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

Forest Land Use Plan/Final Finding for the Corea Bend Timber Sale SC-3147K

November 2011

Corea Bend Timber Sale
SC-3147 K
Forest Land Use Plan—Final Finding

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I. INTRODUCTION

A. Purpose

The purpose of this Forest Land Use Plan (FLUP) is to provide sufficient information to reviewers to insure that the best interest of the state will be served by the Department of Natural Resources, Division of Forestry (DOF), Kenai-Kodiak Area, offering dead spruce for sale or personal use firewood in a 31-acre harvest unit. The Sale contains an estimated 155 thousand board feet (155 MBF) or approximately 310 cords of spruce killed by the spruce beetle infestation

Timber harvest will entail removing dead spruce over 6 inches Diameter at Breast Height (DBH). Live spruce and birch trees will be harvested at the discretion of the state. Access roads into this timber sale will also be used for personal use firewood.

The public is invited to comment on any aspect of this proposed offering of timber within the Corea Bend 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 October 19, 2011 in order to be considered in the final decision of whether the timber sale will be offered for sale or personal use in whole or in part. To be eligible to appeal the final decision a person must have provided written comment by October 19, 2011.

B. Objectives

The primary objectives of this timber sale are to:

1. Reduce the wildfire risk and potential destruction of adjacent private property, salvage timber affected by bark beetles.

2. Accelerate reforestation: harvesting timber is a means of preparing the area for new trees to establish. 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."

3. 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. Firewood is the primary product of this sale, and therefore parallels the publics' increasing firewood demand.

C. Five Year Schedule:

The Corea Bend Timber Sale is currently listed in the last edition of the Five Year Timber Sale Schedule 2011 - 2015.

D. Location:

The legal description of this proposed action is as follows: Section 19 Township 1 North
Range 12 West, Seward Meridian. This sale can be located on the United States Geological Survey 1:63360 Quadrangle maps titled Kenai A-5 and Seldovia D-5. Clam Gulch is the nearest community, and is located approximately 4.5 miles north of the sale. Cook Inlet Region, Inc. (CIRI), the Kenai Peninsula Borough, and the University of Alaska are other large-scale nearby landowners. The nearest village ownership is Ninilchik Native Association, Inc. located approximately 5 miles south of the timber sale.

E. Title, Classification and Other Active or Pending Interests:

This sale is located in an area covered by the Kenai Area Plan (adopted in January 2000) and is designated for Resource Management which allows timber harvests. The management intent for this unit of the plan specifically identifies this proposed sale. This proposed sale complies with the guidelines and specific policies contained in the area plan.

F. Planning Framework

The decision to offer the Corea Bend Timber Sale was 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 Timber Sale, 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 timber sales 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.

Both the area plan and the management plan processes were the means to openly review 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 fact that the Kenai Area Plan's designation for this particular area allows for timber harvest.

Next, the Division of Forestry prepares a Five-Year Schedule of Timber Sales (FYSTS) every other year. 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 sales, 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. 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 department 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).

III. ADMINISTRATIVE RECORD

The division will maintain an administrative record regarding the decision of whether or not to offer timber within the Corea Bend Timber Sale. This record will be maintained at the Kenai-Kodiak Area Office and filed as SC-3147 K

IV. DESCRIPTION OF SALE AREA

A. Physical characteristics of the sale area

Topography and Soils
The Corea Bend Timber Sale is situated within a geographical area that is characterized by level to gently rolling glacial outwash terrain. The elevation ranges from 150 - 200 feet above sea level. The harvest unit is on a gently-sloping (less than 10 percent slope) with an east aspect. Due to the relatively flat terrain and the heavily vegetated ground surface, there is little potential for sedimentation to degrade Falls Creek.

The Natural Resource Conservation Service Soil Survey indicates the predominate soil type in the sale area to the Cohoe Series. The Cohoe Series is a deep, well drained silt loam occurring on nearly flat to strongly sloping terrain. The soil's susceptibility to erosion is rated as slight to moderate.

Waterbodies
There are no anadromous water bodies within the sale area. Falls Creek flows approximately 150 feet to the east to north sides of the harvest unit through a muskeg. This stream flows westward for approximately three miles before entering Cook Inlet over vertical falls.

Timber Stand Conditions
Forest stands in the area are predominately upland stands of approximately 90% spruce and 10% birch with scattered cottonwood and aspen. The canopy has become considerably more open as the spruce died and fell over. The spruce trees are natural hybrids between white spruce and Sitka spruce, called 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.

