

Cumberland

Wildfire plan

Structure Evacuation, Structure Protection and Firewise recommendations



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PURPOSE

This plan has been prepared for the Cumberland 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.

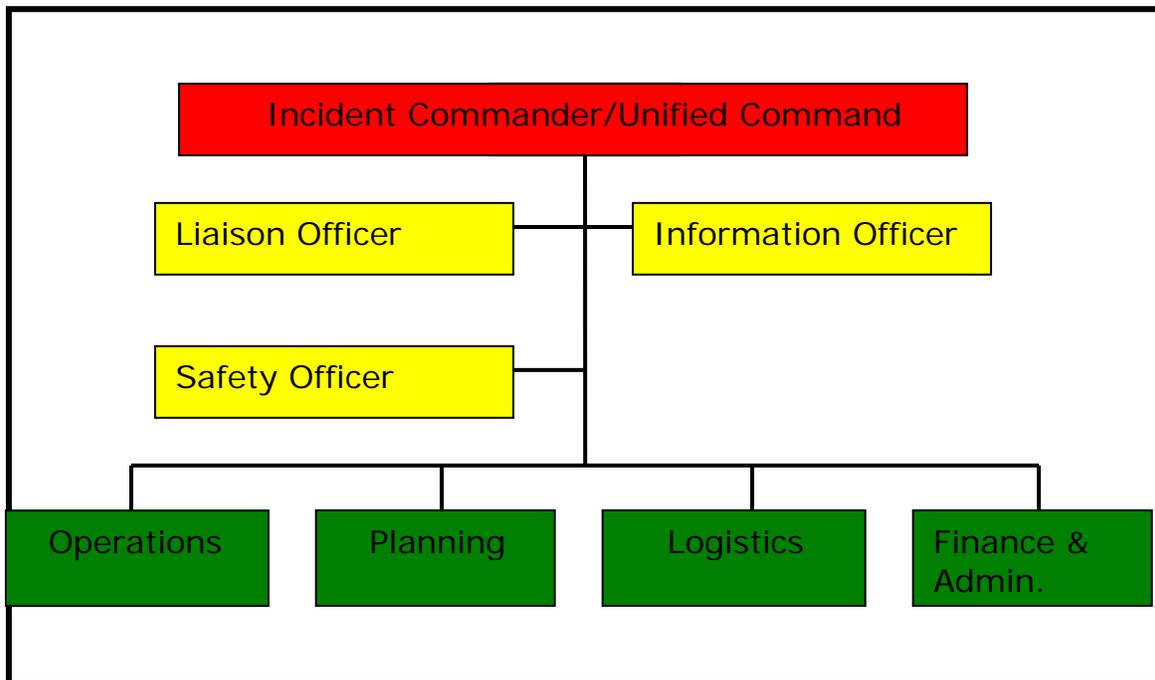
Timely implementation of the Structure Protection/Evacuation elements of this plan for Cumberland and vicinity can save lives and property. A key element to the success of this plan is a strong command presence that incorporates the input of all of the principal emergency service providers. Law Enforcement, 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

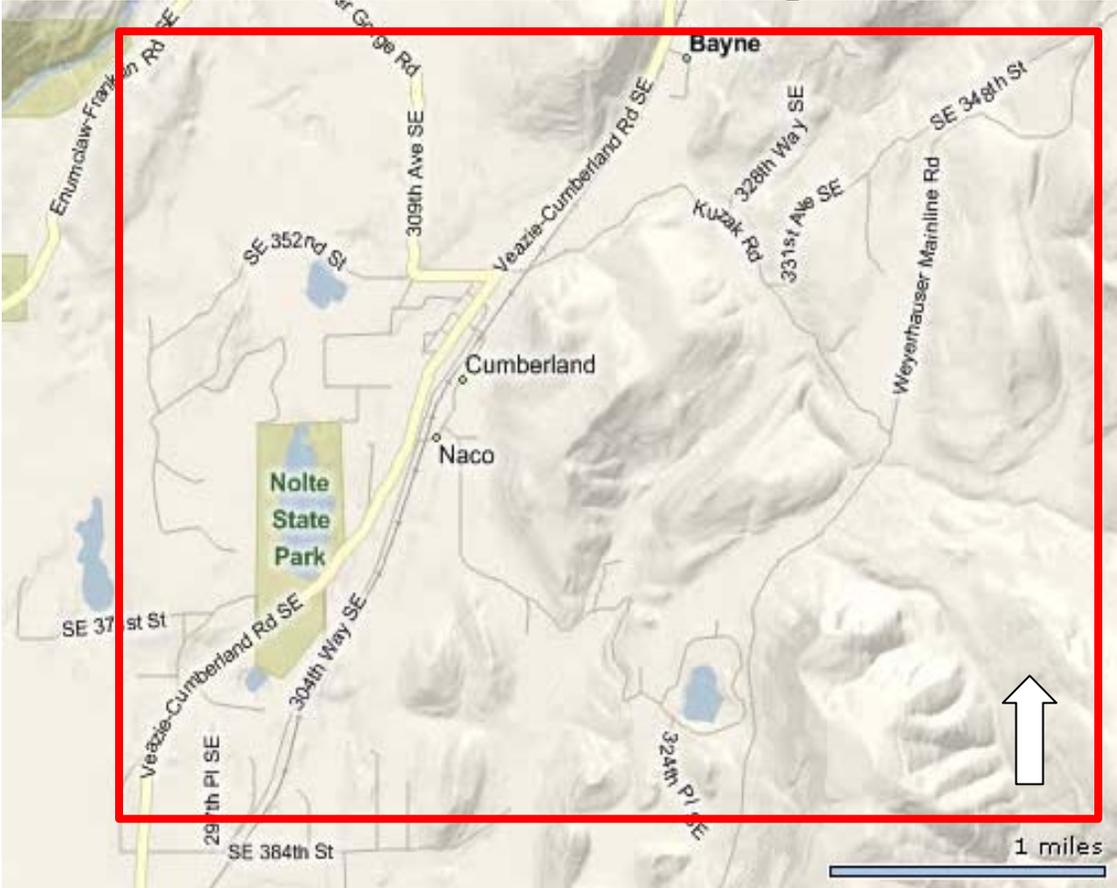


Shown above is a sample Command and General Staff chart of a typical Incident Management Team.

