

Kanaskat/Selleck

Wildfire Plan for Evacuation and Structure Protection

2008



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PURPOSE

This plan has been prepared for the Kanaskat/Selleck vicinity 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 ongoing 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.

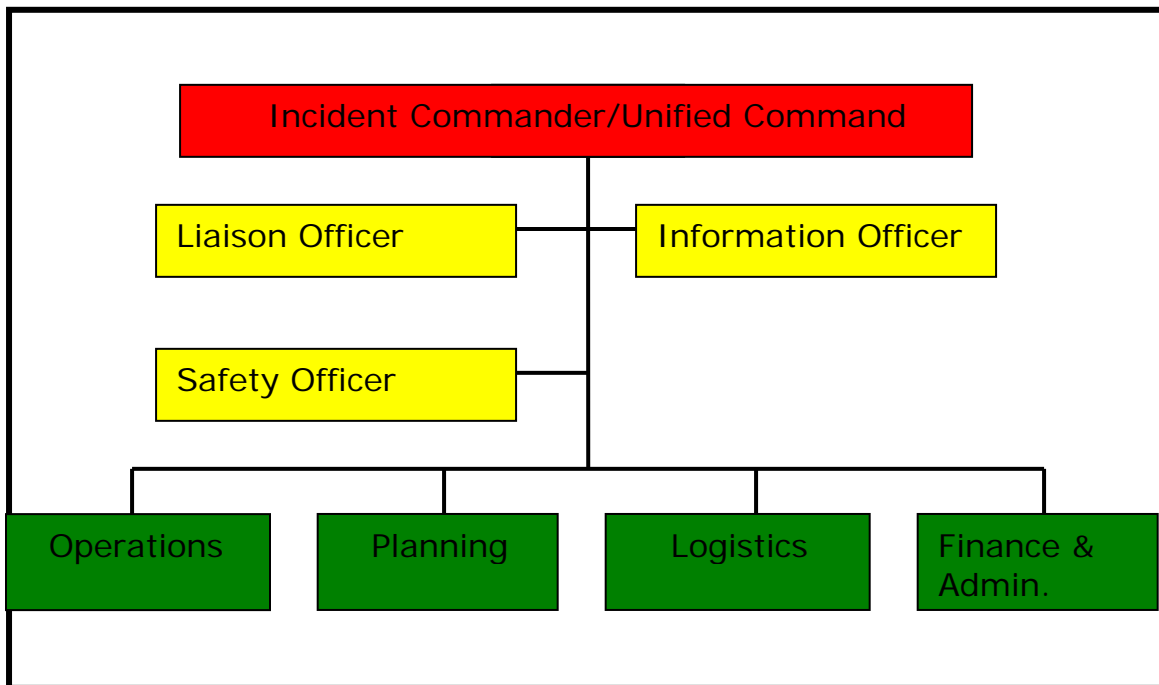
Timely implementation of the Structure Protection/Evacuation elements of this plan for Kanaskat/Selleck and vicinity can save lives and property. A key element to the success of this plan is a strong command presence that incorporates the input of all of the principal emergency service providers. Law Enforcement, Emergency Management and community outreach organizations like the American Red Cross should 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 lack the authority to force anyone to leave 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.

IMS Chart



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

Kanaskat/Selleck Protection area defined

The Kanaskat/Selleck protection area is bounded on the north by the City of Seattle Cedar River Watershed. The eastern boarder is the City of Tacoma Green River Watershed. The fact that both of these watersheds are closed to the public reduces the potential of a human caused fire approaching from the east. This is one of the last urbanizing parts of King County. There are still large parcels of land with agricultural activity and livestock grazing evident here. Most of the structures are well separated and placed in a very rural setting. There is still abundant timber here that frequently conceals hidden homes and other structures. Along the south edge of this unit is the Green River and although Lake Umek is south of the river, The Green River can be considered the southern limit of this unit. There is no specific identifier for the west side of the Kanaskat/Selleck unit however, a line running north to south along the west side of Sugarloaf Mountain would approximate the limit. For the purpose of clarity this unit has been divided into two map sections with a minimum overlap in the middle.

Kanaskat/Selleck street (north)



Kanaskat/Selleck street (south)



Kanaskat/Selleck overhead (north)



Kanaskat/Selleck overhead (south)



FIRE POTENTIAL AND IMPACT REDUCTION

FUELS

The Kanaskat/Selleck area is represented by two fuel type characteristics. The Cedar River Watershed is populated by mature stands of evergreens that have minimum amounts of ladder fuel concentrations (NFDR model H and NWCG type 8). Most of the watershed is fenced and general access is denied. This has limited the kind and amount of human interaction with the forest. The area outside the watershed has seen over harvesting, development, invasion by non-native species of brush, conversion of timber land to agriculture and neglect. The fuels are mostly brush and small timber stands (NFDR model L and NWCG type 6). The contrast in these fuel configurations has a direct bearing on the ability of each to sustain fire. Fuels in the watershed will predominately yield a shade dominated fire scenario. Outside the watershed the brush fuels and open canopy tree stands can be expected to support active fire conditions.

