION
Snoqualmie Pass
Sec 4&5 R11E T22N

GENERAL – Snoqualmie Pass is a winter recreational area at the crest of the Cascade Mountains. This community is situated along Interstate 90 straddling the King/Kittitas County line. This location is ideal in the event of an evacuation due to the rapid access east or west. The structures at Snoqualmie Pass are mostly seasonal use and consist of several condo complexes mixed with single family dwellings. The structures range in age from 50 years to under construction. Most of the buildings have steep pitched metal roofs to protect from heavy snow. This roof design has the added benefit of not being susceptible to ignition from flying brands. The limited development potential in this area has resulted in the structures to be located close together.

PRIMARY PROTECTION - King County Fire District 51
P.O. Box99
Snoqualmie Pass, WA 98068
425.434.6333

HAZARDS –

- LPG tanks are common, many are located between the structure and the wildland fuel.
- It is not uncommon for structures to have no defensible space to work from.
- This entire area can experience east wind events.
- Due to the topography winds can change direction quickly and be very erratic.
- Un-shaded east slopes can promote fast fire runs.
- Interstate 90 is a primary cross state travel route. Smoke obstruction of this route may result in heavy traffic congestion and/or serious motor vehicle accidents.

WATER SUPPLY – The entire Snoqualmie Pass is served by a municipal water system with hydrants strategically located. Keechelus Lake is less than two air miles from most of this area and will provide a good source for dipping.

TACTICAL CONSIDERATIONS – Working wildland fires in the Snoqualmie Pass planning unit may be late season fires when additional resources are difficult to obtain. Any fire that escapes initial attack should be considered serious and additional resources ordered early. Due to the terrain, aerial operations may be more effective than ground attacks. Many of the residential developments have only one way in and out which will need to be considered in the event of an evacuation.

RESOURCE NEEDS – Most of the residential exposure is clustered in small separated groups of structures. This will cause apparatus assigned for protection to be separated as well. Two structural engine strike teams for protection and one wildland engine strike team for patrol and initial attack on hot spots are recommended.

PROBABILITY OF SUCCESS – Good (greater than 80%)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Snoqualmie Pass was rated for common features such as access, vegetation, topography, fire protection and utilities. Then several homes were rated for roof coverings and other existing conditions. Their totals were averaged to establish a community rating. See attached NFPA 299 form for Snoqualmie Pass. Snoqualmie Pass has been rated as having a *moderate* (68 points) fire risk. Individual homeowners and the community can significantly reduce the risk of home ignitions during a wildfire event by being prepared.

RECOMMENDATIONS TO REDUCE FIRE RISK SEVERITY:

These are specific recommendations for the community of Snoqualmie Pass. There are several other general recommendations that may help reduce the potential of fire. The general recommendations can be found in Appendix E.

- Work with the landowners around the entire community to establish and maintain a permanent fuel break. This is especially important to the east of the community.
- This is a community that can benefit from an active Firewise program. Working in concert with Snoqualmie Pass Fire and Rescue, The Washington State Department of Natural Resources and the U.S. Forest Service should initiate a Firewise Program.
- Work within the community to promote the ignition reduction potential of all structures.
- All fire hydrants should be tested to confirm their operational condition.
- Community meetings should be held to discuss the importance of community evacuation and to conduct table top exercises.

Snoqualmie Pass Evacuation Plan

King County operates under a decentralized program for evacuations. When an evacuation is required for any reason the initial operation is conducted by the local authorities closest to the effected area. In this case the closest community with an evacuation capability is North Bend. Evacuations from Snoqualmie Pass can be coordinated through the North Bend Police Department. North Bend Police should be advised as soon as possible if an evacuation is being considered to the west. The majority of the evacuation need for Snoqualmie Pass is located in Kittitas County. Kittitas County operates on a more traditional basis for emergency evacuations. In cooperation with the Kittitas County Department of Emergency Management the Kittitas County Chapter of the American Red Cross has developed evacuation capabilities that can be implemented in Snoqualmie Pass. The Red Cross has secured locations and services to provide for residents that may be displaced by a wildfire. To facilitate an efficient evacuation, the following checklist has been developed.

