

State of Alaska
Department of Natural Resources
Division of Forestry
Coastal Region
Kenai / Kodiak Area

**Forest Land Use Plan, Preliminary Decision
Knob Hill /Firewood Area SC-3235 K
December 2009**



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I. INTRODUCTION

A. Purpose

The purpose of this document is to provide sufficient information to reviewers to ensure that the best interest of the state will be served by the Department of Natural Resources, Division of Forestry, Kenai-Kodiak Area offering for an estimated 300 MBF or approximately 600 cords of spruce. Approximately 40 acres of timber will be available for harvest, within an 80-acre parcel managed by the Alaska Department of Transportation. The Division of Forestry may offer a portion of the timber from this tract for a small commercial timber sale while at the same time offering the most accessible timber for a personal-use firewood area. Timber harvest in this proposal is on a state parcel identified in the Kenai Area Plan as a material extraction site. If material extraction occurs over the entire parcel, within the seven years of the proposed harvest, then reforestation per 11 AAC 95.375 will not apply. The intent of timber harvest in this proposal is therefore to salvage it before it is otherwise removed in order to extract gravel. Gravel extraction has recently started, resulting in at least three acres of timber cleared for the gravel pit.

B. Objectives

1. The primary objective of salvaging timber in this tract is to provide firewood to the public by establishing a personal use firewood area, with the option to provide commercial firewood vendors with timber.
2. To minimize potential wildfire intensity by removing dead timber—a source of large fire fuel.
3. To follow DNR's constitutional mandate to encourage the development of the state's renewable resources, making these resources available for maximum use consistent with the public interest. Additionally, this proposal helps meet the Division's statutory responsibility to provide "...sound forest practices necessary to ensure the continuous growing and harvesting of commercial forest species on ...state land'.

The public is invited to comment on any aspect of this proposed timber sale with regards to the AS 38.05.035 decision. Comments should be mailed to Division of Forestry, 42499 Sterling Highway, Soldotna, Alaska 99669. Comments must be received at the Division of Forestry no later than January 22, 2010 in order to be considered in the final decision of whether the sale will be held in whole or in part.

C. Alaska Coastal Management Program (ACMP) Consistency

One purpose of this document is to provide sufficient information to ACMP reviewers and other reviewers to evaluate whether this project is consistent with the ACMP. DNR believes the activity described in this FLUP is consistent with the ACMP. See Section VI for DNR's consistency analysis.

Pursuant to AS 46.40.096(c), the Division of Forestry is requesting consistency review comments from state resource agencies, affected coastal districts, and other interested parties. Your comments, particularly on the proposed timber sale's consistency with the affected local coastal district management program, are requested. To be considered, written comments must be submitted to the Area Forester, Alaska Division of Forestry, 42499 Sterling Highway, Soldotna, AK, 99669 on or before January 22, 2010. Comments regarding the inconsistency with the affected coastal district's enforceable policies or a state standard must identify the enforceable policy or standard and explain how the timber sale is inconsistent. The Director will make a final ACMP Consistency Determination for the sale prior to his final decision regarding the harvest area.

D. Five-Year Sale Schedule

This proposed harvest area is currently listed in the Five-Year Schedule of Timber Sales (FYSTS) for Calendar Years 2009-2013.

E. Location

The legal description of this proposed action is as follows: Section 31 Township 4 South, Range 13 West, Seward Meridian. This sale is within the Kenai Peninsula Borough District Coastal Management Plan. The nearest Regional Native Corporation is The Cook Inlet Region, Inc., (CIRI). Nikolaevsk is the nearest community, and is located approximately 4.7 miles, by road, northwest of the sale; Anchor Point is located approximately 12 miles west of the sale area. Most of the land ownerships surrounding the sale area are private. This sale can be located on the United States Geological Survey 1:63,360 Quadrangle map titled Seldovia D-5.

F. Title, Classification and Other Active or Pending Interests

The state received patent to these lands on or before June 3, 1963. The proposed timber salvage area is located within Unit 336 of the Kenai Area Plan. Its specific land management designation is material extraction for road construction and maintenance. Unit 336 is approximately 80 acres and is managed by the state Department of Transportation through an Interagency Land Management Agreement with the Bureau of Land Management in 1969. The Alaska Department of Transportation expressed no opposition to timber harvest in this area, (High, 2009).

G. Planning Framework

The decision to offer the Knob Hill Firewood area will be based on a long series of planning decisions, made with public and agency input every step of the way. This document, the Forest Land Use Plan (FLUP) for the firewood area, is one of the final steps in this long planning process. The planning for where timber harvest is appropriate, and where it is not appropriate, is done at a much broader scale than the FLUP. The framework for how management decisions are made for firewood areas on the Kenai Peninsula is as follows:

1. Area plans, management plans, and land use plans (in this case, the *Kenai Area Plan*) determine where timber harvesting is allowed.
2. The Forest Resources and Practices Act and Regulations, and the Alaska Forest Management Statutes & Regulations determine how timber will be managed within areas where harvesting is allowed by the area plan.
3. The Five-Year Schedule of Timber Sales proposes when timber sales will be offered, and approximately where and how big each sale will be.
4. Next, a Forest Land Use Plan is written for each individual sale, which contains more detailed decisions about each sale.

The Kenai Area Plan is the broad-scale analyses of the types of land uses appropriate on different areas of state land on the Kenai Peninsula. The Kenai Area Plan covers approximately 2.1 million acres. The area plan process entails the State reviewing resource information and public concerns prior to making long-range decisions about public land management. The planning processes determined how the complete range of uses would be accommodated in the proposed sale area, including opportunities for forestry, as well as protecting fish and wildlife habitat, opportunities for recreation, and the whole range of other uses. The decision to allow timber harvest in the area is based on the Kenai Area Plan's designation for this particular area allowing timber harvest.