Muskeg, riparian willow, upland willow, and upland alder types are also found. Most spruce greater than 8 inches Diameter at Breast Height (DBH) are dead from spruce beetles. They have lost significant amounts of

bark and wood decay has advanced, rendering the trees prone to wind-snap and soft borings. There has been a considerable change to the forest stand structure. The average age of surviving trees is lower; likewise, the average DBH, height and stand density has diminished. The result is decreased canopy (Schmid and Frye 1977). Natural spruce regeneration occurs when there is an adequate supply of viable seed and an appropriate seedbed (INFEST #9). In unmanaged stands, soil disturbance is minimal resulting in fewer seedbeds. Grass often proliferates, covering sites that could otherwise support tree seed germination. Birch regeneration is also decreased due to the severe competition of grass and inadequate seedbed availability.

Bluejoint reedgrass (*Calamagrostis canadensis*) is densely established throughout the sale area. Bluejoint reedgrass quickly establishes itself in stands killed by spruce beetle and other disturbances. Due to its dense cover, grass lowers the soil temperature and is such an aggressive competitor; it inhibits the regeneration of both tree seedlings and browse species (Lieffers, et al 1993). One study indicates that even after 11 years, no natural tree or browse regeneration had occurred (Holsten, et al 1995). Species diversity has declined in these stands. Within two to four years following mortality, beetle killed trees begin to wind-snap and fall to the ground. The time-span between mortality and having the tree break-off and fall to the ground appears to be a function of the level of decay in the base of the tree at the time of mortality. Recent research has shown that 50 percent of the beetle killed trees break off and fall to the ground within 10 years (Holsten, et al 1995). These downed trees fall across each other or jackstraw and limit access and mobility of both human and wildlife use of the area (Thomas 1979).

Wildfire Potential and Fuels Mitigation

Dead spruce trees undergo changes in physical characteristics over time. The moisture content of the dead tree declines significantly. As foliage rots and falls off, the forest floor is less shaded and more conducive to grass propagation. The boles of dead spruce trees decay and are increasingly more prone to wind-snap, falling onto one another, creating immense piles of wildfire fuel. Surface fuels comprised of grass and downed trees enable wildfires to spread quickly and with greater 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 (See 1998). Even when suppressing fires during moderate weather conditions, placing crews in this type of fuel poses a significant personal safety risk if winds begin to rapidly increase or change direction.

Large-scale spruce mortality significantly influenced wildlife habitat by changing the structure and function of the forest (INFEST #11). The loss of the mature spruce and the potential loss of the younger spruce component will result in the loss of hiding and thermal cover (DF&G 1994). The remaining live forest component will be composed primarily of young spruce seedling/saplings and scattered birch. Grass will become the predominant ground cover and will inhibit the development of suckering and sprouting plants which reduces the availability of browse (Holsten, et. al. 1995). Therefore, as the stand structure changes, the population dynamics between wildlife species within the proposed sale area will vary.

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 preferring the grass-forb successional stage will likely increase in abundance (DF&G 1994).

The primary measures for minimizing impacts to wildlife habitat are the previously-mentioned fringes of timber that will be retained to provide wildlife cover. Only temporary ice roads will be used to access the sale area. After timber harvest activities cease in the spring, the access routes will be blocked with logs or large material to obstruct off road vehicle traffic. This will reduce wildlife impacts associated with roads.

Approximately three to four standing trees per acre will be retained within the harvest unit as nesting habitat.

Harvest operations are not expected to exceed three years and will occur typically from December to mid March, so disturbance from harvest operations will be relatively brief. Grass and alder will reseed rapidly on disturbed sites and help in effectively closing the road access. These actions are intended to closely align with the recommendations of the Kenai Peninsula Brown Bear Conservation Strategy (DF&G 2000).

Bears

For black bear, the proposed Timber Sale includes areas with potential late summer and early fall berry crops. It is doubtful that winter denning sites exist in the sale area for either brown or black bears. This is due to its proximity to residential development. No denning sites were found during field reviews for either species.

Increased vulnerability of local black bear populations to hunting is a function of road location and road density which, in turn, is related to the timber harvesting systems used and the level of logging activity (DF&G 1994).

To date, there has been no census for brown bears taken on the Kenai; there was estimated to be 250 to 300 bears in the late 1990's (DF&G, 1997). There appears to be a healthy viable population (DF&G, 2008). Since the 1950's the brown bear population on the Peninsula has increased to an estimated population of 300 in 1997 (DF&G 1997). This apparent population climb occurred despite a human population increase on the Kenai Peninsula from 9,053 in 1960 to 53,409 in 2008 (US Census Bureau, 2009).