___ Establish the trigger points for all three levels of evacuation.

___ Decide the geographic areas that will need to be evacuated.

___ Identify the approximate number of people that may be evacuated.

___ Identify the time frame within which the evacuation will need to take place.

The evacuation process may involve directing evacuees to a central assembly location. From this location, transportation can be arranged to the evacuation center. The Incident Management Team is responsible for

securing a site to serve as an assembly point. A recommended location is listed below.

WHEN THE EVACUATION ORDER IS ISSUED

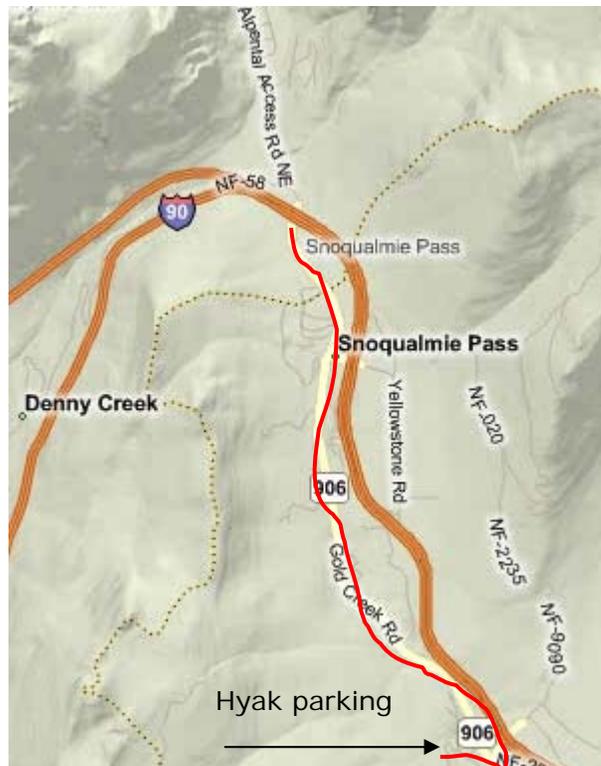
___ Contact the Kittitas County Department of Emergency Management and request the services you need.

- They can provide transportation services among others.
- They will notify the County Sheriffs office and the Red Cross.

RECOMMENDED ASSEMBLY POINT

Iron Horse State Park Hyak parking lot.

Directions: Travel south on Gold Creek Road and follow the signs to the Iron Horse State Park.



East aspect ski slope



Typical fire hydrant



Fuel and structure proximity



Wildland fuel provides continuity between structures



250 gallon LPG tanks 18 feet apart



Condo building with no defensible space



Name of area or address receiving assessment
Snoqualmie Pass

	Points	House or area	Notes
A. Subdivision Design			
1. Ingress and egress			
Two or more roads in/out	0		
One road in/out	7	7	
2. Road width			
Greater than 24 feet	0		
Between 20 and 24 feet	2	2	
Less than 20 feet wide	4		
3. All-season road condition			
Surfaced, grade < 5%	0	0	
Surfaced, grade > 5%	2		
Non-surfaced, grade < 5%	2		
Non-surfaced, grade > 5%	5		
Other than all-season	7		
4. Fire service access			
< = 300ft, with turnaround	0	0	
> = 300ft, with turnaround	2		
< = 300ft, no turnaround	4		
> = 300ft, no turnaround	5		
5. Street signs			
Present (4 in. in size and reflectorized)	0	0	
Not present	5		
B. Vegetation (Fuel Models)			
1. Predominant vegetation			
Light (grasses, forbs)	5		
Medium (light brush and small trees)	10	10	
Heavy (dense brush, timber, and hardwoods)	20		
Slash (timber harvest residue)	25		
2. Defensible space			
More than 100 ft of treatment from buildings	1		
More than 71 -100 ft of treatment from buildings	3		
30-70 ft of treatment from buildings	10		
Less than 30 feet	25	25	
C. Topography			
1. Slope			
Less than 9%	1	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		