Next, the Division of Forestry prepares a Five-Year Schedule of Timber Sales (FYSTS) every other year. As planning progresses forestry activities are further shaped by the guidelines and recommendations developed from the Commissioner's panel on timber harvesting on the Kenai that was implemented in 1994 in response to public perception of the timber sales being proposed at the time of the initial beetle outbreak on the Kenai. The FYSTS gives the public, timber industry, and other agencies an overview of the division's plans for timber sales. They summarize information on proposed timber harvest areas, timber sale access, and reforestation plans. Five-Year Schedules are subject to public and agency review. The review helps identify issues that must be addressed in detailed timber sale planning. After review and revision, DNR uses the schedules to decide how and where to proceed with timber sale planning.

The notice was posted in all Kenai/Kodiak post offices and on the State of Alaska Public Notice and the DOF web sites. The notice was also sent to agencies, Kenai/Kodiak community councils, tribal councils, Native corporations, planning commissions, Legislative offices, conservation groups, small mill operators, timber industry representatives, and private citizens. These public comments were used to identify issues that would be addressed in the Forest Land Use Plans.

Finally, the Forest Land Use Plan (FLUP) is prepared. All forestry activities are designed with by the Forest Practices Act and Regulations in mind which specifies best management practices to maintain soil and water quality. The FLUP presents detailed information on the location, access, harvest methods, duration, and proposed reforestation for each sale. The public is asked to comment at this stage, as well. By getting the best available data, combined with a series of public processes that helps us gather information from the public and other agencies, we make well-informed decisions about uses of resources on state land.

II. LEGAL AUTHORITY

The Division is taking this action under the authority of AS 38.05.035(e) (Best Interest Finding); AS 38.05.110-120; 11 AAC 71 (Timber Sale Statutes and Regulations); AS 41.17.010-.950 and 11 AAC 95 (Forest Resources and Practices Statutes and Regulations); and AS 46.39 and 46.40 and 11 AAC 110, 112, and 114 (Alaska Coastal Management Statutes and Regulations).

III. ADMINISTRATIVE RECORD

The DOF files its timber sale documents by timber sale name and number. The Knob Hill Timber Sale file is labeled SC-3235K.

IV. DESCRIPTION OF SALE AREA

A. Physical characteristics of the sale area

Topography and Soils

This proposed sale is situated within a geographical area that is characterized by flat to gently rolling glacial outwash terrain. It is approximately 300 feet above sea level and local relief averages no more than 5-7 percent in slope.

The dry areas of the sale area are dominated by mature white/Lutz spruce, often mixed with paper birch and occasionally aspen. Willow fringes often occur in the transitional zone between dry forested uplands and wet riparian or muskeg sites.

Water Bodies

A tributary of the Anchor River flows south of the sale area approximately 620 feet from the nearest trees planned for harvest. There is no reason or intent to cross this stream as part of timber harvest or access. Consequently, there are no anticipated impacts of timber harvest to this stream.

Stand Conditions

The stand composition within the sale area is approximately 95 percent Lutz Spruce (*Picea X lutzii* Little) and the remaining percentage birch and balsam poplar. On the Kenai Peninsula, there are natural hybrids between white spruce and Sitka spruce (*Picea glauca X sitchensis*); they are referred to as Lutz spruce (*Picea X lutzii* Little). Researchers believe that this hybridization occurs at varying degrees with some trees showing strong white spruce characteristics, while others will show strong Sitka spruce characteristics. These stands are relatively productive for the Kenai Peninsula with a site index of 60 Feet in 100 years. Larger spruce were estimated during field sampling to be over 150 years old. Most of the largest, dominant spruce have fallen. Approximately 90 percent of the spruce over 12 inches in diameter at breast height are dead. Most of the larger spruce still standing appear to be producing ample cone crops. Over 50 percent of the live spruce are less than eight inches DBH. Concentrations of pole-sized spruce are scattered throughout the sale area. Birch regeneration has been heavily browsed by moose. Nonetheless, there may be enough mature birch left after harvest to provide a seed source to perpetuate birch regeneration if there is adequate soil disturbance. Soil disturbance from scarification is likewise essential for spruce seed germination, especially on sites with heavy grass competition.

At least eighty percent of spruce 9 inches DBH and greater are dead from spruce beetles.

There are a number of successional pathways that may occur. Natural spruce regeneration occurs when there is an adequate supply of viable seed and an appropriate seedbed (INFEST #9). Often what has occurred in unmanaged stands is a significant influx of grass and a lack of an appropriate seedbed for tree regeneration. Due to the degree of spruce mortality, the amount of viable local seed is questionable.

Wildfire and Fuels Mitigation

Of the three main factors affecting fire behavior (fuel, weather, and topography), fuel is the only component over which some measure of management may be exerted. Extensive fuel management is the only option for mitigating potential losses (Beaver 1997).

The spruce beetle infestation during the 1990's resulted in the most significant ecological impact of any natural agent of change in Alaska (USDA 1996). Spruce beetles are greatly influenced the composition of forests by killing most spruce trees over 6 inches in diameter. In forest stands composed almost entirely of spruce, the effects to the forest structure caused by the bark beetle epidemic were dramatic. The almost total loss of mature seed bearing trees over large landscapes will have very long term and profound affects on spruce production on the Kenai Peninsula.

Over time, decaying spruce fall over, often into each other forming concentrated piles of jack-strawed trees. This provides a means for surface fires to accelerate the transition to crown fires in the remaining canopy. The heavy concentration of fuel will be available for combustion for many years.

The spread of fire is greatly enhanced in beetle-killed spruce. The amount of dead and dry fine material, such as Old Mans Beard lichen, that is contained in standing dead trees aids spot fire

occurrence. Dead material down wind of a fire creates a condition where hot embers initiate new fire starts with much greater frequency when compared to green live forests (personal observation W. Wahrenbrock, DOF).