CUMBERLAND AND VICINITY PROTECTION AREA

Cumberland is situated in Southeast King County at the base of the Cascade Mountain Range. Included in this planning unit are the neighborhoods of Serenity, Cumberland, Cumberland Heights, Walker Lake and Nolte State Park. Each of these will be discussed in greater detail in Part II. This area is outside any of the Urban Growth Boundaries of the surrounding Metropolitan communities. Cumberland is the unincorporated hub of this planning area. This is a geographical transitional community between agricultural/grazing lands and the heavy forests of the Cascade Range. This juxtaposition plays an important part of the interface issue here. In conducting the NFPA 299 surveys for this planning unit it was noted that two of the neighborhoods were the prime contributors to the high end of the moderate hazard rating of the overall unit. These neighborhoods are Walker Lake (117) and Cumberland Heights (107). Given the propensity of this areas' susceptibility to East wind events and the location of these two neighborhoods east of the population at Cumberland there is a high probability of a disastrous fire in this area.

Cumberland Vicinity



FIRE POTENTIAL AND IMPACT REDUCTION

FUELS

The predominate fuel model in the Cumberland planning area is brush and timber (NFDR model H or NWCG type 8). The timber stands are broken by open farm land and/or grazed pastures in the lowlands. The brush understory is heavy in several areas and can comprise the majority of the fuel in some places. Most of the timber stands are not thinned and can be subject to wind damage. Evidence of wind thrown trees exists in several locations. Specifically in Nolte State Park this downed timber has been retained for natural affect.

WEATHER

Located at the foot of the west Cascades this planning area is subject to high rainfall and more snow than other parts of the Puget Sound Basin. These additional amounts of moisture tend to delay the typical fire season until late July. During the summer months the temperature may exceed 80 degrees for several days in a row drying fuels rapidly. Afternoon upslope winds can be deceptively strong and cause fires to burn with unexpected intensity. The Cumberland planning area is subject to severe East wind events. Because of its' location between the Green River and White River drainages this area can experience east winds in excess of 80 miles per hour. This phenomenon is the result of high pressure east of the Cascade Range that forces warm air up the Stampede and Naches passes over the mountains. As the air spills over the top of the range it is funneled down the river valleys resulting in gale force compression winds.

TOPOGRAPHY

The Cumberland planning area is situated at the edge of a plateau in the transition to foothills. The plateau is punctuated with isolated hills that may rise 600 feet above

the surrounding land. As a very generalized statement this planning unit has for its east border the Hancock Timber Mainline Haul Road. The elevation increases rapidly as you travel east. For example: Cumberland is at an elevation of 850'. Walker Lake, two miles east, is at an elevation of 1200'. To the northeast is Cumberland Heights at over 1400'.

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 28, 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 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 SEVER.

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 Cumberland 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 defendable. 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 Cumberland 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 Cumberland 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 Cumberland, 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 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 significant 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

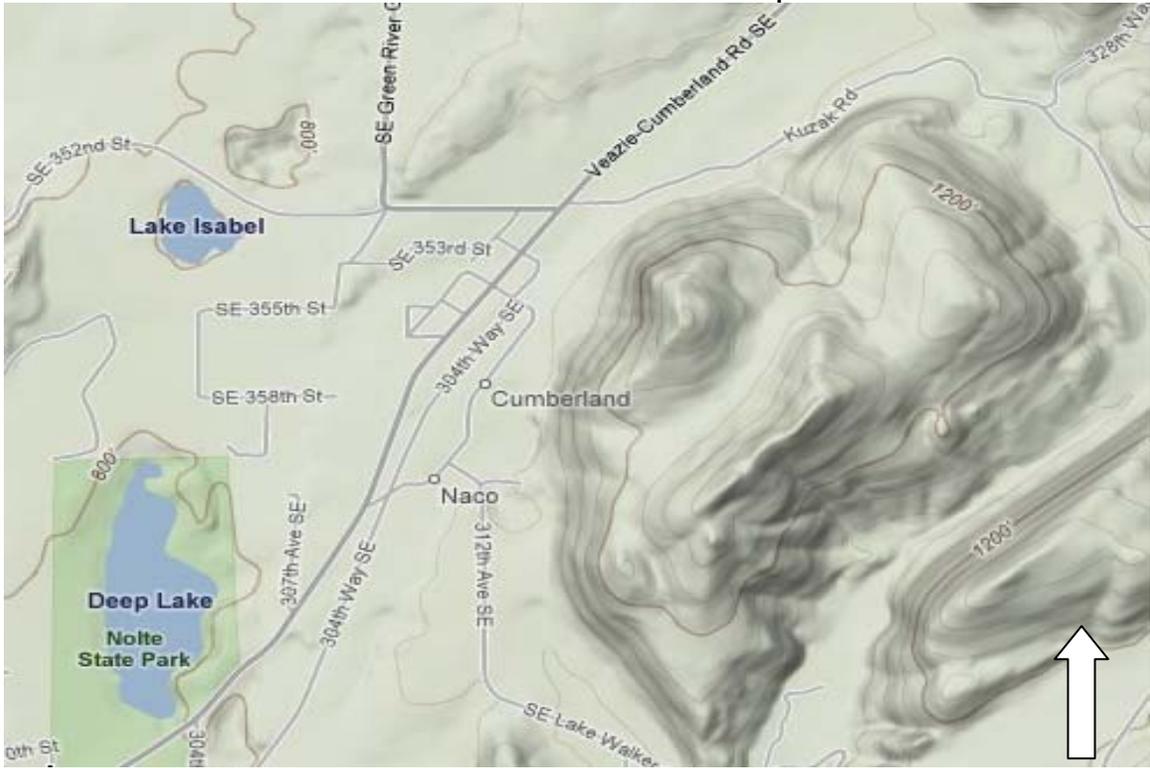
Identify and release or redeploy resources from areas no longer threatened by fire activity.