WEATHER

Kanaskat/Selleck experiences typical inland coastal weather conditions. This area is prone to more moderate east wind events than many of the other foothill locations. Situated in the foothills, this area is subject to higher annual rainfall that occurs usually from November through May of each year. Summer temperatures can exceed 90 degrees which cures the flashy fuels quickly.

TOPOGRAPHY

The built environment portion of this review unit is generally without remarkable topographical features. Topography here is punctuated by small hills with associated draws and drainages. The two most notable hills are McDonald Ridge and Sugarloaf Mountain. With occasional openings in the timber fuel continuity fire may make short aggressive runs up the open drainages. Additionally, there are large open

flats under the high tension transmission lines that bisect the Kanaskat and Selleck sub sets.

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 47, 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 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 can 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."

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 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 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 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 PROPERTY 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 CONDITIONS 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 Kanaskat/Selleck 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 Kanaskat/Selleck unit 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 Kanaskat/Selleck unit 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 the Kanaskat/Selleck area, there is no municipal type water system(s) with strategically placed fire hydrants. In areas without water a request for Structural Task Forces, with water tender support, should be made. 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 ignitability 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 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 ignitibility

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

Courtney Road Street



Courtney Road Overhead



**Structure Protection Plan
Courtney Road
Sec 11&12 R7E T21N**

GENERAL - Courtney Road extends easterly from near the intersection of the Kanaskat Selleck and the Retreat Kanaskat Roads. Courtney Road is only about 1¾ miles in total length. There are structures at both ends of the road but much of the area between is timber land. A significant amount of the timber has been harvested within the past few years and is now overgrown with heavy brush and young re-prod. Courtney Road parallels the base of the McDonald Ridge and provides access to steep terrain to the east. The structures along Courtney Road vary from old dilapidated barns to new well maintained homes. The road itself narrows as you travel east to a point where it is less than 12 feet wide.

PRIMARY PROTECTION – King County Fire District 47
34803 S.E. 268th St.
P.O. Box 268
Ravensdale, WA 98051-0206
360.886.1915

Washington State DNR
950 Farman ST. N
Enumclaw, WA 98022
360.825.1631

HAZARDS –

- Courtney Road is a single access roadway and very narrow in places and has several blind corners. Traffic coordination may be necessary during an evacuation.
- LPG Tanks are prevalent in most locations.
- Many of the structures at the east end of the road have poor defensible space around them.

WATER SUPPLY – There is no fire protection system available along Courtney Road. There is a fire hydrant

located less than ¼ mile south of the intersection of Courtney Road and Kanaskat Selleck Road. The Green River flows approximately parallel to Courtney Road on the south. There are sections of this river that are suitable for aerial dipping.

TACTICAL CONSIDERATIONS – Given the limited number of structures located on the east end of Courtney Road an evacuation should not pose an unmanageable challenge. The structures at the east end are clustered closer together but still have significant separation. Large apparatus may have difficulty negotiating some of the turns and corners near the end of the road. Courtney Road may serve as a good platform to work from in stopping a fire coming from the Green River area. If stopped here a fire burning from the south (Green River) may be controlled and denied access to the steep hillsides of McDonald ridge.

RESOURCE NEEDS – One additional structural Task Force and one Type 2 hand crew.

PROBABILITY OF SUCCESS – Good (65% - 80%)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Courtney Road 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 Courtney Road. Courtney Road has been rated as having a Moderate (65 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 Courtney Road. 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 adjacent landowners to establish and maintain fuel breaks.
- Work within the community to promote the ignition reduction potential of all structures.
- Work with the timber land owners to establish a fire break along the road.
- Implement a Firewise Community plan.

Courtney Road 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 Maple Valley. Evacuations from Courtney Road must be coordinated through the Maple Valley Police Department. Maple Valley Police should be advised as soon as possible when an evacuation is being considered. 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 involves 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 Maple Valley Police Department and request the services you need.

- They can provide transportation services among others.
- They will notify the King County Sheriffs office.

RECOMMENDED ASSEMBLY POINT

THERE IS NO RECOMMENDED ASSEMBLY POINT. AN ASSEMBLY POINT OR EVACUATION LOCATION WILL BE IDENTIFIED AT THE TIME OF A NEED.

The only road sign



West end of Courtney Road



Brush area north of Courtney Road



Example of canopy over roadway



**Wildfire Hazard Severity Form Checklist NFPA
299**

Name of area or address receiving assessment
Cortney Road

	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		
Less than 20 feet wide	4	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		
> = 300ft, with turnaround	2	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	10	
Less than 30 feet	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

34

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	0	
2. Area with history of higher fire occurrence	0 - 5	0	
3. Areas of unusually severe fire weather and winds	0 - 5	2	Moderate east winds
4. Separation of adjacent structures	0 - 5	0	
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0		
Class B roof (composite)	3	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	
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		
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	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		
All aboveground	5	5	
Totals for this page		31	
I. Totals for Risk Assessments			
Totals for page 1 and 2		65	
1. Low Hazard:	< 39 points		
2. Moderate Hazard:	40-69 points	65	
3. High Hazard:	70-112 points		
4. Extreme Hazard:	113 > points		

Kangley street



Kangley overhead



Structure Protection Plan
Kangley
Sec 26 R7E T22N

GENERAL – Kangley is a small residential neighborhood in eastern King County located at the foot of the Cascade Range. There are approximately 40 primary and secondary structures here. One of the structures is the headquarters station of King County Fire Dist 47. Kangley is one of the few locations in this unit that is situated in a non-timbered setting. As is identified by the overhead photo, the majority of the community is surrounded by open land. Access to Kangley is limited to a single county road that is hard surface to 20 feet wide.