Another factor affecting the fire risk of forests is the probability of ignition. Probability of ignition is an expression of how easily a fire will ignite. Dead spruce with low moisture content will ignite far more readily than green spruce. Lightning has historically been an infrequent cause of fire ignition on the Kenai Peninsula (See 1998). However, wildland fire research scientists have stated that the potential for lightning fire ignitions is higher in expanses of snags versus live trees (Alexander and Stocks 1997).

Increased fuel loading on the ground surface will extend the fire problem in fuel types that are known to be of short season duration. Specifically, grass that evolves with increased exposure to sunlight usually only creates fire control problems during the early summer season before "green-up". The addition of large woody material from downed beetle killed trees will create fuel conditions that will support fire occurrence throughout the summer season. These fuel types have been observed to burn with high intensity. Fires in this fuel type burn 20 times faster and 6 times more intensely than the fuel type associated with healthy white spruce stands, particularly in the spring and early fall (See, 1997). Fires in downed spruce trees in grass fuels exhibit a high resistance to control by firefighters. This downed timber impedes access into a fire area by firefighters and will severely limit the use of tactical ground forces such as engines, dozers and hand crews. Even when suppressing fires during moderate environmental conditions, placing crews in this type of fuel poses a significant personal safety risk should winds begin to rapidly increase, change direction, or if sudden slope changes are encountered (J. Winters, personal observations, 1999 – 2007).

The advent of large landscapes of dead trees has also created a condition where fires will burn at high intensity but may not produce seedbeds that are receptive to forest regeneration. Several early season fires such as the Pot Hole Lake, Hidden Creek, and Crooked Creek fires, which resulted in suppression costs of \$6.6 million dollars, demonstrate this problem.

B. Wildlife habitat

The effects of the harvest activity will vary depending on species. Wildlife species that prefer mature and over-mature spruce stands will either be displaced or decline in numbers. Species that prefer the grass-forb successional stage will likely increase in abundance (DF&G 1994). Possible effects of the proposed timber harvest on several wildlife species are outlined below.

Bears

For black bear, the proposed firewood area includes areas with potential late summer and early fall berry crops. It is doubtful that winter denning sites exist on the block due to its proximity to residential development. No denning sites were identified during field reviews.

The brown bear population on the Kenai is presently estimated to range between 250-300 bears (Schwartz, et al. 1999). Since 1999, there has been no census for brown bears taken on the Kenai. There appears to be a healthy viable population (Selinger, 2008). The highest densities of brown bears are in the forested lowlands and sub-alpine areas west of the Kenai Mountains. There is presently no indication of a decreasing population (DF&G 2000). The population numbers were probably at an all-time low in the 1920's due to the tendency of locals to shoot most bears on sight

(Shuster, USFS, personal communication 1997) and the population had been poisoned in the early part of this century (Jacobs 1989). Their distribution often overlaps that of black bears (DF&G 1994). They generally frequent remote, higher elevation, sub-alpine and alpine habitats more often than black bears (DF&G 1994). No denning sites were identified within the proposed firewood area during field reconnaissance. Additionally, the proposed sale does not occur within the elevation range commonly chosen for den sites by brown bears (Jacobs 1989). Again, due to the proximity of the firewood area to human development, the area is not expected to be utilized frequently by brown bears.

There will not likely be sufficient roads constructed in this area to cause impacts to bears. Roads associated with the timber harvest may cause behavioral changes with the bear population. Although evidence suggests that road avoidance behavior and habitat loss leads to changes in wildlife productivity and survivorship, there is little data currently available to support this hypothesis (Frederick 1991). To be of major concern to wildlife managers, behavioral responses to disturbance must have demonstrable demographic consequences. Demographic responses do not necessarily follow, even from significant behavioral responses to changes of the habitat (McLellan and Shackleton 1988). Significantly, the demographic response by brown bears on the Kenai Peninsula has been an increase in the population. Since the 1950's the brown bear population on the peninsula has increased to a current estimated population of 300 (Schwartz, DF&G 1997, personal communication). This is despite a human population increase on the Kenai Peninsula from 9,053 in 1960 to 53,409 in 2008 (US Census Bureau, 2009).

Several researchers suggest that grizzly bears habituate to open roads by shifting to a more nocturnal activity pattern. Darkness may serve as cover, allowing bears to use roads and adjacent habitats and cross open areas where they are vulnerable to human harassment and hunting mortality. To use areas within 100 meters (approximately 328 feet) of roads within their home range, bears have often done so under the cover of darkness by being nocturnal in their travel and feeding patterns (Frederick 1991). This travel period may be shorter in Alaska due to the state's latitude. However, numerous studies, including at least one in Alaska (Olson, et al 1998) have shown that brown bears will use highly disturbed areas by being nocturnal, while bears in undisturbed areas tend to be more crepuscular (active during twilight)(Frederick 1991). Some studies have shown that bears within cover and some yearlings did not change position when vehicles approached. It has also been noted that sows with cubs and yearling juveniles more frequently used habitats near roads than other bears. These areas may have been relatively secure because potentially aggressive adult males avoided them (McLellan and Shackleton 1988). Several researchers reported that adult bears in open sites usually retreated to cover when a vehicle approached within 300 meters (984 feet). However, researchers McLellan and Shackleton found that bears fled even further when approached by people on foot; in 5 of 9 cases when bears in remote areas were approached by humans, bears fled for distances greater than 1 km (0.6 miles), or out of the immediate drainage (Frederick 1991). This illustrates that bears find vehicular traffic less threatening than people on foot.

