2008
Nanwalek
Community Wildfire Protection Plan

Nanwalek, Alaska

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“House Survivor” - Caribou Hills Fire, Ninilchik, June 19, 2007
Executive Summary

This Nanwalek Community Wildfire Protection Plan (CWPP) is a collaborative effort that has been developed in response to the 2003 Healthy Forests Restoration Act (HFRA), which directs communities at risk of wildfire to develop a risk assessment and mitigation plan.

The spread of the spruce bark beetle in Alaska, and particularly in the Kenai Peninsula, has continued for more than a decade. This infestation, considered the largest in North America, has impacted 1.1 million acres of the Kenai Peninsula Borough (KPB) as of 2004. The resulting spruce tree mortality has created an extreme wildfire hazard and has greatly increased the risk of catastrophic loss of life and property across the region. In 1998, the U.S. Senate Appropriations Committee directed the U.S. Forest Service (USFS) to establish a multi-party task force to prepare an action plan to manage the impacts of the spruce beetle infestations in Alaska and to rehabilitate the infested areas. The Kenai Peninsula Borough was designated as the lead agency for the Spruce Beetle Task Force. In 1998 the Task Force presented its findings, and the Kenai Peninsula Borough formed the Spruce Bark Beetle Mitigation Program (SBB). The mission of the Spruce Bark Beetle Mitigation Program is to help protect the lives and property of the residents of the Kenai Peninsula Borough by identifying and mitigating wildfire and other hazards related to spruce bark beetle-killed spruce and to help restore healthy forests. In accordance with that direction, the Spruce Bark Beetle Mitigation Program facilitated development of this Community Wildfire Protection Plan.

The Healthy Forests Restoration Act, enacted by the United States Congress in January 2003, emphasizes the need for federal agencies to collaborate with communities to reduce the risk of destructive wildland fires threatening those communities. The Healthy Forests Restoration Act recognizes that a successful Community Wildfire Protection Plan is dependent upon involvement of local governments, local fire districts, state entities, and, when applicable, other agencies that administer lands within and surrounding the community area. Through this process, communities have the opportunity to influence where and how federal agencies implement fuel-reduction projects on federal lands, and how federal funds may be distributed for projects on nonfederal lands. The guidelines for Community Wildfire Protection Plans, as set forth in the Healthy Forests Restoration Act, include:

- **Collaboration.** A Community Wildfire Protection Plan should be developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and state agency responsible for forest management, in consultation with interested parties and the federal land management agencies managing land in the vicinity.

- **Prioritized Fuel Reduction.** A Community Wildfire Protection Plan should identify and prioritize areas for hazardous fuel-reduction treatments and recommend the types and methods of treatment on federal and non-federal land that will protect an at-risk community or its essential infrastructure.

- **Structural Ignitability.** A Community Wildfire Protection Plan should recommend measures to reduce the ignitability of structures throughout the at-risk community.
The Healthy Forests Restoration Act emphasizes that priority for federal assistance will be given to communities that have identified treatment areas through development of a Community Wildfire Protection Plan. The Community Wildfire Protection Plan is developed to assist local fire districts, local governmental agencies, and residents with the identification of lands, including federal lands, that pose a severe wildfire threat and with identification of strategies for reducing hazard fuels on those lands while improving forest health, and improving firefighting response capabilities. In compliance with the Healthy Forests Restoration Act, the Community Wildfire Protection Plan compliments agreements among local government, local fire districts, and the state agency responsible for forest management. State, federal, and local agencies may then act and respond to the concerns and issues raised in the Community Wildfire Protection Plan.

The Nanwalek Community Wildfire Protection Plan identifies fuel hazards, values at risk from wildfire, and fire history for the area. Mitigation actions are determined to deal with concerns and action items are prioritized for attention and requests for funding. Aside from any agency actions, site-specific planning and treatment is the responsibility of each landowner or jurisdictional agency and will be aided by this plan, wherever possible. Because this is an ongoing plan, the Core Team of community members and agency advisors will work to carry out the action plan, pursue specified requests for assistance, and revise the plan as action items are accomplished and new priorities emerge.

Subject to available funding and or technical resources, the Spruce Bark Beetle Mitigation Program will continue to assist member communities and fire departments with their individual priorities for wildfire risk-reduction and citizen safety.

Property at Risk from Wildland Fire, Kenai Peninsula, 2007
1.0 Introduction

Alaska’s 10.25-million acre Kenai Peninsula Borough has experienced a regional spruce bark-beetle outbreak that peaked in 1996 and continues to spread to uninfected areas. The outbreak resulted in extensive spruce mortality on approximately 1.1 million acres in the Kenai Peninsula Borough by 2004. The infestation extends beyond the Kenai Peninsula Borough, and over the last two decades an estimated 4 million acres of spruce in south-central Alaska have been affected. While spruce bark-beetle outbreaks are natural events and periodically occur throughout south-central Alaska, the magnitude of spruce mortality during historic episodes was typically much less (20% to 30%) than the current infestation in which mortality rates exceeded 90%.

The 2003 enactment of the Healthy Forests Restoration Act gave an incentive to communities to engage in comprehensive forest planning and prioritization. This community-based forest planning and prioritization lead to the formation of the Kenai Forest, Wildfire Protection, and Fuels Management Coordinating Committee. The committee’s goal was to increase collaboration and coordination on all strategic and project level planning to address the impacts of spruce bark beetle in the Kenai Peninsula Borough. The interagency committee includes representatives from:

- United State Forest Service (USFS); Alaska Region, Chugach National Forest, and State & Private Forestry;
- Alaska Division of Forestry (DOF);
- United States Fish & Wildlife Service (USFWS), Kenai National Wildlife Refuge KNWR);
- USDI Bureau of Land Management (BLM), Anchorage Field Office;
- National Park Service, Kenai Fjords National Park;
- Kenai Peninsula Borough (Kenai Peninsula Borough);
- USDI Bureau of Indian Affairs (BIA).
- Other agencies included on the interagency planning team include Alaska State Parks and Chugachmiut.