PART II

Planning area sub-sets

CUMBERLAND

Cumberland street map



Cumberland overhead map



MAPS NOT TO SCALE

STRUCTURE PROTECTION
Cumberland
Sec 28 R7E T21N

GENERAL – Cumberland is a small unincorporated community of approximately 90 structures located four miles north of Enumclaw on the Veazie Cumberland road. Most of the structures are residential with the exception of a store, tavern and fire station. The architecture spans approximately 100 years from structures built in the early 20th century to homes of very modern construction. Cumberland serves as the commercial hub for a small rural area in east King County.

PRIMARY PROTECTION - Enumclaw Fire Department
(King County Fire District 28)
1330 Wells St.
Enumclaw, WA 98022
360.825.5544

HAZARDS –

- Several of the structures use LP Gas for heating. There are LP Gas tanks located throughout the entire community.
- Road widths are very narrow inside the bounds of the community. Some roads are as narrow as 14 feet.
- Veazie Cumberland Road is a main travel route and vehicles frequently exceed the posted speed limit. Use caution crossing this road.
- This area is noted for strong east wind events.

WATER SUPPLY – Cumberland is served by a municipal type water system for fire protection. This system is operated by the City of Tacoma Water Department.

TACTICAL CONSIDERATIONS – Cumberland represents the highest concentration of structures in the planning area.

The most significant tactical consideration is a wildfire during an east wind event. These compressive winds are known to affect this area and can have a devastating impact on fire rate of spread. Depending on the fuels available to a fire these winds can cast burning embers for well over a mile ahead of the fire front. Given the density of structures in Cumberland there could be a need for dozens of apparatus to protect this community and the surrounding area. In order to facilitate this level of activity in such a small area Cumberland should be afforded the designation of a division unto itself. The City of Tacoma water department should be contacted to assure a maximum flow capability from the water system.

RESOURCE NEEDS – Fire and weather conditions will contribute to resource needs however, at a minimum there should be an additional two strike teams of structural engines and one strike team of wildland engines. If an east wind event is anticipated this order should be doubled and include at least two Type I helicopters.

PROBABILITY OF SUCCESS – Moderate (65%-75%)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Cumberland 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 Cumberland. Cumberland has been rated as having a *moderate* (53 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 Cumberland. 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.
- 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.
- All fire hydrants should be tested to confirm their operational condition.
- Community meetings should be held to discuss the importance of community evacuation and conduct table top exercises.

Cumberland 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 Enumclaw. Evacuations from Cumberland must be coordinated through the Enumclaw Police Department. Enumclaw 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 Enumclaw 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

Cumberland Fire Station
35420 Veazie Cumberland Rd
Enumclaw, WA 98022



New house in Cumberland



Typical house in Cumberland



Open lot north of fire station



Example of a long driveway south of Cumberland



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

	Points	House or area	Notes
A. Subdivision Design			
1. Ingress and egress			
Two or more roads in/out	0	0	
One road in/out	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

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	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	3	
3. Areas of unusually severe fire weather and winds	0 - 5	5	east winds
4. Separation of adjacent structures	0 - 5	2	
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		
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		
All aboveground	5	5	
Totals for this page		34	
I. Totals for Risk Assessments			
Totals for page 1 and 2		57	
1. Low Hazard: < 39 points			
2. Moderate Hazard: 40-69 points		57	
3. High Hazard: 70-112 points			
4. Extreme Hazard: 113 > points			

CUMBERLAND HEIGHTS

Cumberland Heights street map



Cumberland Heights overhead



MAPS NOT TO SCALE

STRUCTURE PROTECTION
Cumberland Heights
Sec 27 R7E T21N

GENERAL – Cumberland Heights is a residential area northeast of Cumberland that has developed in no particular order. There are very few structures (less than 10) most of which are served by long driveways. No apparent effort has been taken to manage the fuels around the existing structures. The single access road to this area is poor at best. The road narrow, steep, un-surfaced, un-maintained and un-safe. Fuels in this area consist of an inordinate amount of hardwoods and dense brush.

PRIMARY PROTECTION – Enumclaw Fire Department
(King County Fire District 28)
1330 Wells St.
Enumclaw, WA 98022
360.825.5544

HAZARDS –

- Access is poor due to road condition.
- Fuels are heavy and unmanaged
- Given the fuels and access issues to this area
Firefighter safety must be continually re-evaluated
- Strong east winds are known to occur in this area.

WATER SUPPLY – There is no water available for firefighting in the immediate area. A municipal type water system exists in Cumberland. Water is available for dipping from Walker Lake, Deep Lake or Hyde Lake. All are about equal air distance away.

TACTICAL CONSIDERATIONS – This area constitutes a High risk low frequency occurrence situation. Committing firefighters to this area for any reason other than immediate life safety or rescue is not recommended during any major fire event. Access is poor and the roads are not well

maintained. Attempts should be made to stop a fire or redirect it prior to it reaching Cumberland Heights. Fire fights here during east wind events should be avoided. There is a man made burier that exists adjacent to the south side of Cumberland Heights under the overhead power transmission lines. Extreme care must be exercised in using this as a point to develop a fire break. The Bonneville Power Administration advises against fighting wildfires under high voltage lines.