The primary impact of harvesting may be on the home range of resident bears. However, research suggests that home ranges for brown bears can cover tens to hundreds of square miles and because of this variability, the concept of home range size is not very useful (DF&G 2000). Use of salmon spawning streams are clearly important for brown bears during the summer and fall. The nearest salmon habitat is the North Fork of the Anchor River, approximately two miles to the north.

The availability of security cover is considered important in how brown bears are influenced by human activities. Brown bears are at least twice as likely to be displaced from open areas where they can see or be seen by humans (Suring 1998). The portion of the sale area adjacent to muskegs will have a 100-foot-wide no-harvest buffer. However, the harvested portion of the timber block will provide little cover for bears until the regeneration reaches an adequate height.

Moose

Within the boreal forest, moose are generally more closely associated with forest cover in summer than in winter. This may reflect a preference for forage that is higher quality as a result of delayed plant development or different plant characteristics. Cows may prefer to calve and bed their newborns on forested knolls or other vegetated high points from which predators are more easily detected. These features may also present varied escape routes that require minimal energy expenditure by calves (Collins 1995).

The increasing amount of deadfall and debris on the forest floor could limit access to preferred foraging areas and limit mobility during critical times of the year for moose (DF&G 1994). DF&G (2003) notes that increasing deadfall over time will make moose travel through these areas more difficult. Wellner (1978) suggests that downed material from beetle infestations will prevent access to forage and browse by big game species and that the seriousness of the problem is associated with the quantity of trees killed per unit of land. Slash depths of 1 to 2.3 feet reduced forage production and hindered access for many wildlife species (Bartels 1985). Lyon & Jensen (1980) reported that deer and elk show an approximately 50% reduction in pellet groups in Montana forests where dead and down timber reached or exceeded 0.5 m (approximately 20") in depth. The problem with downed timber can persist for long periods of time.

While biologists recognize the importance of overstory disturbance in the boreal forest in terms of enhanced production of moose browse, recommendations for the size and shape of the forest openings vary greatly from 5 acres to a square mile or more. Generally, the most important reported relationship between size/shape of created openings and their utilization by moose is related to seeding distance and establishment of important species (Collins 1995). While birch is not a significant component of the existing stand, we have seen several similar areas on the southern peninsula where birch has contributed to the regeneration of the harvest sites and do contribute to browse production.

Cover is more important in summer conditions; moose have an efficient way of keeping warm in severe weather but are less efficient in moderating the effects of high summer temperatures that can cause them to overheat (INFEST #6). The buffers along the muskeg will provide some cover, but the harvested areas will not provide shading and calving areas.

Other Furbearers

River otters, like mink, prefer aquatic and streamside habitats. Timber will be retained along any streamside areas within the sale.

Lynx occur throughout the general area. Lynx will use early successional habitats resulting from timber cutting, but require proximity to mature mixed forests (DF&G 1994).

As the spruce forest on the peninsula dies, red squirrel populations will decline as squirrels move to nearby lower quality, marginal habitats where food may be available (DF&G 1994). Cover habitat for squirrels also declines after the first two years as trees lose their needles. The absence of conifers makes the squirrels more susceptible to predation from raptors and larger mammals (USFS 1994). It takes at least 30-50 years after spruce has been reestablished before the area will provide quality red squirrel habitat (USFS 1994).

Similarly, the proposed prescription for harvest will reduce squirrel numbers, but populations will likely remain intact, though at lower densities than prior to timber harvest (DF&G 1994). Ground cover and security from raptors will likely increase with the reforestation practices that are being incorporated. By ensuring quick reforestation after harvest, quality habitat conditions for red squirrels should be achieved in a much shorter time than in the unmanaged beetle killed forest.

Birds

Spruce grouse are also affected by the loss of spruce trees to the spruce beetle primarily through the loss of winter feeding habitat (DF&G 1994). Gradual loss of escape and thermal cover habitat will also occur as the spruce trees lose their needles and eventually fall over (DF&G 1994). The decreased winter food supplies (loss of spruce needles and buds) may displace grouse into areas of lower quality habitat that could increase nutritional stress, and lead to increased mortality (DF&G 1994). Predators associated with grouse, such as owls and goshawks, can be expected to show a response to the increased vulnerability of individual birds displaced by the infestation (USFS 1994). In large-scale infestation areas increased amounts of deadfall, grass, and other debris will impede grouse reproductive displays and reduce summer feeding habitat (DF&G 1994). The end result of no treatment of these dying stands will be a decline in local spruce grouse populations (USFS 1994).

Harvest operations will have similar effects. The loss of canopy will result in increased mortality from predation because of more visible nests and loss of protection from inclement weather (DF&G 1994). Leave areas will help to offset this loss to the extent that they are useful. Scarification, where feasible, and quick reforestation efforts will help to create more suitable habitat conditions in a shorter period of time than if left in an unmanaged condition.

The spruce bark beetle infestation has increased the number of snags and downed woody material, likely benefiting cavity-nesting birds such as woodpeckers, some owls, brown creepers, nuthatches, and chickadees (DF&G 1994). Most snags are beetle-killed spruce. However, mature hardwood stands that contain some hardwood snags offer the most cavities. This is due to the morphological differences between spruce and hardwoods. Living spruce seldom has soft heartwood preferred by cavity nesters. Spruce that die usually falls to the ground within 10 years, which is the time it takes for the heartwood to soften. The larger diameter birch, aspen, and cottonwood trees are more important than spruce for cavity nesters, however, there is very few birch within the timber block and no aspen or cottonwood trees. Spruce snags of 3-4 per acre will be retained for wildlife use. After the beetle outbreak subsides, woodpeckers will still benefit from the large numbers of secondary insects (*cerambycids*, ants, other *scolytids*) present, but this food abundance should only last 2 to 3 years (Schmid and Frye, 1977). The feeding value of these insects for woodpeckers will decrease because they are generally fewer in number and less accessible (they feed in deeper recesses in the wood). After these insects decline, the bird population is also expected to decline because of a lack of food. As the needles and bark fall off dead trees over time, these populations will also decline because of the reduction in available food and cover (DF&G, 1994).