PRIMARY PROTECTION - King County Fire District 47
34803 S.E. 286th St.
P.O. Box 206
Ravensdale, WA 98051-0206
360.886.1915

Washington State DNR
950 Farman ST. N
Enumclaw, WA 98022
360.825.1631

HAZARDS –

- LPG tanks are common to most primary structures.

WATER SUPPLY – There is no fire protection water system available in this area. The closest water system for shuttle operations is in Ravensdale.

TACTICAL CONSIDERATIONS – The Kangley area presents a unique tactical challenge because of the fuel/structural exposure relationship. Time is a critical element in a successful outcome to a working fire in these fuels. Any significant wildfire event that escapes initial attack in the

grass and brush fuels may be very difficult to contain. Structural exposure protection could be necessary before a management team is able to respond and setup operations. Initial attack forces must be prepared to allow a ground cover fire to burn unchecked while directing efforts toward structural protection. The configuration and type of fuels around the structures may make the use of tractor plows effective. Tactical priority must also be placed on maintaining an open access to this fire management area to allow for egress of local residents as well as ingress of additional firefighting forces. Law enforcement assistance with traffic congestion should be a primary consideration. Much of the timbered lands around Kangley are populated by merchantable timber that has a relatively tight closed canopy. Fires in this fuel configuration are usually shade dominated and allow for conventional wildfire tactics. The potential for fires spotting into the light fuels around the structures must be constantly evaluated.

RESOURCE NEEDS – One structural protection Task Force, One type two handcrew and a tractor plow.

PROBABILITY OF SUCCESS – Fair (70% or better).

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Kangley 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 Kangley. Kangley has been rated as having a Moderate (66 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 Kangley. 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 adjacent landowners to establish and maintain fuel breaks.
- Work within the community to promote the ignition reduction potential of all structures.
- Recommend to all owners of vacant land that grass and/or brush should be cut short to reduce the spread of fire.

Kangley 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 Maple Valley. Evacuations from Kangley must be coordinated through the Maple Valley Police Department. Maple Valley Police should be advised as soon as possible when an evacuation is being considered. 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 involves 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 Maple Valley Police Department and request the services you need.

- They can provide transportation services among others.
- They will notify the King County Sheriffs office.

RECOMMENDED ASSEMBLY POINT

THERE IS NO RECOMMENDED ASSEMBLY POINT. AN ASSEMBLY POINT OR EVACUATION LOCATION WILL BE IDENTIFIED AT THE TIME OF A NEED.

Kangley



Example of grass fuels



**Wildfire Hazard Severity Form Checklist NFPA
299**

Name of area or address receiving assessment

Kangley

	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	10	
Less than 30 feet	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