RESOURCE NEEDS – Like Walker Lake, this is a good area to invest in aerial fire attack. Additional resources should include two type 2 helicopters, two dozers, two water tenders, one 20 person crew and a strike team of wildland engines.

PROBABILITY OF SUCCESS – Moderate (55%-65%)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, the Cumberland Heights area 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 Cumberland Heights. Cumberland Heights has been rated as having a *High* (111 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 Cumberland Heights. 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 adjoining property owners to establish and maintain a fuels management program.
- Improve and maintain the access roads in the area to include cutting back brush along the sides.
- Provide high visibility address signs for all structures.
- Encourage local structural and wildland firefighting units to visit the area to become familiar with the features of the community.

Cumberland Heights 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 Enumclaw. Evacuations from Cumberland Heights must be coordinated through the Enumclaw Police Department. Enumclaw 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 Enumclaw 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

Cumberland Fire Station
35420 Veazie Cumberland Rd
Enumclaw, WA 98022



Poor access road 14% grade with rough loose surface



Example of no fuel separation around structure



Driveway 350 feet no turnaround



16' interior roadway with near canopy contact



Name of area or address receiving assessment
Cumberland Heights

	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	very poor condition
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	up to 12% grade
Other than all-season	7		
4. Fire service access			
< = 300ft, with turnaround	0		
> = 300ft, with turnaround	2		
< = 300ft, no turnaround	4		
> = 300ft, no turnaround	5	5	
5. Street signs			
Present (4 in. in size and reflectorized)	0		
Not present	5	5	not standard - few house numbers
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		
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		

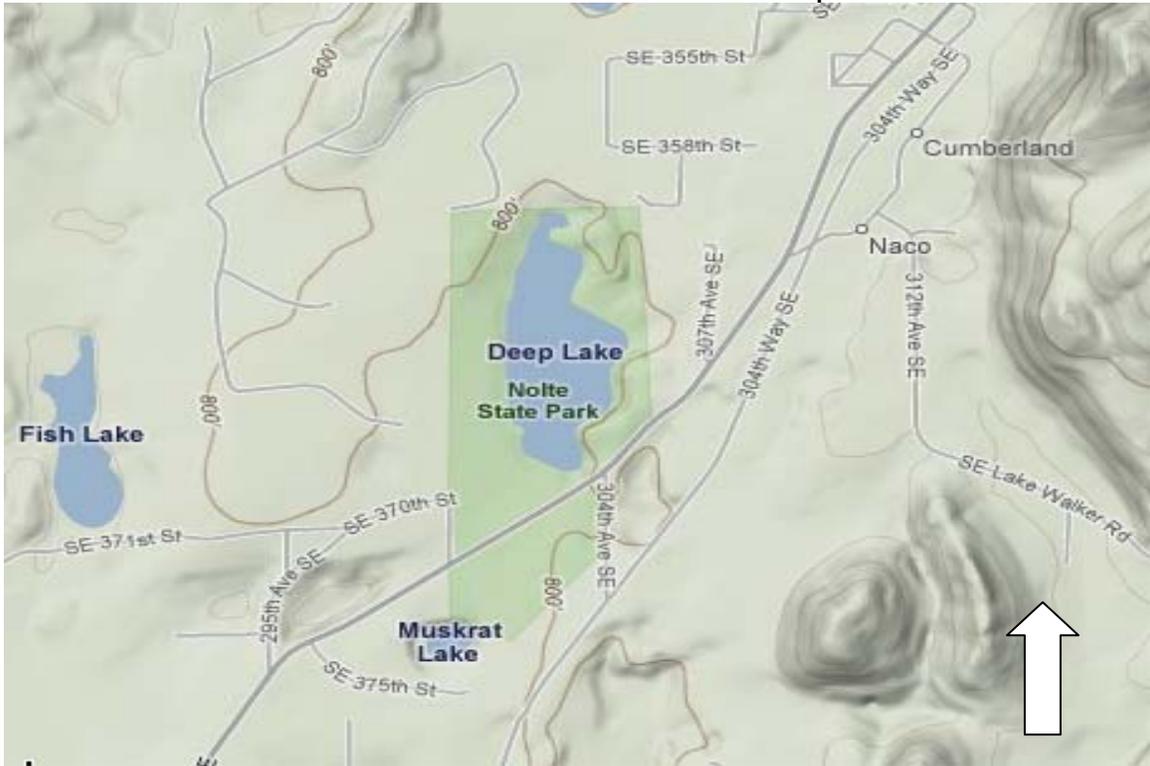
Totals for this page

71

	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	1	
2. Area with history of higher fire occurrence	0 - 5	1	
3. Areas of unusually severe fire weather and winds	0 - 5	5	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		
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	2	difficult access will delay response
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		40	
I. Totals for Risk Assessments			
Totals for page 1 and 2		111	
1. Low Hazard: < 39 points			
2. Moderate Hazard: 40-69 points			
3. High Hazard: 70-112 points			
		111	
4. Extreme Hazard: 113 > points			

NOLTE STATE PARK

Nolte State Park street map



Nolte State Park overhead



MAPS ARE NOT TO SCALE

STRUCTURE PROTECTION
Nolte State Park
Sec 29 R7E T21N

GENERAL – Nolte State Park is located on the Veazie Cumberland Rd immediately south of Cumberland. The park is 117 acres surrounding Deep Lake and is for day use only. During the summer months the park experiences heavy use of the water and trail features. In the late 1980s' the park suffered damage from a wind storm. The dead and down fuels from that storm remain today as understory fuels.