The potential effects from a timber harvest on cavity-nesting and other non-game birds will be the shortage of suitable nesting trees, which could result in lower numbers of birds. The conversion of sites to early successional stages could result in a shift in bird species composition to favor birds that prefer grass, shrub/forb, and sapling habitats (DF&G 1994).

Fish Habitat

Timber harvest in this area is not expected to adversely impact fish habitat. There is an unnamed tributary of the South Fork of the Anchor River approximately 620 feet southeast of the harvest area.

The North Fork of the Anchor River flows approximately 915 feet north of the harvest area; this stream is identified under the Department of Fish & Game Anadromous Fish Habitat as 244-10-10010-2011. To date, the Department of Fish & Game found no discrepancies with the locations or identities of these streams as depicted on the map (DF&G, 2009).

C. Human Activity and Social Considerations

Hunting

Hunting within the proposed firewood cutting area appears to be primarily by local residents, and is not reported to be an exceptional hunting area. Due to the relatively small size of the harvest area, changes in hunting pressure are not likely to be noticed.

Subsistence

The subject area has not been designated as a subsistence zone. Under current state law, subsistence harvest opportunities within the sale area have been incorporated in general hunting and fishing regulations (DF&G 10/23/94). There are the following possible subsistence uses in the area: trapping, hunting and gathering of berries. The effects of the spruce beetle infestation and the proposed timber harvest on wildlife species of interest to both trapping and hunting are detailed above in the two wildlife sections. Most of the *Vaccinium* species prefer open forest conditions, which would tend to indicate that the berry crops might do well as the stands open up. However, Holsten, et al. (1995) indicated that on untreated beetle killed sites, lowbush cranberry decreased in number and on burned sites it doubled. It is anticipated that the berry crop will not be significantly affected by the proposed treatment.

Recreation

There is probably some recreational use by local residents. The harvest is not anticipated to significantly disrupt historical uses. There are no established motorized or non-motorized trails within the sale area. The area may be used for moose hunting in the fall, but there was no evidence of any established camps or recreational use sites. This area is not known to have unique tourism values. At this time, there are no commercial recreation operations that use this area.

Scenic resources

Due to the relatively flat topography, the distance from the Sterling Highway, and the surrounding forest on private land, this sale will not likely be noticeable and will be likely eclipsed by activity associated with the sand and gravel extraction.

This sale will be visible from aircraft, snowmobiles, and ATVs. Residents and visitors to Alaska consistently rated forest vistas damaged by spruce beetles lower in scenic beauty, and the more tree mortality present the lower the perceived scenic beauty. Both residents and visitors cite loss of scenic

values as an important effect of beetle damage. Visitors consistently report sightseeing as a dominant activity, and indicate views seen as a major factor affecting the quality of their visit to Alaska. Respondents of a USFS study consistently preferred preventative thinning treatments to a no-treatment scenario. For forested areas already severely impacted by spruce beetle, respondents preferred the visual conditions produced by rehabilitation strategies that resulted in more rapid regeneration of forest cover. From a list of proposed actions including a no action alternative, respondents continued to prefer actions which would include cutting and removing dead trees, even if selling them would only recover part of the costs (Daniel et. al. 1991). Cutting and removing the dead trees was also chosen over the possibility of burning a site for forest regeneration. Similar results were obtained in other studies within the U.S. (Orland, 1997 and Orland et. al. 1993).

Cultural resources

The Office of History and Archaeology and the State Historic Preservation Office (SHPO) reviews each Five-Year Schedule of Timber Sales and each Forest Land Use Plan for possible impacts to cultural resources. This Forest Land Use Plan will be distributed to the SHPO for review. To date, there does not appear to be any cultural sites within the proposed sale area, according to SHPO, (Krauthofer, 2009). During the course of activities associated with this firewood area, cultural and/or paleontological resources may be inadvertently discovered. If such a site is discovered, the Division of Forestry will protect the site and contact the SHPO.

Under the Alaska Historic Preservation Act (41.35.200), all burials on state land are protected. If burials or human remains are found, all land-altering activities that would disturb the burial or remains shall cease and measures will be taken to protect it in place. The Office of History and Archaeology and a law enforcement officer will be notified immediately to ensure that proper procedures for dealing with human remains are followed.

D. Sustained yield and allowable cut

Timber harvest is being proposed from a site identified for material extraction, which preempts reforestation. Therefore, requirements of The Alaska Forest Resources and Practices Act [AS 41.17.060 (c)] and Article VIII Sec. 4 of the State Constitution would not apply.

E. Silviculture and Timber Harvest

Gravel mining is expected to occur in this area for the next several years, followed by surface reclamation as required by law. Once mining has ensued, the land is being converted, and reforestation requirements of the Alaska Forest Resources and Practices Act will not apply. As part of the land reclamation after gravel mining, the Alaska Department of Transportation has expressed interest in covering gravel pits with topsoil, (High, C. 2009). This would enable future reforestation.

The intent of providing dead timber for firewood is a means of salvaging usable timber before the land is cleared for gravel mining. All dead spruce—standing or down—will be available for harvest per the personal use firewood permits issued.

F. Transportation

The firewood area is located approximately nine miles east of Anchor Point. Knob Hill Road extends east from the North Fork Road. The firewood area is approximately 1.5 miles east of the Knob Hill/North Fork junction. Any roads constructed for timber harvest will require approval by the Division of Forestry.

G. Erosion

The prevailing terrain in the harvest area is flat to gently rolling less than ten percent grade. Consequently, erosion and slope failure associated with steeper terrain is unlikely.

H. Mining

Other than on-going gravel extraction by DOT, there is no other mining in the area. Timber harvest should not effect the gravel extraction activity, if anything it should make it more efficient.