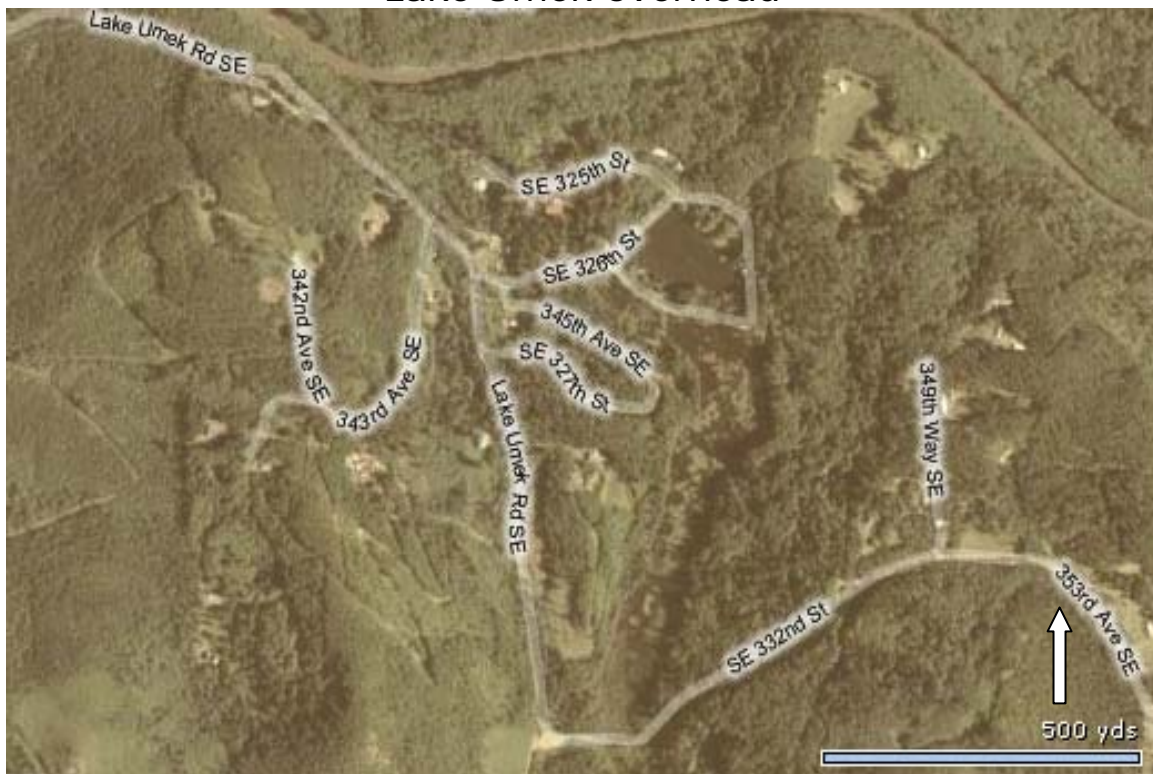
30

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	0	
2. Area with history of higher fire occurrence	0 - 5	0	
3. Areas of unusually severe fire weather and winds	0 - 5	0	
4. Separation of adjacent structures	0 - 5	0	
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0		
Class B roof (composite)	3	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		
Combustible siding and deck	10	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		
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	10	
2. Organized response resources			
Station within 5 miles of structure	1		
Station greater than 5 miles	3	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		
All aboveground	5	5	
Totals for this page		36	
I. Totals for Risk Assessments			
Totals for page 1 and 2		66	
1. Low Hazard:	< 39 points		
2. Moderate Hazard:	40-69 points	66	
3. High Hazard:	70-112 points		
4. Extreme Hazard:	113 > points		

Lake Umek street



Lake Umek overhead



STRUCTURE PROTECTION PLAN

Lake Umek
Sec 14 R7E T21N

GENERAL – Lake Umek is a heavily timbered residential area that is situated south southeast of Kanaskat. Access to this area is by way of a narrow gravel road that is not well maintained and contains grades in excess of 10%. The structures are located on large parcels of land and have good separation between them. The structures are mostly comprised of primary residential and secondary barns, garages, shops, sheds and other assorted small out buildings. Access to many of these structures is by way of long private driveways. The private streets in this area are not well marked. Addresses are frequently not posted and difficult to see from the road.

PRIMARY PROTECTION - King County Fire District 47
34803 S.E. 268th St.
P.O. Box 206
Ravensdale, WA 98051-0206
360.886.1915

Washington State DNR
950 Farman St. N
Enumclaw, WA 98022
360.825.1631

HAZARDS –

- LPG tanks are common to most primary structures.
- Local residents tend to drive too fast for the conditions of the roads. Care should be exercised in watching for oncoming vehicles.
- Aerial dipping from Lake Umek may be difficult due to its' small size and the trees surrounding it. The lake is only about 2 acres in size. There is an overhead powerline parallel to S.E. 326th St.

WATER SUPPLY – There is no fire protection water system available in this area. Water for structure protection must be transported in by water tenders. Lake Umek has an ideal area for drafting with turnaround space for water tenders.

Lake Umek is accessible for aerial dipping.

SPECIAL NOTE: New residential structures constructed after 1992 where no fire flow is available and/or the access grade exceeds 15% or is less than 20 feet wide are required to be protected by automatic fire sprinklers.

TACTICAL CONSIDERATIONS –Lake Umek road is over two miles long and dead ends. Local residents evacuating while firefighting units are accessing the area may cause extreme traffic issues. Coordination with the King County Police will be necessary. In most locations the tree canopy extends over the narrow roads and renders them ineffective as fuel breaks. There is a railroad right of way north of the area that may serve well as a fuel break. Fires approaching from this direction may be stopped at the railroad right of way. Lake Umek protection area is above the railroad so spot fires could be problematic.

RESOURCES NEEDED – One additional Structural task force, one wildland engine strike team one dozer and a type two hand crew should be added to the initial resource request.

PROBABILITY OF SUCCESS – Fair (50% to 65%)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Lake Umek 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 Lake Umek. Lake Umek has been rated as having a Extreme (118 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 Lake Umek. There are several other general recommendations that may help reduce the potential of fire. The general recommendations can be found in Appendix E.

- Immediately implement a Firewise Community plan.
- Widen the road to a minimum of 20 feet.
- Establish a road maintenance program to include removal of the tree canopy covering the road.
- Install road signs consistent with the county standard
- Work with adjacent landowners to establish and maintain permanent fuel breaks.
- Post standard address signs at all driveways
- Work within the community to promote the ignition reduction potential of all structures.
- Recommend to all owners of vacant land that grass and/or brush should be cut short to reduce the spread of fire.
- Community meetings should be held to develop and publish a community evacuation plan.

Lake Umek 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 Maple Valley. Evacuations from Lake Umek must be coordinated through the Maple Valley Police Department. Maple Valley Police should be advised as soon as possible when an evacuation is being considered. 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 involves 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 Maple Valley Police Department and request the services you need.

- They can provide transportation services among others.
- They will notify the King County Sheriffs office.

RECOMMENDED ASSEMBLY POINT

THERE IS NO RECOMMENDED ASSEMBLY POINT. AN ASSEMBLY POINT OR EVACUATION LOCATION WILL BE IDENTIFIED AT THE TIME OF A NEED.