In November 2003, the committee met to develop an “All Lands/All Hands” five-year action plan (the Action Plan). The purpose of the Action Plan is to identify and prioritize the full range of work needed to mitigate the impacts of the spruce bark beetle on the Kenai Peninsula. This mitigation work is organized according to the “National Fire Plan (NFP) 10-Year Comprehensive Strategy”. A major finding in the Action Plan is that wildfire potentially threatens approximately 51,000 Kenai Peninsula Borough residents who live in 26,000 residential structures with a cumulative property value of $2.7 billion (all residential, industrial, and commercial infrastructures). Furthermore, 89% of the Kenai Peninsula Borough valuation is located in 15 communities with either an extreme or high wildfire risk rating.
In accordance with the direction of the 2003 Healthy Forests Restoration Act, the Action Plan places a priority on working collaboratively with communities in the Wildland-Urban Interface (WUI) and emphasizes the need for the communities on the Kenai Peninsula to complete Community Wildfire Protection Plans. These Community Wildfire Protection Plans give local community members an opportunity to consider Wildland-Urban Interface boundaries around their community for themselves, identify and prioritize hazard fuel reduction projects, and to recommend measures to reduce the ignitability of structures throughout the at-risk community. Under the guidance of the Coordinating Committee the Spruce Bark Beetle Mitigation Program has taken the lead in facilitating these protection plans for each of the communities.

1.1 Community Wildfire Protection Plans

A Community Wildfire Protection Plan helps a community develop, clarify and refine its priorities for protection of life and property and critical infrastructure in the wildland urban interface. The Community Wildfire Protection Plan brings together diverse local interests with a large base of knowledge to discuss their mutual concerns for public safety, community sustainability and natural resources. It offers a positive, solution-oriented environment in which to address challenges such as: local firefighting capability, the need for defensible space around homes and subdivisions, and where and how to prioritize land management on both federal and non-federal land. A Community Wildfire Protection Plan can be used by Firewise program working groups, individual homeowners, fire departments, fire management personnel in natural resource agencies, and others involved in wildfire planning and mitigation efforts. Guidelines outlined in “Preparing a Community Wildfire Protection Plan: A Handbook for Wildland–Urban Interface Communities” (see References page 31) were utilized to develop this plan.

1.2 Wildland-Urban Interface

The Wildland-Urban Interface is commonly described as the zone where structures and other features of human development meet and intermix with undeveloped wildland or vegetative fuels. Wildland fire within the Wildland-Urban Interface is one of the most dangerous and complicated situations firefighters face. Federal-level fire planning places a priority on working collaboratively with communities in the Wildland-Urban Interface to reduce their risk from large-scale wildfire. Methods of reducing the risk of wildland fire include:

- Reducing the amount of fuels in the interface area;
- Fragmenting or breaking up continuous wildland fuels;
- Informing the public through education and outreach of proper Firewise program practices;
- Involving individual landowners in implementing Firewise techniques on their property;
- Improving fire suppression capabilities and fire response infrastructure;
- Reducing the incidence of human caused fires.

Preventive treatments such as reducing fuel loading, ladder fuels, and hazard trees; planting a fire resistant species mix; and restoring and protecting early succession habitat, provide a good opportunity for long-term planning for fire safety and forest health and are potentially more cost-effective than suppression.
2.0 Planning Process

The Nanwalek Community Wildfire Protection Plan has been developed as an on-going, cooperative process to reduce the risk of wildfire to residents, properties, and infrastructure on federal, state, and private lands in the Nanwalek area. This process helps our communities identify and refine wildland fire hazard priorities and specify actions needed to help safeguard our infrastructure and other community values. This Community Wildfire Protection Plan serves as an active management tool as well as a consolidated community-based guide to wildfire mitigation.

The Community Wildfire Protection Plan was developed utilizing the step-by-step process presented in the Handbook:

Task One: Engage Interested Parties.
Task Two: Convene Decision Makers.
Task Three: Establish a Community Base Map.
Task Four: Develop a Community Wildfire Risk Assessment.
Task Five: Establish Community Priorities and Recommendations (Mitigation Plan).
Task Six: Complete Mitigation and Monitoring Plan.
Task Seven: Finalize the Community Wildfire Protection Plan.

2.1 Public Participation

Land owners in the Nanwalek area were contacted in late Fall 2007 about developing their Community Wildfire Protection Plan to help reduce the fire risk within the community. There was interest by local leaders in the Community to participate in the Community Wildfire Protection Plan process. A four page flyer outlining the schedule of the initial meeting, topics to be discussed and the process of developing the plan was developed in February, 2008 and mailed to all households owning property in the area.

The first community meeting was held in Nanwalek on April 3, 2008. The meeting addressed the Community Wildfire Protection Plan goals and the Community meeting process to complete the plan. The Core Team concept was defined and the attendees agreed to be members in the process. The initial Wildland Urban Interface map and a Community Wildfire Protection Plan area map were presented. Changes and additions to the maps were discussed and were incorporated into the planning process of the Community Wildfire Protection Plan and Wildland-Urban Interface area surrounding Nanwalek.

A Firewise power point slide show entitled “Wildfires on the Kenai” was presented by the plan facilitator to the community. The locally produced presentation identified the Wildland -Urban Interface and the numerous recent wildfires around the Kenai Peninsula. The focus of the presentation was to promote methods of fuel clearing around individual properties. This has proven to be the most effective tool for defending property.
The next meeting for the Core Team was presented on June 13, 2008 at the Community Center. This meeting was attended by the initial members and the hazard/risk assessment for Nanwalek was presented to the group (see 4.0 Community Risk/Hazard Assessment). Discussion focused on the summary points of the assessment, and the Community Values of Risk.

The group then began identifying ideas and projects to help mitigate the identified risks to the community. Some of the projects are new ideas to make the Community safer. Others are a continuation and improvement of existing projects throughout the Community of Nanwalek.
2.2 The Core Team

The Community Wildfire Protection Plan Core includes members of the Nanwalek community who must mutually agree on the plan’s final contents. To achieve the goals of a Community Wildfire Protection Plan and to satisfy Healthy Forest Restoration Act requirements, strong community participation is necessary to provide local knowledge and perspectives. Local agencies, utilities, and government representatives were invited to the planning process. The Alaska Division of Forestry, Division of Parks and Alaska Fire Marshals office were included in correspondence to provide input to the priorities of this Community. All planning meetings were advertised and open to the public.

The Core Team will manage the plan and, with agency assistance, apply for funding to accomplish the identified wildfire mitigation actions. Annual reviews should be conducted by the Core Team to update the body of the Community Wildfire Protection Plan, document actions accomplished, and schedule further projects.