I. Materials

The harvest area is within a state parcel designated under the Kenai Area Plan for material (gravel) extraction. The Alaska Department of Transportation (DOT) stated that timber harvest would not interfere with material extraction. Since the August 2009, approximately two acres has been mined for gravel.

J. Economics

Providing timber to the public for needed firewood is an efficient utilization of material that would otherwise be potentially lost during land clearing associated with gravel mining. Given that most of the stand is dead, firewood is a good use for this wood. It has little if any value for other commercial uses at this time or in the future.

V. MARKET CONDITIONS

There is currently a viable firewood market on the Kenai Peninsula, with several commercial vendors that sell firewood at prices ranging from \$150 to \$200 per cord delivered. The DOF has been able to sell all of the commercial firewood sales that it has marketed within ½ mile of existing roads in the past two years. Demand increased significantly last year with the corresponding increase in heating fuel.

Based on contacts from the public seeking firewood, there appears to be a significant portion of the population that is either unable to afford commercial firewood, or prefer to harvest it themselves. Access for personal firewood has been an obstacle for non-commercial firewood cutters during the warmer weather. This proposed site will provide accessible firewood with limited development costs.

VI. ALTERNATIVE ACTIONS

There are four possible alternatives to consider for this harvest area. A discussion of each of the four alternatives follows:

- 1. To continue timber harvest as proposed.** This alternative meets the objectives of the Five-Year Schedule of Timber Sales and one of DNR's mandates to make the state's renewable resources available for public use.
- 2. To modify the timber harvest by making them smaller or larger.** This site is intended to be large enough to provide as much firewood to the public as is available within the State ownership, as well as providing firewood for a small commercial harvest. Increasing the size of the harvest unit will eliminate the surrounding no-harvest buffers which are intended to provide visual cover for wildlife. Decreasing the size of the harvest area will reduce the supply of firewood and leave more timber be lost as the result of gravel mining.
- 3. Defer timber harvest to a later date.** Deferring harvest to a later date may result in timber lost to land clearing associated with mining gravel. The opportunity for the public and commercial operators to have timber from this site will be lost.

4. Not offer this timber for sale. This alternative would result in not meeting any of the objectives outlined for this management action. Utilization of the forest resource would not be achieved. This alternative would delay the management objectives planned for the area, would deny the public a source of firewood.

VII. ACMP CONSISTENCY ANALYSIS

This area is within the Kenai Peninsula Borough District Coastal Program. There are no known natural hazard areas, or areas of historic or archaeological importance within the proposed sale area. There is no coastal development occurring in the area and the proposed sale will not inhibit coastal access to the public. No energy facility, utility route, or utility facility exists or will be developed as a result of this action. No sand or gravel will be extracted from coastal waters, intertidal areas, barrier islands, or spits. The area has not been identified as a subsistence area under 11 AAC 114.250(g) and any subsistence use is thought to be minimal. Therefore, the sale does not conflict with the standards on coastal development, natural hazard areas, coastal access, energy facilities, utility routes and facilities, sand and gravel extraction, subsistence, and historic, prehistoric and archeological sites.

Road construction and timber harvesting activities will adhere to the Forest Resources and Practices Regulations (FRPA), meeting timber harvest and processing standards.

This offering is consistent with the ACMP habitat standards because 11 AAC 95.185(g) preempts the habitat standards enacted under 11 AAC 112 and 11 AAC 114, and the proposed action has been designed to be consistent with the Forest Practices.

The laws and regulations regarding timber harvest and the quality of air, land, and water administered by the Department of Environmental Conservation will apply ensuring consistency.

VIII. PRELIMINARY FINDING AND DECISION

The purpose of this decision is to determine if the Department of Natural Resources, Division of Forestry, will make available timber located in Section 31, Township 4 S, Range 13 W in the Seward Meridian. After due consideration of all pertinent information and alternatives, the DNR has reached the following **Preliminary Decision: To offer the sale as proposed in Alternative 1**. In addition, the DNR finds that this preliminary decision satisfies the objectives as stated in this document and it is in the best interest of the state to proceed with this action. This decision also contains the DNR's consistency analysis. The DNR believes this action is consistent with the Alaska Coastal Management Program.

If you have any questions, please contact Hans Rinke of the Kenai/Kodiak Area Office at (907) 260-4210 or e-mail hans.rinke@alaska.gov.



Hans Rinke
Area Forester

12-16-09

Date

Abbreviations

ADFG:	Alaska Department of Fish and Game
BMPs:	Best Management Practices
DBH:	diameter at breast height
DEC:	Department of Environmental Conservation
DLP:	Defense of Life and Property
DNR:	Department of Natural Resources
DOF:	Division of Forestry
FF:	Final Finding (Forest Land Use Plan)
FLUP:	Forest Land Use Plan
FRPA:	Alaska Forest Resources and Practices Act
FYSTS:	Five Year Schedule of Timber Sales
KAP:	Kenai Area Plan
ORV:	off-road vehicle
PD:	Preliminary Decision (Forest Land Use Plan)
SHPO:	State Historic Preservation Office