Lake Umek



lake Umek marsh



Drafting area



Narrow road example



Typical residential setting



Less typical residential setting



Wildfire Hazard Severity Form Checklist NFPA
299

Name of area or address receiving assessment

Lake Umek

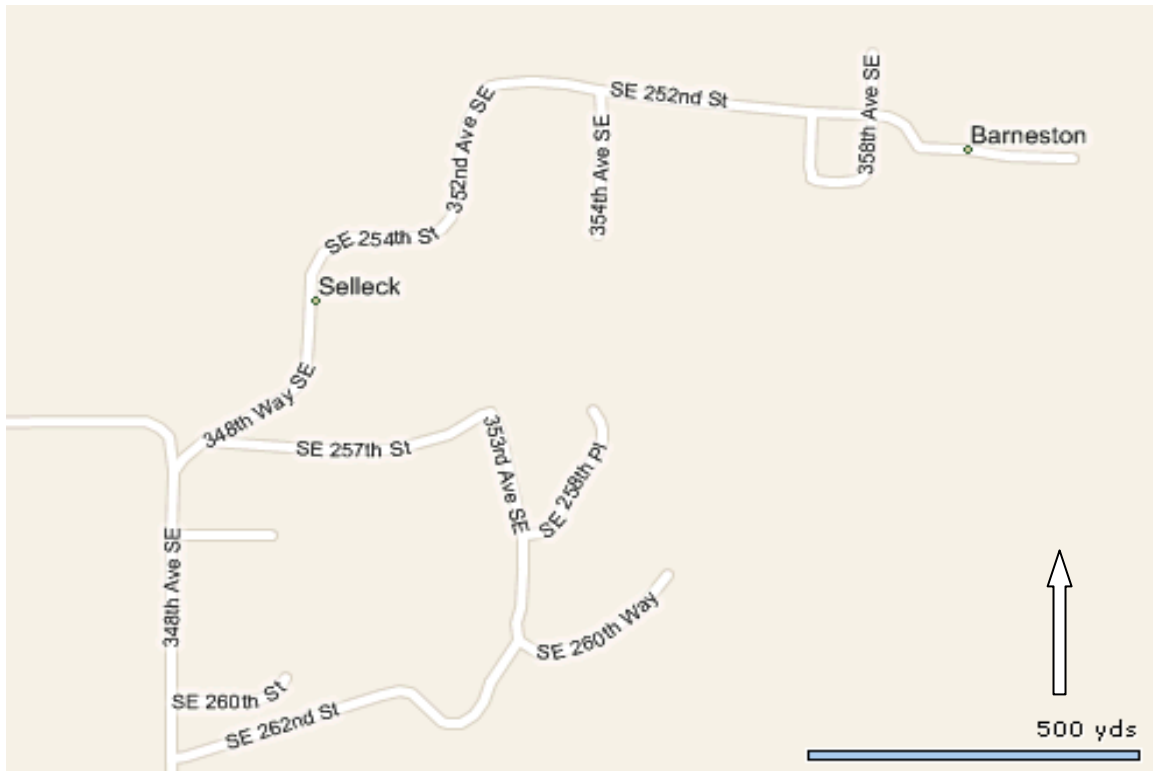
	Points	House or area	Notes
A. Subdivision Design			
1. Ingress and egress			
Two or more roads in/out	0		
One road in/out	7	7	
2. Road width			
Greater than 24 feet	0		
Between 20 and 24 feet	2		
Less than 20 feet wide	4	4	
3. All-season road condition			
Surfaced, grade < 5%	0		
Surfaced, grade > 5%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

Totals for this page

54

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	0	
2. Area with history of higher fire occurrence	0 - 5	0	
3. Areas of unusually severe fire weather and winds	0 - 5	0	
4. Separation of adjacent structures	0 - 5	0	
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0		
Class B roof (composite)	3	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		
Combustible siding and deck	10	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		
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	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	3	all after 1992
None	5		
H. Utilities (Gas and Electric			
1. Placement			
All underground utilities	0		
One underground, one aboveground	3		
All aboveground	5	5	
Totals for this page		32	
I. Totals for Risk Assessments			
Totals for page 1 and 2		118	
1. Low Hazard:	< 39 points		
2. Moderate Hazard:	40-69 points		
3. High Hazard:	70-112 points		
4. Extreme Hazard:	113 > points		
		118	

Selleck street



Selleck overhead



Structure Protection Plan
Selleck
Sec 26 R7E T22N

GENERAL – Selleck is a small area north of Kangley that is surrounded on three sides by the City of Seattle Cedar River Watershed. The land around selleck is heavily timbered with mature conifers. Access to this community is by way of 348th Ave. S.E. which is the only road in or out. The road is maintained by King County and is hard surfaced. The road width is only 18 feet in places. There are no services in this neighborhood so residents must travel for basic needs. The area labeled as Barneston is populated by residential structures that have clapboard siding and wood shingle roofs. As a former mill site this type of construction is not uncommon. There is one structure of significance here. The old Selleck School building still stands and has been converted to condominiums.

PRIMARY PROTECTION - King County Fire District 47
34803 S.E. 268th St.
P.O. Box 206
Ravensdale, WA 98051-0206
360.886.1915

Washington State DNR
950 Farman ST. N
Enumclaw, WA 98022
360.825.1631

HAZARDS –

- Most of the residential structures have LPG tanks associated with them.
- This area is served by a single road in and out of a heavily timbered residential community.
- Wood shingle roofs will contribute to rapid fire spread between structures.