The highest densities of brown bears are in the forested lowlands and sub-alpine areas west of the Kenai Mountains. No denning sites were identified within the proposed Timber Sale 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 Timber Sale to human development, the area is not expected to be utilized frequently by brown bears.

At the onset of the spruce beetle infestation, the degrading stands were not expected to have significant impacts on bear populations (USFS 1990 and DF&G 1994). However, increased access associated with resource development is of concern to wildlife managers (Selinger, 2005). Logging roads 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). Again, this proposed sale will be accessed by roads that are only drivable during the winter months, when bear activity is expected to be minimal.

Several researchers suggest that grizzly bears habituate to open roads by shifting to a more nocturnal activity pattern. Apparently, 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). 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 Shackelton 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. This may be attributable to habituation.

This Timber Sale may impact 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).

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 harvested portion of the Timber Sale 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).

As the dead spruce fall to the ground, escape routes will diminish and it is likely that energy expenditure by newborn moose for escape will be increased. The increase over time in the amount of deadfall that will occur without intervention will also decrease sight distance that may result in additional predation of young moose. 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. Slash depths of 1 to 2.3 feet reduced forage production and hindered access for many wildlife species (Bartels 1985).

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. While birch is not the dominate species of the existing stand, this sale operation is intended to result in mature left standing as seed sources. Ground disturbance from logging activity will result in favorable conditions for subsequent birch regeneration.

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 Fur Bearers
Timber harvest activities are expected to impact the habitat for ermines, mink, and river otters by reducing cover or abundance of available prey. By retaining timber in riparian areas—as will be required in this proposed sale—the above-mentioned impacts will be offset.

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).

Snowshoe hares are apparently increasing numbers in proximity to the sale area. This species is subject to population rises, followed by abrupt declines. As to when this when the population will decline is unknown, but will probably be associated with other factors than the impacts of timber harvest. During peak population cycles, hares browsing can cause significant reduction in young tree development.

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 Sale 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

There are no streams within or near the sale that flow into anadromous fish streams. As stated previously, Falls Creek empties into Cook Inlet over bluffs approximately two miles southwest of the sale area. Therefore, there are no anadromous fish species in Falls Creek. The Ninilchik River is located approximately two miles east of the sale area

C. Human activity and social considerations

Hunting

Based on field observations, the area is hunted primarily by local residents; hunting pressure is not expected to increase in the area as a result of timber harvest. The Alaska Department of Fish and Game is responsible for setting hunting regulations, including restricting hunting areas.

Subsistence

The subject area has not been designated as a subsistence zone. Under current state law, subsistence harvest opportunities within the Timber Sale 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

Based on field observations, there appears to be intermittent recreation, presumably by local residents. Generalized use of ATV's was evident in the 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.

Cultural Resources

Currently, there no reports of cultural or historical sites in the Alaska Heritage Resources Survey within the sale area (DNR/ Parks, AHRS, 2011). The Alaska Heritage Resources Survey (**AHRS**) is an inventory of all reported historic, prehistoric, and paleontological sites within the State of Alaska. The AHRS will be examined for updated information regarding the sale area prior to advertising this Timber Sale.

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.

Scenic

This sale will not be be visible from the Sterling Highway, but will be visible by aircraft, snowmachiners, and ATV users. 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).

Prompt reforestation, timber retention areas near wetlands, and the retention of all live spruce and birch, will lessen what visual impact may be caused by harvest operations.

Land Use
No agricultural use or grazing is known to occur. Traditional use areas may exist but the sale will not adversely impact these uses. However, opportunities for hunting and berry picking will likely be improved. Snowmobiles and ATV users enjoy travel within the sale area.

D. Sustained yield and allowable cut
This proposal complies with sustained yield/allowable cut principles outlined in the Kenai-Kodiak Area's Five Year Schedule of Timber Sales for CY-11 through CY-15.

E. Silviculture and Timber Harvest
The silvicultural prescription selected for spruce in this sale is salvage harvest, while keeping green reserves. All merchantable dead or infested spruce larger than 8 inches in DBH will be removed. Live spruce and birch will only be allowed for harvest at the discretion of the State.

Logging will not be authorized during spring break-up, which usually occurs during a period from mid-April to June 1. The length of time to complete the harvest operations will be two years. The contract will require that care be taken to minimize damage to residuals.