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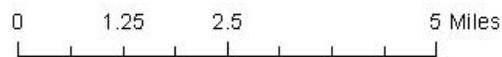
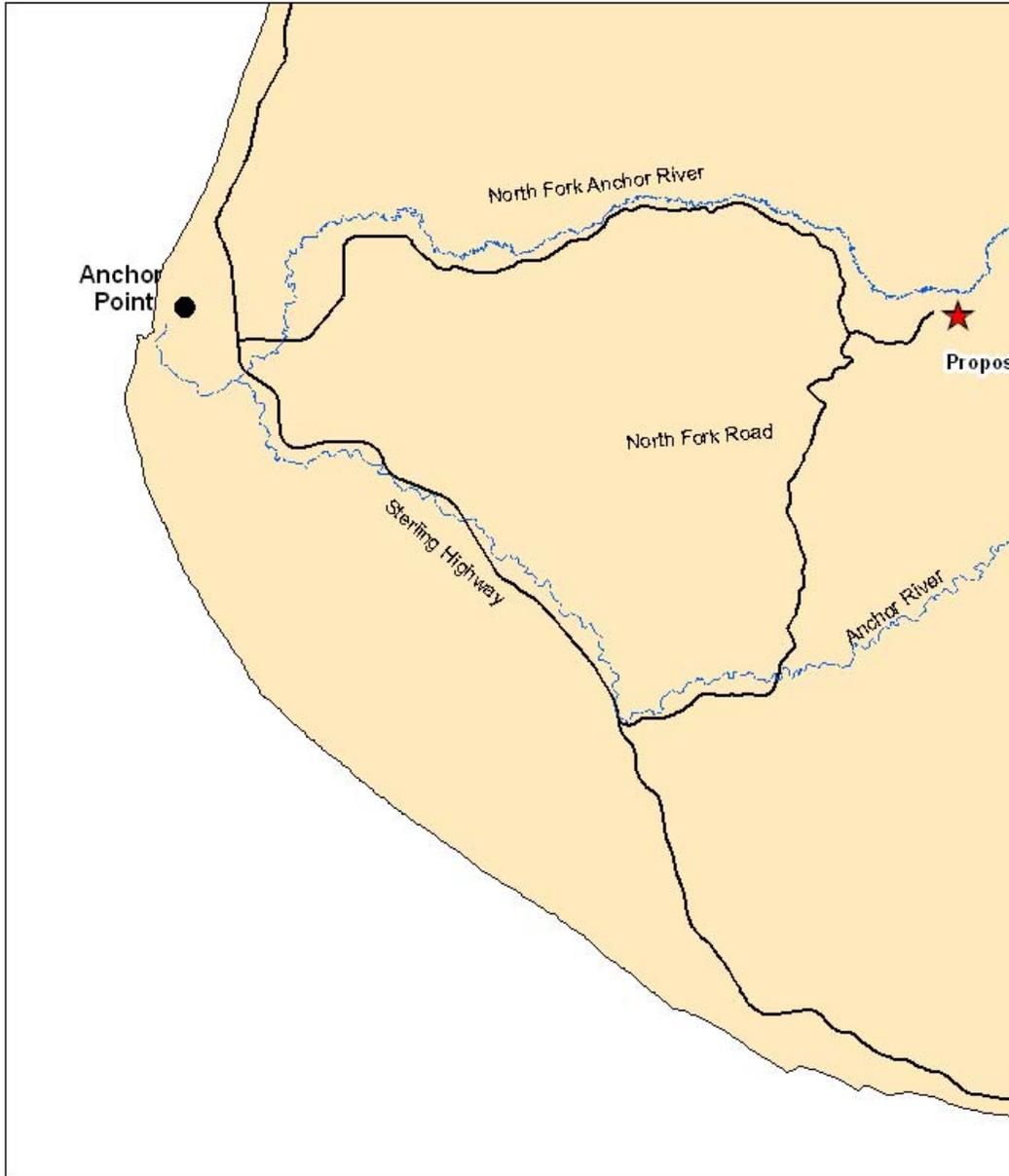
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Links to Planning Documents:

Kenai Area Plan: <http://www.dnr.state.ak.us/mlw/planning/areaplans/Kenai/index.cfm>

Vicinity Map

Knob Hill Firewood Area
SC-3235 K



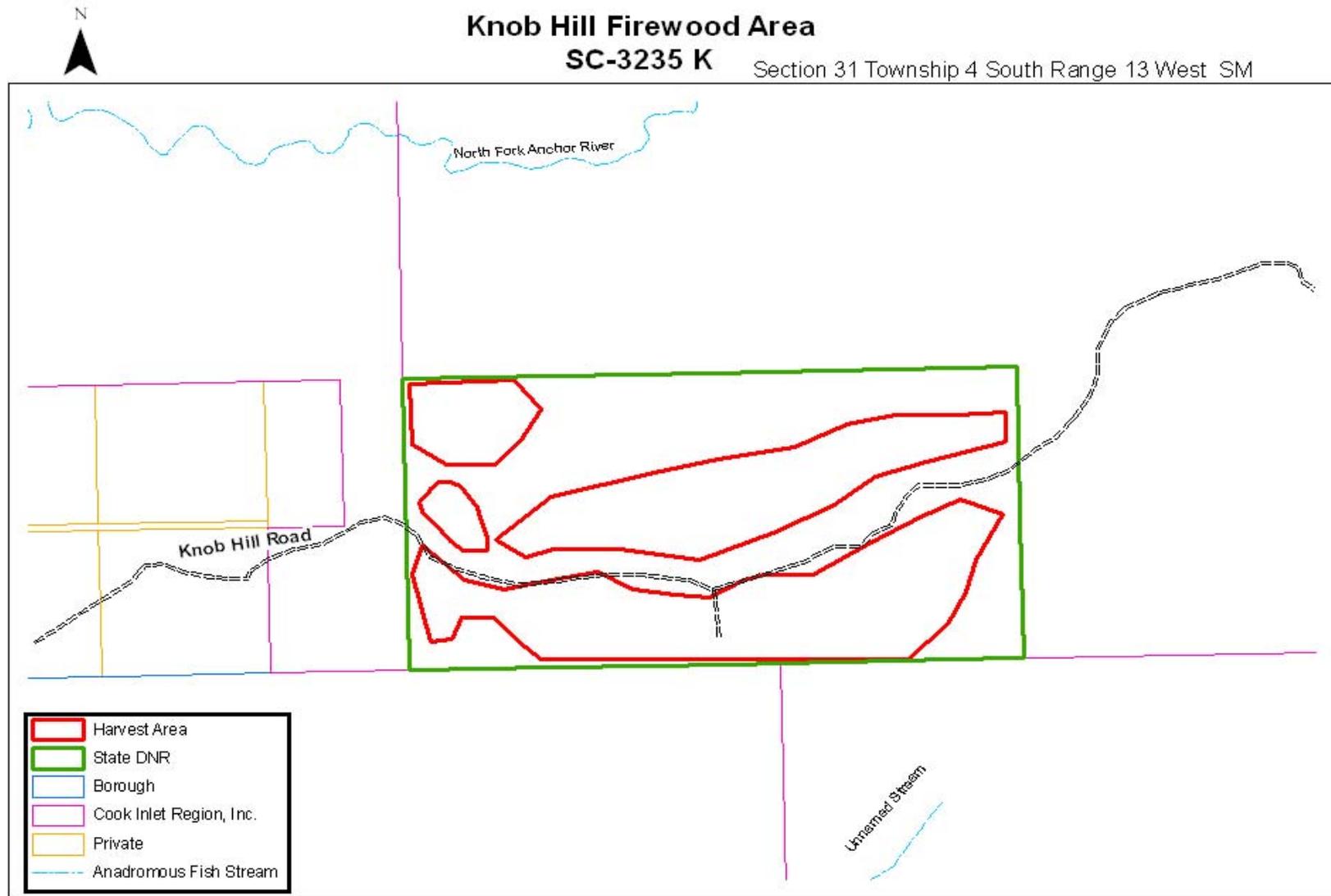
Alaska Division of Forestry
Kenai / Kodiak Area
260-4212
J. Winters