WATER SUPPLY – There is no fire protection water supply in this area. There is a hydrant approximately three miles south at the intersection of the Retreat Kanaskat and the Kanaskat Selleck roads that may be satisfactory for a water tender shuttle operation. Retreat Lake is the closest water body capable of supporting aerial operations.

TACTICAL CONSIDERATIONS – Given the concentration and type of construction of the structures at the old mill site near the former school building, combined with the lack of water, structure protection here will present a risk to firefighters that may not be acceptable. The area is closed in by heavy timber and limited to one way of escape. Fires in other parts of selleck may be complicated by rapid advance in flashy fuels that transition into heavier fuels before an initial attack can be made.

RESOURCES NEEDED – One tender strike team and one structure engine strike team

PROBABILITY OF SUCCESS – A significant fire in this area has a low (less than 50%) probability of successfully protecting all of the structures.

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Selleck 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 Selleck. Selleck has been rated as having a HIGH (107 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 Selleck. There are several other general recommendations that may help reduce the potential of fire. The general recommendations can be found in Appendix E.

- Implement a Firewise Community Plan immediately.
- Work with Seattle Public Utilities to establish and maintain a permanent fuel break around the community.
- Work within the community to promote the ignition reduction potential of all structures to include replacement of the wood shingle roofs.
- Recommend to all owners of vacant land that grass and/or brush should be cut short to reduce the spread of fire.
- Community meetings should be held to develop a community evacuation plan and conduct table top exercises.

Selleck 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 Maple Valley. Evacuations from Selleck must be coordinated through the Maple Valley Police Department. Maple Valley Police should be advised as soon as possible when an evacuation is being considered. 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 involves 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 Maple Valley Police Department and request the services you need.

- They can provide transportation services among others.
- They will notify the King County Sheriffs office.

RECOMMENDED ASSEMBLY POINT

THERE IS NO RECOMMENDED ASSEMBLY POINT. AN ASSEMBLY POINT OR EVACUATION LOCATION WILL BE IDENTIFIED AT THE TIME OF A NEED.

Former school



Structures with wood shingle roofs and clapboard siding



Typical fuels surrounding Selleck



Overhead utilities



**Wildfire Hazard Severity Form Checklist NFPA
299**

**Name of area or address receiving assessment
Selleck**

	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		
Less than 20 feet wide	4	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		
> = 300ft, with turnaround	2		
< = 300ft, no turnaround	4	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		
Heavy (dense brush, timber, and hardwoods)	20	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