### Nanwalek Community Wildfire Protection Plan Core Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wally Kvasnikoff</td>
<td>Tribal Chief</td>
</tr>
<tr>
<td>David McComack</td>
<td>Village Protection Safety Officer, Fire Chief</td>
</tr>
<tr>
<td>Ephim Moonin</td>
<td>Chugachmiut Firewise</td>
</tr>
<tr>
<td>Alma Moonin</td>
<td>Resident</td>
</tr>
<tr>
<td>George Cook</td>
<td>Resident</td>
</tr>
<tr>
<td>Patti McComack</td>
<td>Resident</td>
</tr>
<tr>
<td>Emilie Swelling</td>
<td>Resident</td>
</tr>
<tr>
<td>Roberta Wilfong, Michael Fastabend</td>
<td>Advisors, Kenai Peninsula Borough, SBB</td>
</tr>
<tr>
<td>Sharon Roesch</td>
<td>Advisor, Alaska DOF, Fire Prevention</td>
</tr>
<tr>
<td>Steve Schreck</td>
<td>Advisor, Alaska Fire Marshals Office</td>
</tr>
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</table>

3.0 Community Background

**Community Description**

Nanwalek is located at the southern tip of the Kenai Peninsula, 10 miles southwest of Seldovia and four miles east of Port Graham. The area encompasses 5.6 sq. miles of land. Winter temperatures range from 14 to 27 degrees. Summer temperatures vary from 45 to 60. Average annual precipitation is 24 inches.

**Population**

Nanwalek is a growing community with a population of 310. The population of the community consists of 93% Alaska Native or part Native. A federally-recognized tribe is located in the community, the Native Village of Nanwalek. Nanwalek is a traditional Alutiiq village. Subsistence activities are a large part of the culture.
Nanwalek Land Ownership

<table>
<thead>
<tr>
<th>Owner</th>
<th>Percent of Total Area</th>
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<tr>
<td>Borough</td>
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<tr>
<td>Federal</td>
<td>6</td>
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<td>Municipal</td>
<td>0</td>
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<tr>
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<tr>
<td>State</td>
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</table>

Structures

There are approximately 65 structures within the Community Wildfire Protection Plan area boundary including residential structures, and village corporation facilities. The Kenai Peninsula Borough School is located in the community and attended by 76 students. Local hospitals or health clinics include Nanwalek Clinic (907-281-2251). Nanwalek is classified as an isolated village, it is found in EMS Region 2F in the Prince William Sound Region. Emergency Services have coastal float plane and air access. Emergency service is provided by volunteers and a health aide. Auxiliary health care is provided by Nanwalek First Responders (Clinic 907-281-2250).

Infrastructure

There are two miles of electrical transmission lines maintained by Homer Electric Association (HEA) and its contractors. There are telephone lines throughout the area but no cell phone coverage. There are 1.9 miles of roads and undedicated access roads and trails throughout the Community Wildfire Protection Plan area.

A state-owned 1,850 foot by 50 foot gravel airstrip sits atop a natural spit which divides the small lagoon from Kachemak Bay/Cook Inlet.

Industry

The Nanwalek School, the Native Association programs, general store and two lodging facilities provide employment in Nanwalek. Seven residents hold commercial fishing permits.
Natural Resource Values

The watershed for the village water system is located above the current village. A system of rivers, lagoon, and lakes provide a healthy run of salmon that migrate past the village each year. Berry picking is also an important source of subsistence activity tied to the local watersheds.

The community drinking water is derived from a surface stream and is treated; a new surface water source is under development. Nanwalek has a piped water and sewer system which serves all homes in the village; most are completely plumbed. The village needs a larger water storage tank, water treatment, new water and sewer mains, new fire hydrants, and a landfill expansion.

Cultural Sites

The village was originally the site of a Russian Trading Post called Alexandrovsk. It was later called "Odinochka," meaning "a person living in solitude." A Russian Orthodox Church was built in the community in 1870. In 1930, a replacement Church was constructed, and it is a designated national historic site. In 1991, locals changed the community name of English Bay to Nanwalek, meaning "place by lagoon." Many of the current residents are of mixed Russian and Sugpiaq (Alutiiq) lineage. Villagers speak Sugtestun, a dialect of Eskimo similar to Yup'ik.

Dumps

There is a non Alaska Department of Environmental Conservation permitted dump operated by the Borough within the Community Wildfire Protection Plan area, with a burn box.

Hazards

There are no identified hazards such as bulk facility fuel tanks. However, most of the residential and structures and commercial lodges transport and use liquid and pressurized gas fuels for heating and cooking. These oil and propane fuel tanks are located adjacent to the structures.

Fire Equipment

There is Project Code Red equipment stored in a shipping container in the middle of Nanwalek. There is no fire department building, current trained volunteers or an organized operating fire service in Nanwalek. The current Village Protection Safety Officer (VPSO) is the acting Fire Chief.

Local Fire Prevention Efforts

At this time no organized fire prevention efforts have been completed. There is a fire curriculum taught during Fire Prevention Week by the Village Protection Safety Officer.
Other Community Values

There are two non-maintained cemeteries located within the Community Wildfire Protection Plan area.

3.1 The Community Wildfire Protection Plan Area

The Community Wildland Protection Area for Nanwalek includes 5.6 square miles of land surrounding the Nanwalek area. Most of the lands are located south and west of the village. Nanwalek has several large projects in various stages of development including a new docking area 4 miles southwest of town. A subdivision is being planned south of the village along the river and lakes. Native select allotments stretch 5 miles from the village and the CWPP includes these parcels of land.

Nanwalek Acreages by Wildland Fuel Hazard Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Acres</th>
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<tr>
<td>Extreme</td>
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<td>High</td>
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<tr>
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<td>220</td>
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<tr>
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<td>*3,600</td>
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*The values have been rounded down to nearest 10 acres.

3.2 Community Wildland Urban Interface

Wildland-Urban Interface

The Wildland-Urban Interface is commonly described as the zone where structures and other features of human development meet and intermix with undeveloped wildland or vegetative fuels. As more people inhabit the Wildland-Urban Interface, the threat to structures and private property from wildfire increases. Wildland fire within the Wildland-Urban Interface is one of the most dangerous and complicated situations firefighters face and wildland firefighting agencies and local fire departments cannot always adequately protect the growing number of structures in the Wildland-Urban Interface. It is therefore critical that landowners assume responsibility for developing their properties to reduce the risk posed by wildland fires. Federal-level fire planning places a priority on working collaboratively with communities in the Wildland-Urban Interface to reduce their risk from large-scale wildfire.