PRIMARY PROTECTION - Enumclaw Fire Department
(King County Fire District 28)
1330 Wells St.
Enumclaw, WA 98022
360.825.5544

HAZARDS –

- LP Gas storage around structures
- Heavy dead and downed fuels
- This area is noted for strong east wind events

WATER SUPPLY – There is no municipal type water system protecting the park. Deep lake is sufficient for dipping. There is a municipal type system in Cumberland one mile north of the park.

TACTICAL CONSIDERATIONS – Given the limited number of structures in the park (3) the only significant tactical concern is the east wind events that occur in this area. During these events the intensity and rate of spread of a fire can increase exponentially.

RESOURCE NEEDS – One type 1 or 2 structural engine should be adequate for the protection of park structures.

PROBABILITY OF SUCCESS – High (90% or better)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, Nolte State Park was rated for common features such as access, vegetation, topography, fire protection and utilities. Then one of the buildings was rated for roof coverings and other existing conditions. The totals were averaged to establish an overall rating. See attached NFPA 299 form for Nolte State Park. Nolte State Park has been rated as having a *high* (80 points) fire risk. Individual homeowners and the park can significantly reduce the risk of home and structure ignitions during a wildfire event by being prepared.

RECOMMENDATIONS TO REDUCE FIRE RISK SEVERITY:

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

- During heavy use periods the vehicle parking arrangement limits access by fire apparatus. Reconfigure the parking to accommodate rapid access by fire apparatus.
- Given the commitment by the park to maintain the natural setting of the dead and down fuels it is important to create a fuel break between the park and neighboring property. The park should work with adjoining property owners to establish and maintain a fuel break.
- Post signs in multiple locations in the park to warn users of the fire danger and how to report a fire
- Develop a written evacuation plan for the park so all park personnel are aware of the process for evacuation.
- Provide a minimum of 100 feet of defensible space around all buildings.

Nolte State Park 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. The State Park operates under its' own authority. Evacuations from Nolte State Park do not fit the usual post evacuation needs pattern and the park will probably be evacuated prior to the approach of a major fire.

Live fuels at Nolte State Park



Dead and down in background



Name of area or address receiving assessment
Nolte State Park

	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	20'
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		
> = 300ft, with turnaround	2	2	loop through parking lot
< = 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		
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	1	
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		

Totals for this page

42

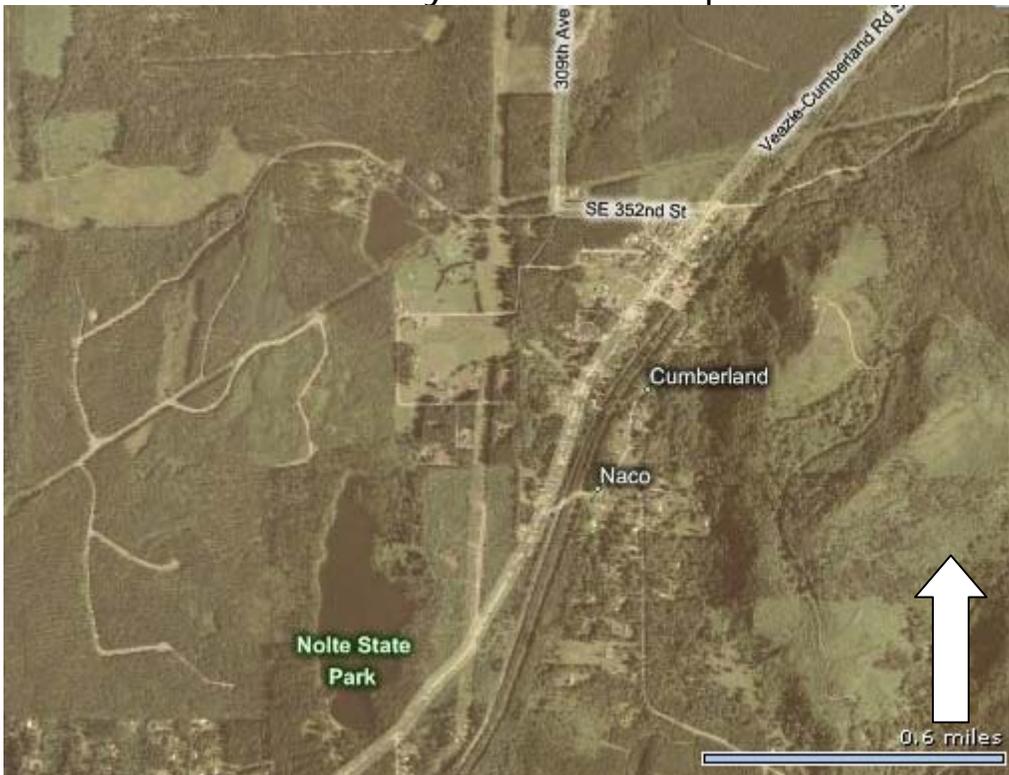
	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	1	
2. Area with history of higher fire occurrence	0 - 5	1	
3. Areas of unusually severe fire weather and winds	0 - 5	5	east winds
4. Separation of adjacent structures	0 - 5	2	
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0	0	
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		
Combustible siding and deck	10	10	wood
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	3	LPG tank
All aboveground	5		
Totals for this page		38	
I. Totals for Risk Assessments			
Totals for page 1 and 2		80	
1. Low Hazard: < 39 points			
2. Moderate Hazard: 40-69 points			
3. High Hazard: 70-112 points			
4. Extreme Hazard: 113 > points			
		80	

SERENITY

Serenity street map



Serenity overhead map



STRUCTURAL PROTECTION

Serenity
Sec 29 R7E T21N

GENERAL – Serenity is a relative new subdivision located west of Cumberland. This gated residential community is accessed from SE 352nd St. along the north edge of Cumberland. This street provides the only ingress and egress to the development. The large 5 to 7 acre lots are well suited for the executive homes being built in this development. The roads have moderate grades and are hard surfaced throughout. The road grid follows the King County standard with signs posted at all intersections. At the time of this review there were only four homes constructed in this development. This entire development is timbered with young fir of approximately 15 – 25 years old. Most of the brush and understory have been removed and the trees have been pruned and thinned in some locations. This community has the appearance of being a Firewise Community.