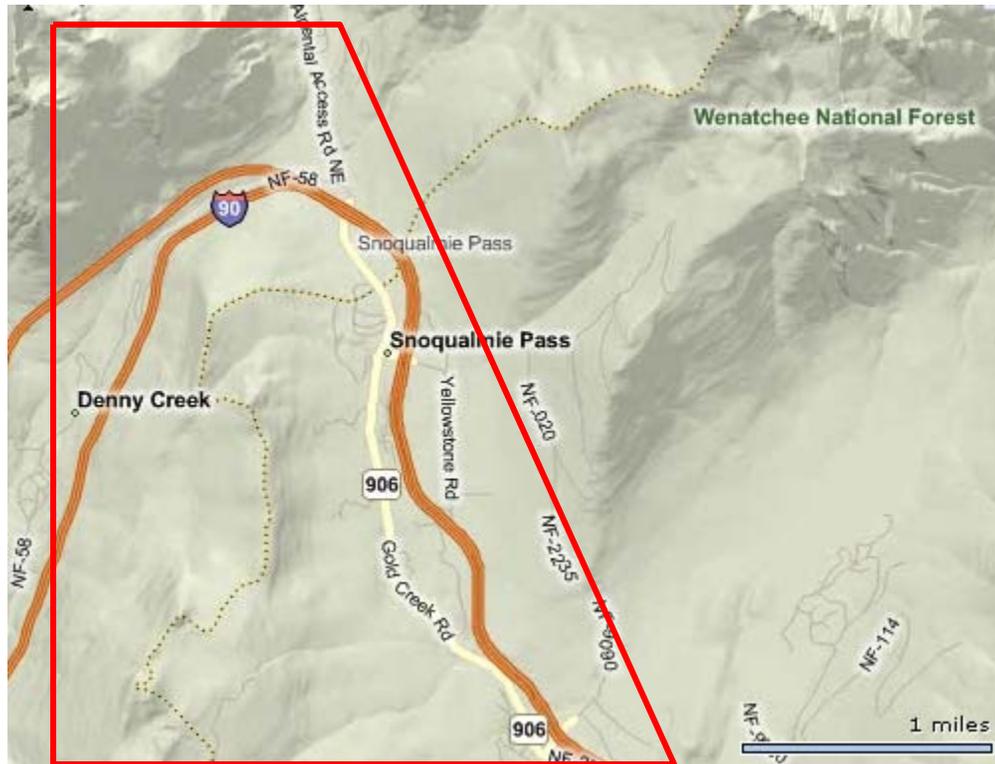
Totals for this page

45

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	3	Slopes
2. Area with history of higher fire occurrence	0 - 5	0	
3. Areas of unusually severe fire weather and winds	0 - 5	3	East winds
4. Separation of adjacent structures	0 - 5	3	30' - 50' common
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0	0	Most
Class B roof (composite)	3		
Class C roof (wood shingle)	15		
Non-rated	25		
F. Existing Building Construction			
1. Materials (predominant)			
Noncombustible siding/ deck	0		
Noncombustible siding/ wood deck	5	5	hardie plank siding
Combustible siding and deck	10		
2. Setback from slopes > 30%			
More than 30 feet to slope	1		
Less than 30 feet to slope	5		
Not applicable	0	0	
G. Available Fire Protection			
1. Water source availability (on site)			
500 gpm pressurized hydrants < 1000ft apart	0	0	
250 gpm pressurized hydrants < 1000ft apart	1		
More than 250 gpm non-pressurized, 2 hours	3		
Less than 250 gpm non-pressurized, 2 hours	5		
No hydrants available	10		
2. Organized response resources			
Station within 5 miles of structure	1	1	
Station greater than 5 miles	3		
3. Fixed fire protection			
Sprinkler system (NFPA 13, 13R, 13D)	0		
None	5	5	
H. Utilities (Gas and Electric)			
1. Placement			
All underground utilities	0		
One underground, one aboveground	3	3	
All aboveground	5		
Totals for this page		23	
I. Totals for Risk Assessments			
Totals for page 1 and 2		68	
1. Low Hazard: < 39 points			
2. Moderate Hazard: 40-69 points		68	
3. High Hazard: 70-112 points			
4. Extreme Hazard: 113 > points			