The Healthy Forests Restoration Act (HFRA) defines the location of Wildland-Urban Interface boundaries as those areas within or adjacent to an at-risk community. The Nanwalek Wildland Urban Interface was established by drawing a half-mile radius from the center point of each occupied parcel. As Nanwalek continues to grow, the wildland urban interface should be amended by the Core team to include these areas.
Map 1: Nanwalek Community Wildfire Protection Plan and Wildland-Urban Interface Defined Area
**Wildland Fuel Hazard and Fire Risk Legend**

**Extreme Risk – Red:** This fuel type is typified by recent beetle killed white spruce forest with a grass under story. These extreme fire hazard conditions were observed when the spruce bark beetle epidemic first occurred around Kachemak Bay and spruce trees omitted thick pitch and the needles of the tree dried in the dying process. After spruce needles dropped, an increase of light penetrated the forest canopy and a thick grass mat replaced the brush under story in the forest. Black spruce forests are also an extreme fuel hazard fire risk.

**High Risk – Orange:** This fuel type is typified by a mature live and decaying dead spruce mix in the forest. The dead forest of the ocean regime surrounding Kachemak Bay is now over 10 years and high relative humidity and fuel moisture contents cause the dead forest to decay and fall in the strong seasonal winds.

**Moderate Risk – Yellow:** This fuel type is typified by a mature live white spruce and hardwood forest, or decaying white spruce forest and a brush under story. A typical brush under story includes live plants such as willow, devils club and berry bushes. These plants often grow amidst a mossy tundra component.

**Low Risk – Dark Green:** This fuel type is typified by a mature Sitka spruce forest or a mature hardwood forest with a brush under story. A typical brush under story includes live plants such as willow, devils club and berry bushes. These plants often grow amidst a mossy tundra component. This fuel type also includes the alder forest, which maintains high moisture contents.

**Very Low Risk – Light Green:** This fuel type is found along river corridors and includes moist brush fuels. It is also typical in higher elevations and is represented by thick moss alpine tundra. This fuel type typically grows above all tree areas and leads into the highest of rock and ice. Alpine tundra can burn actively on its surface during drought conditions with strong winds.

**No Risk – Gray:** Water, rock and ice.
4.0 Community Wildfire Risk and Hazard Assessment

The development of a Community Wildfire Protection Plan requires the analysis of the wildfire hazard that threatens the people, property, and environment within the defined Community Wildfire Protection Plan area. The risk and hazard assessment was adopted by the Alaska Interagency Wildfire Coordinating Group (November 2005) and is the foundation for planning strategies, planning and preparedness activities, response capabilities, and recovery and restoration.

4.1 Values at Risk

<table>
<thead>
<tr>
<th>Wildland Fuel Hazard Rating</th>
<th>Nanwalek Total Property Values</th>
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<tr>
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<td>0</td>
<td>$0</td>
</tr>
<tr>
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<td>$0</td>
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<tr>
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<td>$0</td>
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<td>Total</td>
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<thead>
<tr>
<th>Wildland Fuel Hazard Rating</th>
<th>Nanwalek Institutional Property Values</th>
<th>Property Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0</td>
<td>$0</td>
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<tr>
<td>Moderate</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>$0</td>
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<tr>
<td>Very Low</td>
<td>6</td>
<td>$3,967,000</td>
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<tr>
<td>No Risk</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>$3,967,000</td>
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4.2 Wildfire Fuels and Fire History

Forest Fuels

The spruce bark beetle outbreak of the 1990’s caused massive mortality of mature white/Lutz and Sitka spruce from Fox River to Jakolof Bay. Environmental conditions and change in tree type (from white/Lutz spruce to Sitka spruce) dramatically decreased spruce bark beetle activity from Jakolof Bay to Seldovia. Very little spruce bark beetle activity has occurred from Seldovia to Port Graham and Nanwalek. At this time the greatest threat of increased future spruce bark beetle activity in the area from Jakolof to Port Graham will result from poor land management practices that creates spruce bark beetle breeding sites (freshly felled trees or large diameter slash).

Wildland Fire Season and Climate Change

The fire season on the Kenai Peninsula typically occurs from April to September, with the greatest fire activity occurring between May and June, when live fuel moisture is dry from the winter freeze, and high-pressure weather systems bring higher temperatures and lower humidity conditions.

The rate of spread for wildland fire is based on fuels, weather and topography. The fuels on the Kenai Peninsula are mostly in transition from thick, green forests to decaying dead spruce. Spruce forests, whether live or dead, are both flammable and provide radiant heat and ember spot fires that advance a fire through air convection. Nanwalek still maintains old growth Sitka spruce forests with brush and alder underground. There are small pockets of grass, however once the under story grass component greens by early summer, wildland fire spread has moderated.

Ecological changes in recent decades noted around the world support the fact that the current earth’s climate is warming. This global warming trend is having impacts, both subtle and substantial, on the ecology of the Kenai Peninsula and the Arctic in general. The ice is retreating throughout the Kenai Peninsula. The glaciers above Lakes Tustumena, Skilak and the shrinking Harding Ice field are noticeable examples.

The fire potential on the Kenai Peninsula has been influenced by recent global warming. Climate and fire data confirm that fire season length and fire severity have increased with the recent ambient temperature increases. Another outcome of the warmer climate trend is the arrival of earlier than normal “snow-free” dates. This translates to an earlier spring fire season.

Firewise

Wildland firefighting agencies and local fire departments cannot always adequately protect the growing number of structures in the Wildland-Urban Interface. It is therefore critical that landowners assume responsibility for developing their properties to reduce the risk posed by wildland fires. The expanding Wildland-Urban Interface on the Kenai Peninsula, recent weather patterns, and the severity of the beetle-kill problem, reinforce the importance of following wildland fire safety principles such as the Firewise program.
The following are actions that owners can take to greatly reduce the chances of fire burning their structures:

- Use non-combustible construction materials to the extent possible, most importantly, non-combustible roofing material.
- Screen or enclose openings into structures and under porches and decks.
- Develop a **defensible space** around the structure that is a least 30 feet wide, use fire-resistant plant material for landscaping.
- Remove flammable materials from on and around the structure. If the structure is built on a slope, the defensible space must be greater on the down slope side of the house corresponding to the steepness of the slope.
- Thin spruce trees and remove lower limbs within 100 feet of structures.
- Install firebreaks, such as pathways, lawns, and gardens to break up the continuity of fuels within the 100-foot zone.
- Improve driveway for access and egress for personal vehicles and fire trucks.