PRIMARY PROTECTION – Enumclaw Fire Department
(King County Fire Dist 28)
1330 Wells St.
Enumclaw, WA 98022
360.825.5544

HAZARDS –

- There is only one way in and out which is gated.
- Large lots have necessitated long driveways.
- This area is noted for strong east wind events

WATER SUPPLY – There is no community water system available for fire protection. Hyde Lake, near the entrance to the development, is accessible for drafting and/or dipping. There is a good municipal type water system in Cumberland which is supplied by Tacoma City Water.

TACTICAL CONSIDERATIONS – Fire intensity and rate of spread should be low to moderate in this subdivision.

RESOURCE NEEDS - At the time of this writing (2008) the limited number of structures here would require limited numbers of additional resources. Two additional type six engines should be more than enough to protect this area.

PROBABILITY OF SUCCESS – High (90% or better)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, the Serenity subdivision 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 Serenity. The Serenity subdivision has been rated as having a *moderate* (45 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 Serenity. There are several other general recommendations that may help reduce the potential of fire. The general recommendations can be found in Appendix E.

- First and foremost, work with the Palmer Coke and Coal Company and The Bonneville Power Administration to establish an emergency egress route to the west that connects with the Enumclaw-Franklin Road.
- Work with adjoining property owners to establish and maintain a fuels management program.

Serenity 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 Enumclaw. Evacuations from the Serenity area must be coordinated through the Enumclaw Police Department. Enumclaw 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.

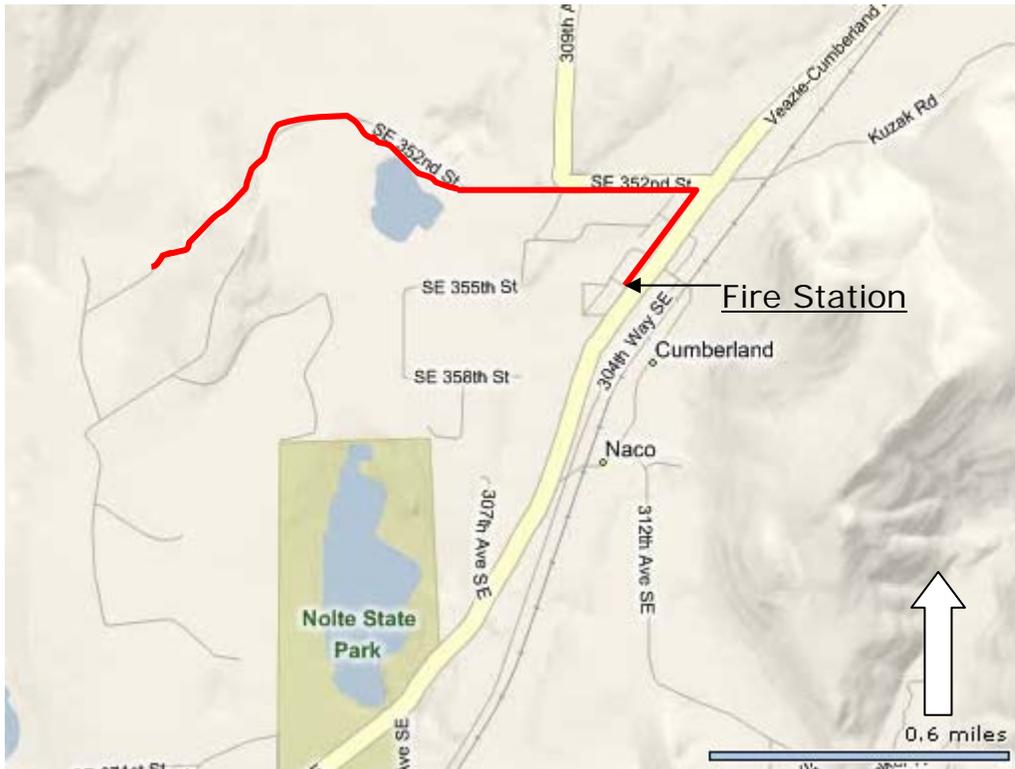
WHEN THE EVACUATION ORDER IS ISSUED

___ Contact the Enumclaw 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

Cumberland Fire Station
35420 Veazie Cumberland Rd
Enumclaw, WA 98022



Gated entrance to Serenity



Open landscape around structures typical in Serenity



Name of area or address receiving assessment
Serenity

	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	22'
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	1	
More than 71 -100 ft of treatment from buildings	3		
30-70 ft of treatment from buildings	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

21

	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	New development
3. Areas of unusually severe fire weather and winds	0 - 5	5	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	0	Hardie plank
Noncombustible siding/ wood deck	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	0	
One underground, one aboveground	3		
All aboveground	5		
Totals for this page		24	
I. Totals for Risk Assessments			
Totals for page 1 and 2		45	
1. Low Hazard: < 39 points			
2. Moderate Hazard: 40-69 points		45	
3. High Hazard: 70-112 points			
4. Extreme Hazard: 113 > points			

WALKER LAKE

Walker Lake street map



Walker Lake overhead



MAPS NOT TO SCALE

STRUCTURE PROTECTION
Walker Lake
Sec 34 R7E T21N

GENERAL – WalkerLake is a mixed use residential community southeast of Cumberland. There are recreational as well as year around occupied structures in this area. In total there are about 25 structures around the lake. The lake has a public boat launch and is used for water activities and fishing. Access to this area is via Walker Lake road SE which is hard surfaced but exceeds 10% grade and is only 18 feet wide. The access road also has several sharp corners in its' 350 – 400 foot elevation gain. East Walker Lake Dr. SE extends around the lake to the north and east where it dead ends on the east side of the lake. At one point this road is only 12 feet wide. Fuels around the lake are dense and many of the homes do not have a defensible space of any kind.