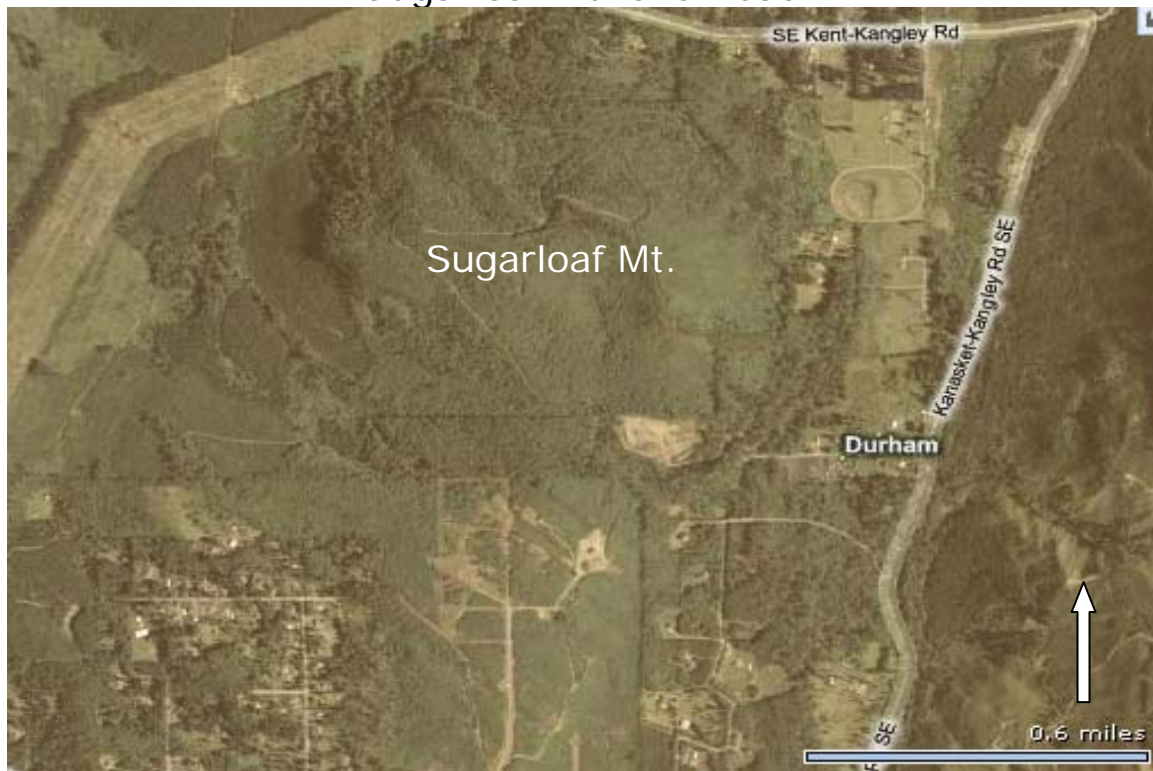
61

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	0	
2. Area with history of higher fire occurrence	0 - 5	0	
3. Areas of unusually severe fire weather and winds	0 - 5	0	
4. Separation of adjacent structures	0 - 5	0	
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0		
Class B roof (composite)	3		
Class C roof (wood shingle)	15	15	
Non-rated	25		
F. Existing Building Construction			
1. Materials (predominant)			
Noncombustible siding/ deck	0		
Noncombustible siding/ wood deck	5		
Combustible siding and deck	10	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		
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	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		
All aboveground	5	5	
Totals for this page		46	
I. Totals for Risk Assessments			
Totals for page 1 and 2		107	
1. Low Hazard: < 39 points			
2. Moderate Hazard: 40-69 points			
3. High Hazard: 70-112 points		107	
4. Extreme Hazard: 113 > points			

Sugarloaf Mt. street
Note, there is no specific access to Sugarloaf



Sugarloaf Mt. overhead



Structure Protection Plan
Sugarloaf
Sec34 R7E T22N

GENERAL – For the purposes of this report the Sugarloaf Mt. protection plan will concentrate on the few structures around Sugarloaf Mt. There are no structures on the mountain. Sugarloaf Mt. is surrounded by approximately two dozen primary structures and several associated out buildings. The most severe fire conditions for this area will be during a wind event that could cause a fire to rapidly back down the mountain. Given this scenario most structures could be protected individually because of the separation between them. The exception to this may be a spotting fire moving to the south west where the concentration of structures is greater.

PRIMARY PROTECTION - King County Fire District 47
34803 S.E. 268th St.
P.O. Box 206
Ravensdale, WA 98051-0206
360.886.1915

Washington State DNR
950 Farman St. N
Enumclaw, WA 98022
360.825.1631

HAZARDS –

- In the event an aggressive initial attack is the strategy for protecting structures in this area the access to Sugarloaf Mt. is limited and obstructed.
- LPG tanks are common to most structures in this area.

WATER SUPPLY – There is no water supply for fire protection in this area. There is a hydrant at the intersection of the Kent Kangley road and the Kangley Selleck road that may serve as a source for tender shuttles. Lake retreat is less than two miles to the west and will provide for aerial operations.

TACTICAL CONSIDERATIONS – A fire on or around Sugarloaf Mt. should not present any significant abnormal tactical challenges.

RESOURCE NEEDS – The addition of one wildland strike team for patrol will be beneficial.

PROBABILITY OF SUCCESS – High (90% or better)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Sugarloaf Mt. 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 Sugarloaf Mt. Sugarloaf Mt. has been rated as having a Moderate (56 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 Sugarloaf Mt. 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 adjacent landowners to establish and maintain fuel breaks.
- Work within the community to promote the ignition reduction potential of all structures.
- Work with the timber land owners to establish a fire break around the base of the mountain.
- Recommend to all owners of vacant land that grass and/or brush should be cut short to reduce the spread of fire.

Sugarloaf Mountain 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 Maple Valley. Evacuations from the Sugarloaf Mt. area must be coordinated through the Maple Valley Police Department. Maple Valley Police should be advised as soon as possible when an evacuation is being considered. 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 involves 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 Maple Valley Police Department and request the services you need.

- They can provide transportation services among others.
- They will notify the King County Sheriffs office.

RECOMMENDED ASSEMBLY POINT

THERE IS NO RECOMMENDED ASSEMBLY POINT. AN ASSEMBLY POINT OR EVACUATION LOCATION WILL BE IDENTIFIED AT THE TIME OF A NEED.

Sugarloaf Mt from the north west



View of Mountain from Durham



**Wildfire Hazard Severity Form Checklist NFPA
299**

Name of area or address receiving assessment
Sugarloaf Mt.

	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		
Less than 20 feet wide	4	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	10	
Less than 30 feet	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

32

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	0	
2. Area with history of higher fire occurrence	0 - 5	0	
3. Areas of unusually severe fire weather and winds	0 - 5	0	
4. Separation of adjacent structures	0 - 5	0	
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0		
Class B roof (composite)	3	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	newer homes w/ hardieplank
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		
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	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		
All aboveground	5	5	
Totals for this page		29	
I. Totals for Risk Assessments			
Totals for page 1 and 2		61	
1. Low Hazard:	< 39 points		
2. Moderate Hazard:	40-69 points		56
3. High Hazard:	70-112 points		

APPENDIX A

Kanaskat/Selleck street (north)



Kanaskat/Selleck street (south)



Kanaskat/Selleck overhead (north)



Kanaskat/Selleck overhead (south)