**Structure Ignitions**

The main principle to understand about structure ignitability is that the structure is a source of fuel and may burn just as readily as dead spruce trees and the wild grasses. Structure loss to wildland fire can occur by conduction (including airborne firebrands), convection, or radiant heat. Convection ignites fuel sources above the flaming front, and radiant heat ignitions occur when the structure becomes hot enough to combust without direct flame contact. Firebrands are embers or burning pieces of limbs, leaves, or twigs that a blown onto a structure. Firebrands may lodge in crevices of roofs, eaves, or side paneling and smolder for several hours before causing combustion. Firebrands ride on air currents resulting from the fire and may be carried over several hundred feet to a mile from the fire front.

Fire spread occurs by a propagating process, not as a moving mass such as floodwater. For fire to spread, materials such as a tree or shrub in the flame front must meet the conditions of ignitability. The conditions are the presence of oxygen, flammable fuel, and heat. Oxygen in a wildland fire situation is ever-present. Heat is supplied by the flame front. Wildland fuel in the path of the flame that meets the condition of combustion will ignite. If fuel does not meet the condition of combustion, it will not ignite. This explains why some trees, vegetation, or structures may survive a wildland fire and others in the near vicinity are completely burned.

Critical factors that increase the chances of structure loss are flammable roofing materials (e.g., cedar shingles), and flammable materials (ornamental trees, shrubs, debris/wood piles, fuel tanks, and residential barbeques) near the structure. A wildland fire does not burn a structure unless it meets fuel and heat requirements sufficient for ignition and continued combustion. With this understanding of fire behavior, the flammability of the structure and its immediate surrounding can be managed to reduce the chances of ignition and loss during a fire incident. The ultimate responsibility for structure protection during wildland fire lies with the structure owner.
“Tracey Avenue Fire”, April 30, 2005, Fritz Creek, Alaska
5,000 acre spring grass and timber fire, south slope of Bald Mountain.
HISTORICAL FIRES SOUTH OF KACHEMAK BAY 1995 to 2007

<table>
<thead>
<tr>
<th>YEAR</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>CAUSE</th>
<th>LAND STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Nanwalek</td>
<td>.1 acre</td>
<td>Structure</td>
<td>Private</td>
</tr>
<tr>
<td></td>
<td>Tutka Bay</td>
<td>.1 acre</td>
<td>Campfire</td>
<td>State</td>
</tr>
<tr>
<td></td>
<td>Anisim Point</td>
<td>.1 acre</td>
<td>Structure</td>
<td>Private</td>
</tr>
<tr>
<td>2007</td>
<td>No Fires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>No Fires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>No Fires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Petersen Bay</td>
<td>1 acre</td>
<td>land clearing</td>
<td>Private</td>
</tr>
<tr>
<td>2004</td>
<td>Nanwalek</td>
<td>1 acre</td>
<td>land clearing</td>
<td>Private</td>
</tr>
<tr>
<td>2003</td>
<td>No Fires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Bear Cove</td>
<td>2 acres</td>
<td>land clearing</td>
<td>Private</td>
</tr>
<tr>
<td>2002</td>
<td>Bear Island</td>
<td>1 acre</td>
<td>land clearing</td>
<td>Private</td>
</tr>
<tr>
<td>2001</td>
<td>No fires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Little Tutka</td>
<td>.1 acre</td>
<td>Campfire</td>
<td>State MHL</td>
</tr>
<tr>
<td>2000</td>
<td>Peterson Bay</td>
<td>.1 acre</td>
<td>Power line</td>
<td>Private</td>
</tr>
<tr>
<td>1999</td>
<td>No fires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Nanwalek</td>
<td>5 acres</td>
<td>Land clearing</td>
<td>Private</td>
</tr>
<tr>
<td>1998</td>
<td>Peterson Bay</td>
<td>.1 acre</td>
<td>Power line</td>
<td>Private</td>
</tr>
<tr>
<td>1997</td>
<td>Petersen Bay</td>
<td>.5 acre</td>
<td>Campfire</td>
<td>Native</td>
</tr>
<tr>
<td>1997</td>
<td>Yukon Island</td>
<td>.1 acre</td>
<td>Campfire</td>
<td>FWS</td>
</tr>
<tr>
<td>1997</td>
<td>Sadie Cove</td>
<td>.1 acre</td>
<td>Campfire</td>
<td>State Park</td>
</tr>
<tr>
<td>1996</td>
<td>Nanwalek</td>
<td>.1 acre</td>
<td>Land clearing</td>
<td>Private</td>
</tr>
<tr>
<td>1996</td>
<td>Nanwalek</td>
<td>.1 acre</td>
<td>Campfire</td>
<td>City</td>
</tr>
<tr>
<td>1996</td>
<td>Tutka Bay</td>
<td>.1 acre</td>
<td>Campfire</td>
<td>State Park</td>
</tr>
<tr>
<td>1995</td>
<td>Nanwalek</td>
<td>.5 acre</td>
<td>Children</td>
<td>Private</td>
</tr>
<tr>
<td>1995</td>
<td>Peterson Bay</td>
<td>.1 acre</td>
<td>Power line</td>
<td>State Park</td>
</tr>
</tbody>
</table>

This table is compiled by the Alaska Division of Forestry in Soldotna and includes all reported wildland forest fires in the South Kachemak Bay area lands that are adjacent to Nanwalek. Historical records are important data to help communities plan for their mitigation projects, understanding the fire cause in their areas.

4.3 Risk and Hazard Analysis

The Community Wildfire Protection Plan process assists communities in developing an appropriate and desired wildfire protection plan that addresses elements of community protection. Three steps are addressed in the process for developing the Community Wildfire Protection Plan framework for action: 1) the risk and hazard assessment, 2) mitigation plan, and 3) monitoring. This is the first step, the risk and hazard assessment.
“Risk is a concept that denotes a potential negative impact to some characteristic of value that may arise from a future event.”