PRIMARY PROTECTION - Enumclaw Fire Department
(King County Fire District 28)
1330 Wells St.
Enumclaw, WA 98022
360.825.5544

HAZARDS –

- LP Gas tanks are common in this area. Some are overgrown and concealed.
- Narrow dead end roads increase the possibility of firefighters being trapped by a fast moving fire.
- This area is subject to east wind events.

WATER SUPPLY – There is no municipal type water system in the area for fire protection. Walker Lake is accessible for dipping. The public boat launch will accommodate drafting by fire apparatus however it is steep and narrow. At the bottom of the hill near the area marked Naco there is a fire hydrant with good flow.

TACTICAL CONSIDERATIONS – Walker Lake is situated at approximately 1200 feet elevation in a natural drainage that promotes accelerated air movement. To the immediate east of the lake is a near vertical west aspect bluff that rises to over 3000 feet. These topographic features may cause exaggerated fire conditions. Any late season or wind driven wildfire in the Walker Lake area must be viewed with the utmost suspicion for its' potential of extreme fire behavior. Immediate evacuation of this area should be a priority during any major fire event. Structural protection around Walker Lake should not be attempted on an individual building basis. A concentrated effort to stop or redirect a fire will prove to be a safer tactic.

RESOURCE NEEDS – Walker Lake is well suited for aerial operations. The use of helicopters may be effective in slowing a fire enough to allow ground forces to establish lines. Much of the terrain is accessible by dozers. An early resource order should include two type 2 helicopters, two dozers, one hand crew and one strike team of wildland engines.

PROBABILITY OF SUCCESS – Fair (55%-65%)

COMMUNITY FIRE RISK ASSESSMENT - Using the NFPA 299 community wildfire hazard assessment methodology, the Walker Lake area 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 Walker Lake. The Walker Lake area has been rated as having an Extreme (117 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 Walker Lake. 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 adjoining property owners to establish and maintain a permanent fuel break around the entire community.
- In conjunction with Hancock Timber Company develop and maintain an emergency means of egress from the area via the Main Line road.
- Establish and maintain a better access point to the lake for drafting.
- Conduct an intensive public education campaign to help the public understand the need for rapid evacuation if ordered.
- Implement a comprehensive Firewise program.

Walker Lake 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 Enumclaw. Evacuations from Walker Lake must be coordinated through the Enumclaw Police Department. Enumclaw 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 Enumclaw 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

Cumberland Fire Station
35420 Veazie Cumberland Rd
Enumclaw, WA 98022



Walker Lake survey house



Fuels on high bank lot



Walker Lake boat launch



Example of narrow road



Wildfire Hazard Severity Form Checklist NFPA

299

This form may be used for individual houses or larger areas like developments or other types of applications.

Name of area or address receiving assessment

Walker Lake

	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	17' wide
3. All-season road condition			
Surfaced, grade < 5%	0		
Surfaced, grade > 5%	2	2	uneven-road greater than 10%
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		
> = 300ft, no turnaround	5	5	
5. Street signs			
Present (4 in. in size and reflectorized)	0	0	Present but not uniform
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	Terrain slightly uneven
Between 10-20%	4		
Between 21-30%	7		
Between 31-40%	8		
Greater than 41%	10		

Totals for this page

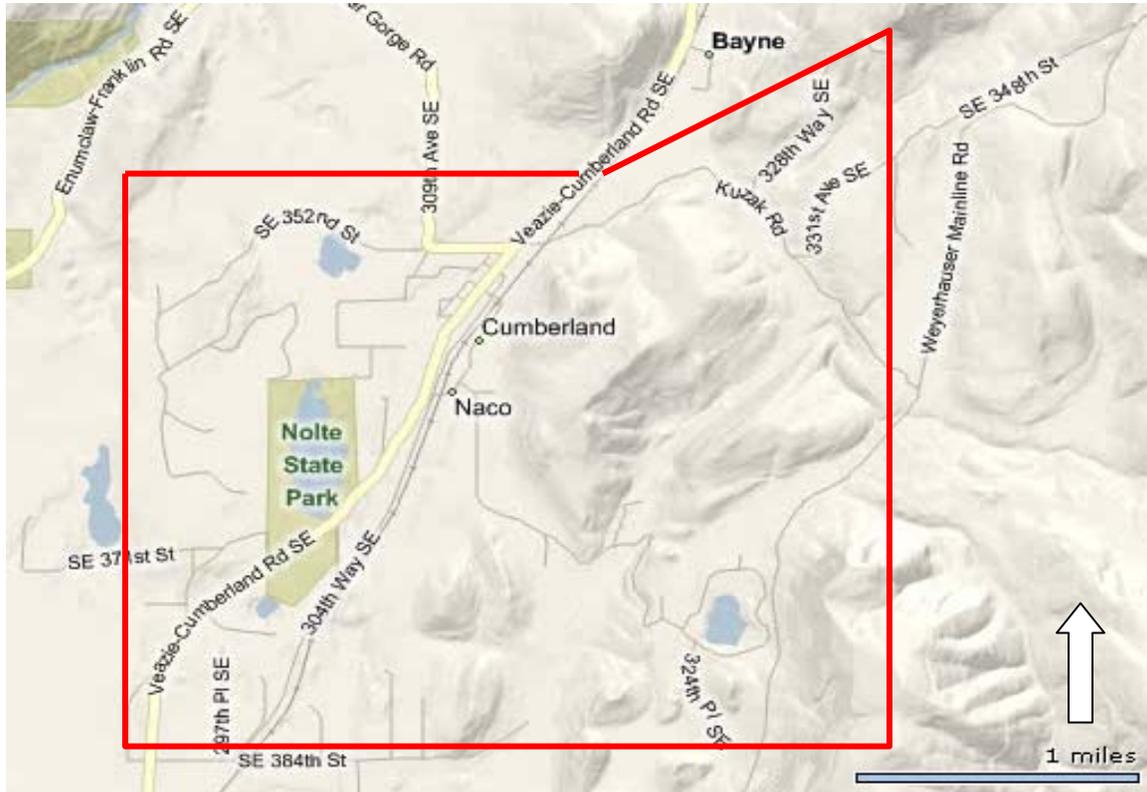
64	
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	Points	House or area	Notes
D. Additional Rating Factors			
1. Topography that adversely affects wildland fire behavior	0 - 5	5	Located in drainage
2. Area with history of higher fire occurrence	0 - 5	2	
3. Areas of unusually severe fire weather and winds	0 - 5	5	Subject to east wind events
4. Separation of adjacent structures	0 - 5	5	Small lots w/ close structures
E. Roofing Materials			
1. Construction material			
Class A roof (metal, tile)	0		
Class B roof (composite)	3	3	Generally comp.
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	1	
Less than 30 feet to slope	5		
Not applicable	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	Closest hydrant 1.5 miles
2. Organized response resources			
Station within 5 miles of structure	1	2	Road grade will delay response
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		53	
I. Totals for Risk Assessments			
Totals for page 1 and 2		117	