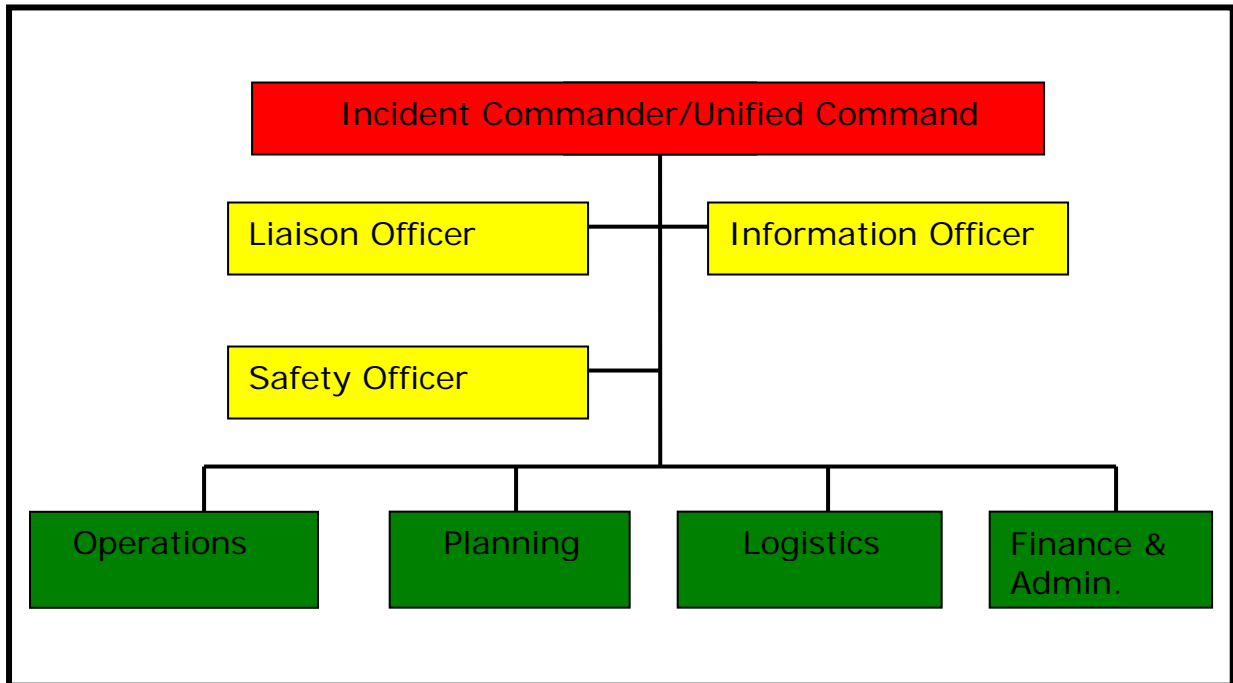
APPENDIX B

Structure Protection Checksheet - Single Property

Tactical Area				Protection #		S F
Address				Owner		
Legal	Sec	Twnsp	Range			
LAT. N			LONG W			
<i>Structure Type</i> 1 Story <input type="checkbox"/> 2 story <input type="checkbox"/> Other <input type="checkbox"/> Wood Frame <input type="checkbox"/> A-Frame <input type="checkbox"/> Log Home <input type="checkbox"/> Outbuilding <input type="checkbox"/>						
Safety Factor						
RAPID <input type="checkbox"/> Driveway - Unsafe to use for ingress - egress during fire passage ASSESSMENT <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

King County Fire District 47 34803 SE 268 th St. P.O. Box 206 Ravensdale, WA 98051	360.886.1915
Washington DNR 950 Farman St Enumclaw, WA 98022 Dispatch	360.825.1631 360.802.7024
Valley (Fire) Communications 27519 108 th Ave. SE Kent, WA 98030	253.372.1300
U.S. Forest Service Emunclaw Office 450 Roosevelt Ave. Enumclaw, WA 98022	360.825.6585

LAW

Maple Valley Police 22035 Wax Rd. Ste 5 P.O. Box 320 Maple Valley, WA 98038 Dispatch	425.413.5158 206.296.3311
King County Police Precinct 3 22300 SE 231 st Maple Valley, 98038	206.296.3883
King County Office of Emergency Mgmt.	206.296.3830
Washington State Patrol 2803 156 th Ave. SE Bellevue, WA 98007	425.649.4370

UTILITIES

King County Dept of Transportation	206.296.6590
Road Services Division	1.800.527.6237
201 S. Jackson St.	
Seattle, WA 98104	

Maple Valley Public Works	425.413.8800
P.O. Box 320	
22035 Wax Rd SE	
Maple Valley WA, 98038	

Washington State Dept of Transportation	206.440.4000
NW Region Office	
15700 Dayton Ave.	
Shoreline, WA	
P.O. Box 330310 Seattle, WA 98133	

Puget Sound Energy	888.225.5773
P.O. Box 97034	
Bellevue, Wa 98009	

OTHERS

Red Cross (King County Chapter)	206.323.2345
1900 25 th Ave. South	
P.O. Box 3097	
Seattle, WA 98114	

Metro Transit	206.684.1162
201 S. Jackson St.	
Seattle, WA 98104	

Tahoma School District 409	425.413.3400
27520 Maple Valley – Black Diamond Rd.	
Maple Valley, WA 98038	

APPENDIX E

THE FOLLOWING PAGES CAN BE USED AS 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.