“A hazard is a situation which poses a level of threat to life, health, property or environment. Most hazards are dormant or potential, with only a theoretical risk of harm, however, once a hazard becomes 'active', it can create an emergency situation. (Source: Wikipedia)

The “Alaska Interagency Community Wildfire Protection Plan Guide” was utilized to assess the threat of wildfire to the Nanwalek community. The guide was developed in November 2005 from a working group of wildland fire officials throughout the state of Alaska.

The risk and hazard analysis measures five areas of criteria of fire protection of communities. The criteria includes: 1) Lands inside the Wildland-Urban Interface, 2) Lands outside the Wildland-Urban Interface, 3) Natural barriers surrounding a community, 4) Existing fire protection resources, and 5) Firewise standards throughout the community.

These five assessments are categorized into a low, fair or excellent rating. They were made on a qualitative basis by professional wildland fire consultants. These findings of risk and hazard assessment are listed below.

(1) Inside the Wildland Urban Interface:

The rating area includes lands within one-half mile of the community in all directions. The rating is based on the history/likelihood of a wildland fire in the area, its escapement and difficulty to control. The rating is also based on the availability of wildland fire hazard fuels (see Community Base Map).

The Nanwalek area is surrounded by wildland fuels in the moderate to low fire hazard classification. The fuels are Sitka spruce, alder, and brush. The Nanwalek Wildland-Urban Interface also has no past history of an escaped wildland fire. Temperatures are mild in the summer and seldom exceed 70 degrees. Because of its location next to water, there is high relative humidity in the Nanwalek area.

Based on these current fuel conditions, past fire history, and weather regime, there is a Low risk to wildland fire inside the Nanwalek.

| The Nanwalek wildland fire risk for lands Inside the Wildland Urban Interface area is Low |
(2) Outside the Wildland Urban Interface:

The rating area is outside the Nanwalek Wildland Urban Interface and includes all lands of the Community Wildfire Protection Plan. The rating is based on the history/likelihood of a wildland fire in the area, its escapement and difficulty to control. The rating is also based on the availability of wildland fire hazard fuels. Similar wildland fuels as mentioned above are currently present outside of the Nanwalek area. Also, areas of terrain, like rock and ice pose no threat outside the community. Based on the local fire history, weather regime, and forest fuel conditions a Low rating is assigned.

The Nanwalek wildland fire risk for adjacent lands Outside the Wildland Urban Interface area is Low

(3) Man-made and Natural Barriers around the Community:

Alaska communities are located in a variety of geographical conditions. Some are situated along river corridors, others on uplands, and along coastal areas. Surrounding many of these communities are barriers. Barriers are zones that would help restrict large fire movement from coming into the community. Barriers may be water, natural or manmade. A natural barrier may be a topographic feature, vegetation change, or bare ground. An example of a manmade barrier would be a road or an airstrip.

Nanwalek is protected on the west and north by Kachemak Bay. The east side of the village is backed by dense stands of Sitka spruce. The south side is exposed to wildland fuel vegetation that leads to a future planned subdivision.

The Overall Barrier Rating for the Nanwalek Community Wildfire Protection Plan area is Fair.

(4) Fire Protection Resources

At this time, there is no trained and active volunteer fire department and limited resources present for fire response in the Nanwalek Community Wildfire Protection Plan area. Also, fresh water supply available to fight a fire from the city of Nanwalek current water system is minimal. The ocean could be accessed as a continuous water supply in an emergency.
Wildland and structure fire equipment is provided by the Alaska State Fire Marshals’ Project Code Red program. This consists of a compressed air foam system, portable pumps and wildland fire tools. Secondary resource for wildland firefighting is a State Forestry crew based in Homer, which could respond by local hire helicopter or marine vessels. Soldotna State Forestry has a dedicated helitack crew and ship based in Soldotna during May through July. An Air Attack retardant aircraft provided by State Forestry is based in Palmer, though during high fire danger can be pre-positioned in Kenai. Additional resources (Smoke Jumpers, Hot Shot Crews, etc.) would be coordinated and dispatched through the Alaska Fire Service-Bureau of Land Management (BLM) based in Fairbanks.

| The Fire Protection Rating for the Nanwalek Community Wildfire Protection Plan area is Poor |

(5) Firewise Ratings

The Alaska Firewise standards rate properties in five general categories. These include fire resistant landscaping, fire resistant home construction materials, adequate water supply to fight a fire, access for firefighting resources to the property and adequate clearance around the structure from flammables, refuse, and debris.

Using the Firewise Home Rating Chart, a cursory Firewise rating was performed on properties throughout the Plan area. Though there has not been an organized community program to support Firewise, many of the properties have a baseline of defensible space clearance of 30 feet around structures. This is necessary action to keep the dying spruce trees from falling on top of homes. Continued assessment and clearing fire prone vegetation to the standard around all structures should be utilized.

Most homes in the Nanwalek area are not fire resistant according to Firewise construction standards. These products include cement board siding, fire resistant decking, and metal roofs are more expensive in initial cost. Fire resistant building methods such as skirting houses and decks are wise standards to keep fire from coming underneath a house. Vents above the rafters or into attics can also invite sparks from the outside of homes during a wildland fire.

There is a water hydrant system in the village of Nanwalek, however the water supply to the system is limited and often dries up at summers end. The construction of ponds that capture water runoff is a good source to improve water supply to fight a fire. Most of the properties are situated near the ocean and could use sea water to fight a fire, provided there are working pumps, hose and hardware at each location.

Access for responding fire resources to help in an emergency is a challenge for Plan area properties that rely on maritime transportation access. With large tidal swings, most properties are inaccessible twice daily during low tide. The area is not connected by an infrastructure of accessible roads.
There is a fair practice of keeping flammable material away from structures. Oil and propane tanks are the most common heating fuels, and should be placed in an area away from direct contact and piped into structures. Flammable refuse and firewood should be stacked away from structures.

The Community Firewise Overall Rating for the Nanwalek Community Wildfire Protection Plan area is Poor.

4.4 Nanwalek Risk and Hazard summary

The values at risk in the Community of Nanwalek are primarily residential dwellings, public buildings, and all watersheds that provide runoff drinking water for individual properties. The infrastructure values that are at risk consists of power/phone lines and docks.