APPENDIX A

Snoqualmie Pass Protection Area



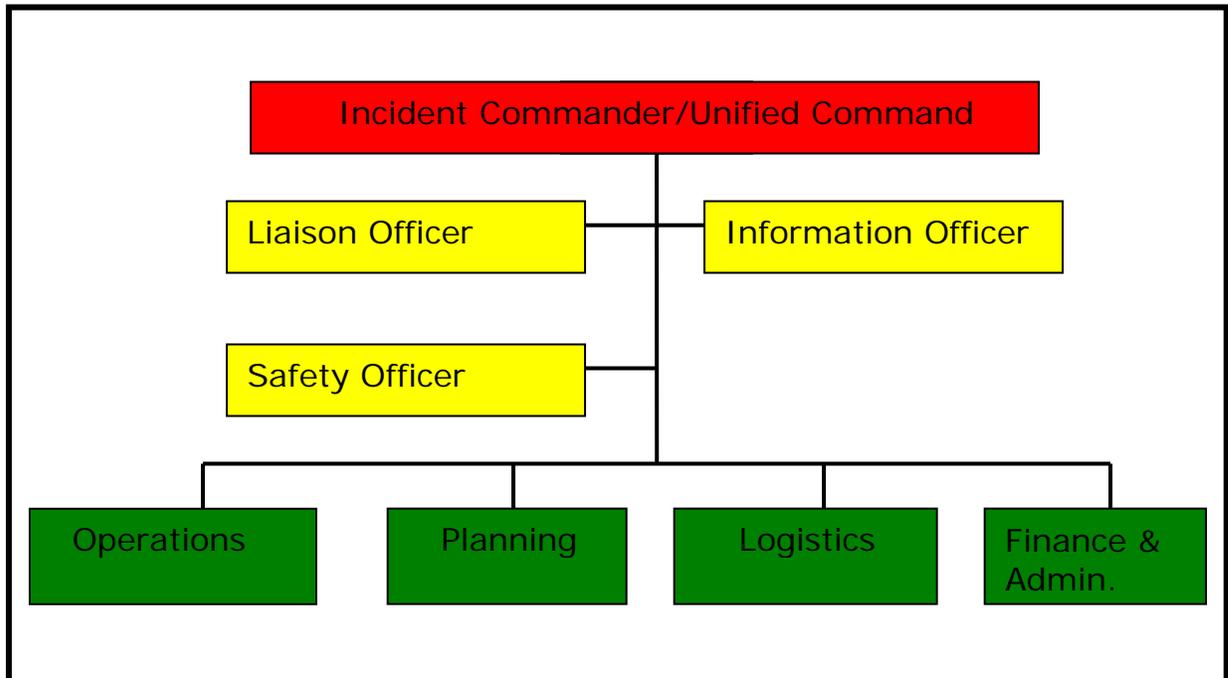
APPENDIX B

Structure Protection Checksheet - Single Property

Tactical Area		Protection #		S F
Address		Owner		
Legal	Sec	Twmsp	Range	
LAT. <i>N</i>		LONG <i>W</i>		
Structure Type 1 Story <input type="checkbox"/>		2 story <input type="checkbox"/>	Other	
Wood Frame <input type="checkbox"/>	A-Frame <input type="checkbox"/>	Log Home <input type="checkbox"/>	Outbuilding <input type="checkbox"/>	Safety Factor
RAPID ASSESSMENT <input type="checkbox"/> Driveway - Unsafe to use for ingress - egress during fire passage <input type="checkbox"/> Roof - Involved in fire upon arrival <input type="checkbox"/> Powerlines Blocking If yes to either question above, skip next section and check "non-defendable" below				
Check YES or NO for all areas [yes means it is a factor]				
DRIVEWAY -	Dead End or Longer than 200 Ft.		<input type="checkbox"/> YES <input type="checkbox"/> NO	
ROOF -	Flammable Debris on roof/gutters		<input type="checkbox"/> YES <input type="checkbox"/> NO	
ROOF -	Combustible [Asphalt Shingle or Wood Shake/Shingle]		<input type="checkbox"/> YES <input type="checkbox"/> NO	
TREES -	Overhanging Roof		<input type="checkbox"/> YES <input type="checkbox"/> NO	
TREES/BRUSH	Flammable Vegetation within 30 Ft. of Structure		<input type="checkbox"/> YES <input type="checkbox"/> NO	
VEHICLES	Parked outside within 30 Ft. of Structure		<input type="checkbox"/> YES <input type="checkbox"/> NO	
SLOPE	More than 20% anywhere within 30 Ft. of Structure		<input type="checkbox"/> YES <input type="checkbox"/> NO	
SLOPE	More than 40% anywhere within 30 Ft. of Structure		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DECK / STILTS	Not enclosed / Open underneath / Intermediate Fuels		<input type="checkbox"/> YES <input type="checkbox"/> NO	
POWERLINE	Overhead within 30 Ft. of Structure		<input type="checkbox"/> YES <input type="checkbox"/> NO	
Defensible Evaluation Tally			Place tally # in upper right box	
0-2 YES above	<input type="checkbox"/>	DEFENDABLE=SF 1 (Green)		
3-5 YES above	<input type="checkbox"/>	NEEDS PREPARATION/Defend AGGRESSIVELY =SF 2(Yellow)		
6-7 YES above	<input type="checkbox"/>	NEEDS PREPARATION/Defend CAUTIOUSLY = SF 2 or 3		
8-10 YES above	<input type="checkbox"/>	NON-DEFENSIBLE=SF 3 (Red)		
map / photo		Priorities		
		Hazards:		
		Water Supply?		
		Tactics		
PREPARED BY [print] :			DATE:	