1. Low Hazard:	< 39 points		
2. Moderate Hazard:	40-69 points		
3. High Hazard:	70-112 points		
4. Extreme Hazard:	113 > points		117

APPENDIX A

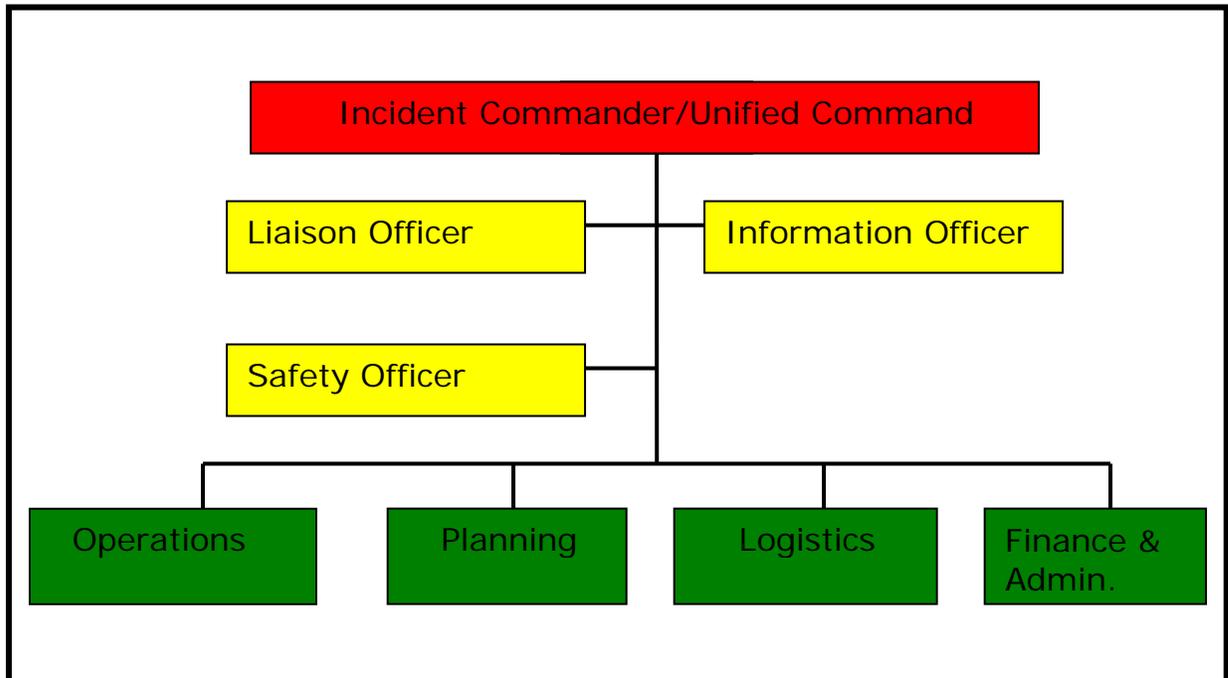
CUMBERLAND AND VICINITY Protection Area



APPENDIX B

APPENDIX C

IMS Chart



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

APPENDIX D

FIRE

Enumclaw Fire & KCFD 28 360.825.5544
1330 Wells St.
Enumclaw, WA 98022

Washington DNR 360.825.1631
950 Farman St
Enumclaw, WA 98022

Dispatch 360.802.7024

Valley (Fire) Communications 253.372.1300
27519 108th Ave. SE
Kent, WA 98030

U.S. Forest Service 360.825.6585
Emunclaw Office
450 Roosevelt Ave.
Enumclaw, WA 98022

LAW

Enumclaw Police Dept. 360.825.3503
1705 Wells St.
Enumclaw, WA 98022

Enumclaw Office of Emergency Mgmt. 360.825.3503
1705 Wells St.
Enumclaw, WA

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

King County Office of Emergency Mgmt. 206.296.3830

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

UTILITIES

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

Enumclaw City Shops 360.825.5541
2041 Railroad St.
Enumclaw, WA 98022

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 25th Ave. South
P.O. Box 3097
Seattle, WA 98114

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

Enumclaw Schools 360.802.7100
2929 McDougall Ave.
Enumclaw, WA 98022

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.