Overall fire danger for most of the year is low due to the vegetation types and maritime climate. Much of the larger fuels are fire resistant due to the high relative humidity near the ocean. Alders, willow and brush are the dominant non-timber wildland fuels. These fuels have a high degree of moisture that resists fire.

Most homes are built near the ocean, which increase the barrier protection from wildfire.

There is currently a lack of trained and organized fire response organization in the village. There is equipment purchased through grants available to fight a fire. The fire chief has some fire training. An expanded fire department building similar to the neighboring village of Port Graham should be considered if the community continues to expand. This would effectively house vehicles that could respond to wildland and structure fires. There has never been a wildland fire that has escaped initial attack in the area.

Firewise standards for the area are rated moderate, with access, water supply and landscaping around the structures being in the middle range. Fire resistant construction, the storage offlammables near structures, and an inconsistent water supply lower the Firewise ratings.

Overall Assessment Rating of Risk and Hazards in Nanwalek

<table>
<thead>
<tr>
<th>Risk and Hazard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) wildland fire inside community</td>
<td>Low Risk</td>
</tr>
<tr>
<td>2) wildland fire outside community</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Barriers</td>
<td>Fair</td>
</tr>
<tr>
<td>Fire Protection</td>
<td>Poor</td>
</tr>
<tr>
<td>Community Firewise Rating</td>
<td>Poor</td>
</tr>
</tbody>
</table>
5.0 Community Wildfire Mitigation and Monitoring Plan

Suggestions and comments regarding Nanwalek community priorities and how to reduce the wildfire risk to communities were obtained from participants after review of the public risk and hazard assessment. The Community decided upon broad goals to address their fire risk. Increased fire prevention, fuels reduction around the Wildland-Urban Interface and improved fire suppression preparedness are broad goals of the Nanwalek Community.

To achieve these goals, there are specific objectives listed within the Mitigation Plan and recommended actions required to achieve those objectives. The Mitigation Plan also prioritizes, assigns timelines, and lists the responsible party required to achieve the objectives.

Weather conditions sufficient for wildfire are variable and ever changing. However, citizens have some control over the amount of fuel that accumulates in the Wildland-Urban Interface and improvements to defensible space around their values at risk. Continued hazard fuel reduction and fuels management can be used in the Nanwalek area to reduce the amount of woody debris surrounding values at risk.

Any plan for reduction of hazardous wildland fuels must address the need to maintain the fire-resistant status of the area. As trees are removed, lands should be treated to encourage regeneration of a healthy forest and to discourage blue joint grass as the predominant vegetation type. Scarification after harvest may provide a seedbed for new trees, or tree planting can be utilized. Prescribed fire may be used in the form of burn piles during winter months to dispose of woody debris. In addition to fuels management, human-caused ignitions can be reduced through public education and outreach efforts. Human-caused fires may be reduced by increasing public awareness through education of children and parents in the school.

In consideration of all the information gathered through community meetings and interviews, the Nanwalek Community Wildfire Protection Plan planning process has identified five broad primary objectives for their Community Wildfire Protection Plan: 1) Increased fire response capability, 2) Education, 3) Public safety, 4) Fuel reduction and 5) Ignition source management. These objectives and the recommended actions are listed below.
5.1 Wildfire Mitigation Objectives and Recommended Actions:

Increased Response Capacity

- Procure a small air compressor to effectively fight fires with compressed air foam and Nanwalek’s limited water supply. This will also allow more fire training within the community.
- Procure an additional 20’ shipping container to house additional fire equipment.
- Inventory all homes and provide working smoke detectors and fire extinguishers.
- Order additional wildland fire equipment (pumpkins, bladder-bags, hose, and hardware) to fight wildland fire effectively.
- Provide wildland and structure fire refresher training for the community...

Education

- Provide an annual wildland fire prevention school curriculum for all students.
- Increase the public education awareness through Firewise mailings.

Public Safety

- Reposition water lines to cover the new housing structures in the village.
- Support the village water improvement project slated for 2009. The supply is inadequate to fight a wildland or structure fire.
- Sign a mutual aid agreement with all South Kachemak Community Wildfire Protection Plan communities to respond when fire or disaster assistance is requested.

Fuel Reduction

- Conduct Firewise surveys and list priorities around the infrastructure and private homes, for annual Firewise projects. Support the continuation of Firewise defensible space funding and local project work through Chugachmiut.

The final Community Wildfire Protection Plan meeting in late August 2008 engaged the Core Team to prioritize a list of Community Mitigation actions. The projects identified to be carried out are then assigned roles and responsibilities by the core team. These roles and responsibilities are explained in each action. They describe how the action will be delegated, as well as time frames for those accomplishments.

The funding guidelines explain the specifics of how the projects and activities will be funded within or outside the Community.
### Community Action Priorities

<table>
<thead>
<tr>
<th>Priority</th>
<th>Nanwalek Action Priorities</th>
<th>Roles and Responsibility</th>
<th>Funding Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Order additional wildland fire equipment (pumpkins, bladder-bags, hose, and hardware) to increase the Plan area fire response capacity.</td>
<td>David McComack, 281-2274 will apply with the VFA grant. Also will order the fire equipment. 2009</td>
<td>$5,000 Forestry VFA grant through DOF Soldotna. Wally Kvasnikoff will work to secure housing for the equipment to qualify for the 10% match.</td>
</tr>
<tr>
<td>2</td>
<td>Procure a small air compressor to effectively fight fires with compressed air foam and Nanwalek’s limited water supply. This will also allow more fire training within the community.</td>
<td>VPSO David McComack 2008/9</td>
<td>$3500 for compressor. Funding sources in the past have not been successful.</td>
</tr>
<tr>
<td>3</td>
<td>Support the village water improvement project slated for 2009. The supply is inadequate to fight a wildland or structure fire.</td>
<td>Nanwalek council member Jerry Demas is organizing the project funding with ANTHC. 2009</td>
<td>Grant is in process.</td>
</tr>
<tr>
<td>4</td>
<td>Conduct Firewise surveys and list priorities for annual work projects around Nanwalek’s infrastructure and WUI.</td>
<td>Ephim Moonin will prioritize Firewise projects within the community. 2008. <a href="mailto:ehmoonin@gci.net">ehmoonin@gci.net</a></td>
<td>Chugachmiut is requested to apply for Firewise Grants for Defensible Space work inside Nanwalek village.</td>
</tr>
<tr>
<td>5</td>
<td>Provide an annual wildland fire prevention school curriculum for students to teach each other.</td>
<td>VPSO David McComack will acquire materials and teach curriculum. 2009</td>
<td>DOF Prevention</td>
</tr>
</tbody>
</table>