APPENDIX C

IMS Chart



Shown above is a sample Command and General Staff chart of a typical Incident Management Team.

APPENDIX D

FIRE

Snoqualmie Pass Fire and Rescue 425.434.6333
P.O. Box99
Snoqualmie Pass, WA 98068-0099

Eastside Fire and Rescue 425.392.3433
(dispatch for Sno. Pass Fire & Rescue)
175 Newport Way N.W.
Issaquah, WA 98027

Kittcom (Kittitas County Dispatch) 509.925.8534

Washington DNR 360.825.1631
950 Farman St
Enumclaw, WA 98022
Dispatch 360.802.7024

U.S. Forest Service 425.888.1421
902 S.E. North Bend Way Bldg 1
North Bend, WA

LAW

King County Police 206.296.3883
Precinct 3
22300 SE 231st
Maple Valley, 98038

Washington State Patrol 425.649.4370
2803 156th Ave. SE
Bellevue, WA 98007

King County Office of Emergency Mgmt. 206.296.3830

Kittcom (Kittitas County Dispatch) 509.925.8534

UTILITIES

King County Dept of Transportation
Road Services Division
201 S. Jackson St.
Seattle, WA 98104

206.296.6590
1.800.527.6237

Kittitas County Public Works Dept
411 N Ruby St Suite 1
Ellensburg, WA 98926

509.962.7523

Washington State Dept of Transportation
NW Region Office
15700 Dayton Ave.
Shoreline, WA
P.O. Box 330310 Seattle, WA 98133

206.440.4000

Puget Sound Energy
P.O. Box 97034
Bellevue, Wa 98009

888.225.5773

OTHERS

Red Cross (Kittitas County Chapter)

509.925.5866

Red Cross (King County Chapter)
1900 25th Ave. South
P.O. Box 3097
Seattle, WA 98114

206.323.2345

Metro Transit
201 S. Jackson St.
Seattle, WA 98104

206.684.1162

APPENDIX E

THE FOLLOWING PAGES CAN BE USED AS A MASTER
COPIES FOR HANDOUTS IN AN EVACUATION AREA.

24 Hours to Success

Flying embers and creeping ground fires are significant contributors to the loss of a majority of homes to wildfire.

Listed below are some of the things you can do to increase the survivability of your home during the threat of a wildfire. These tasks can be accomplished in a relatively short time (24 hours or less) with very little, if any, cost to you.

1. Remove needles and leaves from your home's roof and rain gutters. These can ignite and quickly spread fire to your home.
2. Rake and remove combustible debris (grass, needles, and leaves) from around your home and out buildings. Dispose of this material at least 30 feet from any building.
3. Remove combustible materials from around wooden decks and walkways. If ignited, these materials can be blown under decks and walkways.
4. Move all fire wood at least 30 feet from your home. Wood piles can cause a very intense fire.
5. Remove wooden fences connected to your home. This will create a fire break if the fence catches fire.
6. Remove combustible outdoors furniture to a distance of at least 30 feet from your home.
7. Cover all vents (foundation and roof) with a fine mesh screen of 1/8th inch or less to prevent sparks or embers from being blown into your home.
8. Remove combustible material from around any propane or fuel tanks.

**In the event of an evacuation
Review the back of this sheet.**

In addition to the tasks listed on the other side, you should also try to do the following:

1. Place a sprinkler on your roof; do not turn it on until the fire's arrival is imminent. This will help conserve water for possible fire department use.
2. Connect hoses to all spigots. This will assist firefighters when they arrive.
3. Close all windows and shutters. Remove combustible curtains and window treatments.

These small tasks can greatly increase the chances of your home surviving when a wildfire threatens.

Please take the time to make a difference.