Sale Map

Knob Hill Firewood Area

SC-3235 K

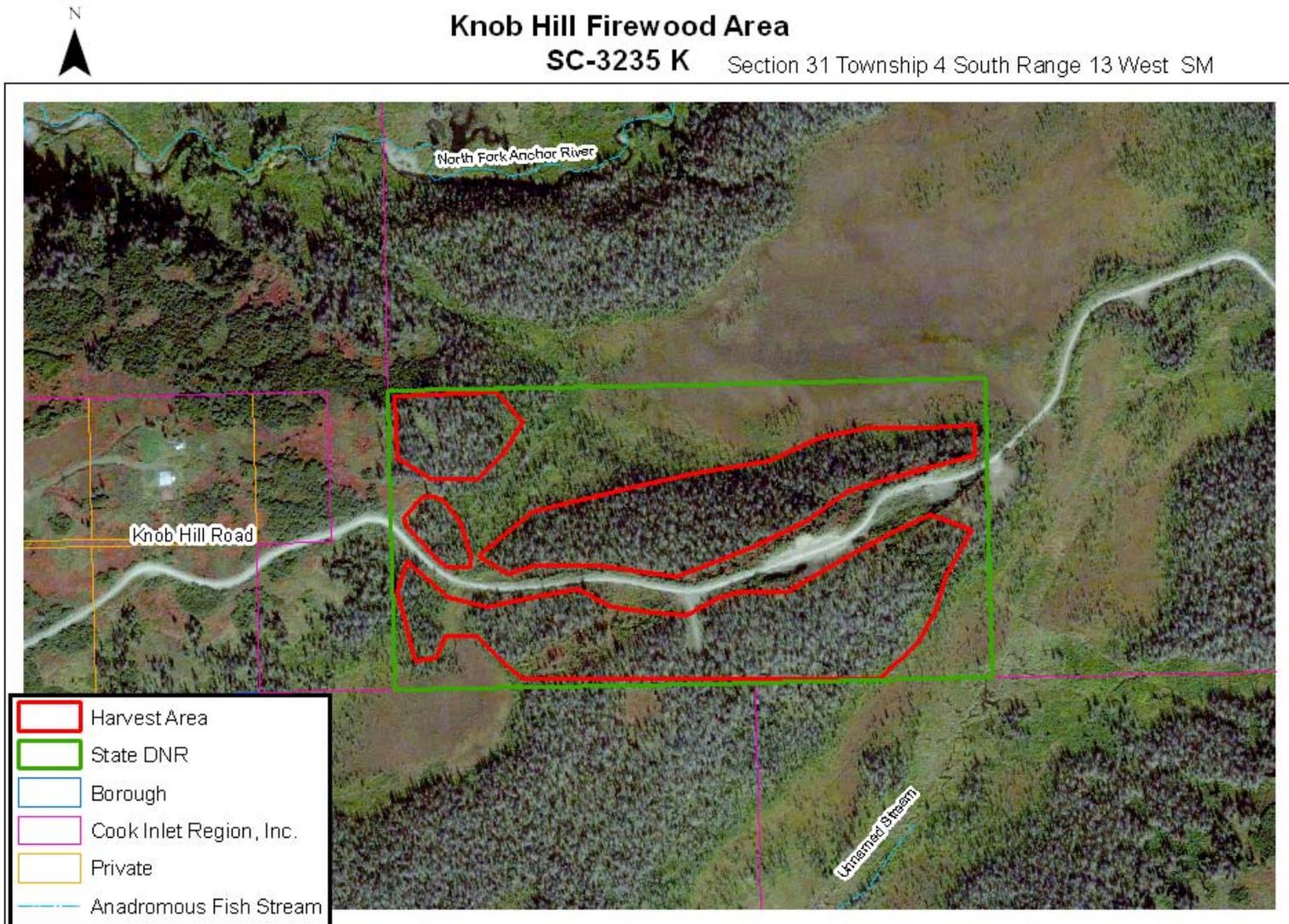
Section 31 Township 4 South Range 13 West SM



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0 500 1,000 Feet



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