### Future Recommended Action Projects

1. Inventory all homes and provide working smoke detectors and fire extinguishers.
2. Reposition water lines to cover the new housing structures in the village.
3. Sign a mutual aid response cooperative agreement with South Kachemak Community Wildfire Protection Plan communities to respond when fire or disaster assistance is requested.
5.3 Monitoring Plan

The Core Team members, along with any key community participants, should reconvene in the spring and fall to update the fire plan each year. The Monitoring meeting will assess and update the previous years recommended actions. These meetings will review the identified projects, status of completion, and make any editions or provide additional solutions to complete the past years’ recommended actions. The monitoring plan meeting should also identify prioritize future projects, assign roles and responsibilities, funding guidelines and schedule dates for the next planning meeting to continue the process.
6.0 Community Wildfire Protection Plan Agency Resources

**Alaska Division of Forestry**

**Fire Prevention**
Sharon RoeSch, Division of Forestry. 260-4260
Fire Wise Program - The Kenai Peninsula has a local Firewise web site, (www.firewisekp.com). This group provided homeowners with home visits to assess Firewise ratings for property on the Kenai Peninsula. As more people inhabit the wildland-urban interface, the threat to structures and private property from wildfire increases. Firewise is a national-level initiative designed to educate and instruct local homeowners, community leaders, planners, and developers. These efforts lessen the threat of wildfires through individual and cooperative mitigation techniques and education. The national Firewise website (www.firewise.org) contains information to assist property owners in defending their property against wildfires and in reducing the staggering impact and cost of severe wildland fires. Other state and local websites provide additional fire safety information.

**Stewardship Forestry:** Al Peterson 260-4214, Lois Betini, 235-7841

**Wildland Urban Interface Grants**
The Wildland-Urban Interface Grants provide fuel reduction assistance for hazard tree removal and forest thinning for landowners with a taxed structure on their property. Wildland Urban Interface Grants provide private landowners a cost share for forestry projects.

**Fire Management:** Tom Marok, 260-4220

**Volunteer Fire Assistance/Rural Fire Assistance Grants**
An annual State and Federal program to assist rural volunteer fire departments. Grants can be used to purchase fire fighting related equipment. A 10% in-kind match is required from communities. Applications are due in March. (www.forestry.alaska.gov/pdfs/08VFARFARRPApplication.pdf)

**Federal Excess Personal Property**
The Division of Forestry provides fire departments with used vehicles, water tanks and hose reels from military surplus.

**Kenai Peninsula Borough**

**Spruce Bark Beetle Mitigation Program:** Roberta Wilfong, Program Manager, 714-2430
The mission of the Spruce Bark Beetle Mitigation Program is to help protect the lives and property of the residents of the Kenai Peninsula Borough by identifying and mitigating wildfire and other hazards related to spruce bark beetle-killed spruce, and to replant forests impacted by the spruce bark beetle.

**Office of Emergency Management:** Scott Walden, Coordinator, 262-2097
Management, Planning, and Logistical support for Kenai Peninsula emergencies.

**Community Emergency Response Team:** Glenda Landua, Program Coordinator, 262-2098.
CERT offers volunteer training for local communities at risk from wildfire, flooding, high winds, blizzard, extreme cold, volcanic activity, earthquake and tsunami. Community Emergency Response Teams goal is to support and utilize preparedness in each community and residential area of the Kenai Peninsula.
State of Alaska Fire Marshal Office

Division of Fire & Life Safety, Division of Training and Education: Steve Schreck, 745-5413
The mission of the Division of Fire and Life Safety is to prevent the loss of life and property from fire and explosion. Programs handled from the Training and Education bureau include: Registration, accreditation, testing, certification and technical assistance.
Project Code Red: Project code red is a fire equipment and training program sponsored by the Alaska Village Initiatives. Rural fire departments can apply for grant funding to purchase a fire fighting foam unit on a trailer pulled by an “all terrain vehicle”. It equips five firefighters with tools, needs no engines or electric motors, and can deliver 600 gallons of eco-safe fire fighting foam. The unit easily accesses boardwalks and trails and ships in a container that doubles as an insulated/heated firehouse. The neighboring communities of Nanwalek, Port Graham and Nanwalek are Project Code Red communities.

U. S. Department of Agriculture - USDA

Natural Resource Conservation Service: Homer NRCS, Mark Kinney/Craig Sanders,235-8177
The Natural Resource Conservation Service provides programs for landowners who are interested in improving habitat and erosion control on their property. The Environmental Quality Incentives Program offers financial and technical assistance to eligible participants to install conservation practices. Defensible space and pond construction are two types of programs that may qualify under Environmental Quality Incentives Program.
7.0 Review and Support of the Nanwalek Community Wildfire Protection Plan

The following community representatives/agencies have reviewed this Community Wildfire Protection Plan and support the efforts of this community to reduce wildfire threats, increase wildfire preparedness, and further wildfire education.

Wally Kvasnikoff
Nanwalek Tribal Chief

Scott Walden, Director
Office of Emergency Management
Kenai Peninsula Borough

Ric Plate, Area Forester
Division of Forestry
Alaska Department of Natural Resources
Abbreviations and Acronyms

ADNR  Alaska Department of Natural Resources
ANTHC  Alaska Native Tribes Health Council
BLM  Bureau of Land Management
CERT  Community Emergency Response Team
CWPP  Community Wildfire Protection Plan
DNR  Alaska Department of Natural Resources
DOF  Division of Forestry
EMS  Emergency Management System
EQUIP  Environmental Quality Incentives Program
GIS  Geographic Information System
HFRA  Healthy Forests Restoration Act
KPB  Kenai Peninsula Borough
NRCS  National Resource Conservation Service
NFP  National Fire Plan
OEM  Office of Emergency Management
PSA  Public Service Announcement
SBBMP  Spruce Bark Beetle Mitigation Program
USFS  United States Forest Service
USDA  United States Department of Agriculture
WUI  Wildland Urban Interface
References

Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities:


Alaska Interagency Community Wildfire Protection Guide:

http://fire.ak.blm.gov/administration/awfcg.php