Delimbed tops will be re-scattered and allowed to decompose or will be burned. Some piles will be retained for their wildlife values. Large amounts of nutrients such as phosphorous, nitrogen, and to a lesser extent for other mineral elements, are stored in the foliage, twigs, and branches; smaller amounts are in the main trunk of the tree (Bartels 1985). This material (limbs, twigs, and needles) is an important source of nutrients for the next stand of trees; typically over 95% of the nitrogen is contained within this material (Perry, et. al. 1989). Disposal of green or infested spruce material larger than five inches in diameter shall be in accordance with the standards set in 11 AAC 95.195(b) of the Forest Practices Regulations. Stump heights will be kept as low as feasible, typically less than one foot.

Logging will not be authorized during spring break-up, which usually occurs during a period from late March to June 1. The length of time to complete the harvest operations will be three years. The contract will require that care be taken to minimize damage to residuals.

The State will conduct regeneration surveys within 2 years following harvest to determine if artificial regeneration will be necessary. Planting may be necessary on sites lacking sufficient regeneration to meet stocking standards. Planted spruce seedlings will be grown from locally collected seed. This proposal may be adjusted post-harvest depending on the success in protecting residual seedlings and saplings.

Regeneration surveys will monitor trends of survival and species composition and also help to determine if any further reforestation effort is required to meet the reforestation requirements of the Forest Resources and Practices Act (11 AAC 95.375).

F. Transportation

Access into the timber sale will be via the Sterling Highway near Mile 123.2 onto a state DNR parcel and proceeding east for approximately 3,560 feet, land owned by the Kenai Peninsula Borough. The purchaser will therefore be required to obtain a land use permit from the Borough prior to constructing the access road. Due to the muskeg between the Sterling Highway and the sale area, access into the sale area will be during the winter when the ground is adequately frozen.

Any access to the sale area through private ownerships will require a written agreement with the landowners. All roads onto state land will be temporary ice roads that must be put to bed upon completion of use in accordance with the Forest Resources and Practices Regulations on road closure (11 AAC 95.320). Log hauling on ice roads will begin when underlying ground is frozen sufficiently to support equipment. This requires a minimum of 8 inches of snow and 6 inches of frost.

The Timber Sale purchasers will be required to close roads on state lands at the conclusion of their sale. The temporary roads on state land that are put to bed upon completion of use will be closed in accordance with the Forest Resources and Practices Regulations on road closure (11 AAC 95.320). Additionally, wood debris will be spread over a portion of the road bed to minimize future impacts of all terrain vehicles.

G. Erosion

This proposed firewood sale is on relatively flat terrain; the overall slope is less than 10% grade. Therefore, no slope failures or soil movement is expected.

H. Mining

There is no known mining activity in this area and therefore no effect.

I. Materials

This proposed harvest will not preclude future development of a material site. Needed borrow material for the Timber Sale road(s) will be minimal and acquired from within the right of way. No pits will be developed.

V. MARKET CONDITIONS AND ECONOMICS

The local market includes domestic sawlogs, house logs and firewood. Most of the timber from this sale area will probably be sold and utilized as firewood. The cost of heating oil on the Kenai Peninsula rose sharply in 2008. The demand for firewood has increased noticeably over the previous two years. Consequently, firewood sold retail for $150 to $200 per cord in 2010. Firewood prices are presently competitive with sawlogs as an end product for all but the green wood. Firewood will likely be in greater public demand than either sawlogs or house logs in the near future. The DOF anticipates this sale to be marketable based on past sale activity.

VI. ALTERNATIVE ACTIONS

After a review of the material and information discussed above, the following alternatives have been considered:

1. **Offer a timber sale as outline in this Forest Land Use Plan.** 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. It also meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional local jobs due to the combination of road building, logging, and trucking.

2. **Offer this timber sale at another time.** We believe that postponing the harvest of timber within the sale area is not in the public interest. As the dead trees continue to decay, their merchantability will decline; therefore it is important to provide opportunities to utilize a resource that currently is in high public demand—firewood.

Additionally, the increasing fuel loading as a result of the dead trees is not in the public's interest. Trees that would otherwise be salvaged would become sources for ignition and fuel loading for a potential catastrophic wildland fire. This timber sale is located in the wildland-urban interface and is a high priority for removal of potentially hazardous fuels. Additionally, postponing the sales to a later date could result in sufficient loss of market value that the sale would become uneconomical.

3. **Modify the Sale by making the harvest units smaller.** This sale is intended to be large enough to be economically viable for mechanical logging methods. 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 sale area will reduce the supply of firewood and leave more timber to further deteriorate on the site and exacerbate the wildfire fuel loading. This sale is large enough to cover the costs of constructing access roads and cover the mobilization costs to operate in the Anchor Point area under historic conditions. This sale is appropriately balanced to maintain other resource values as well as provide economic benefits to the Kenai Peninsula.

4. **Do not offer this timber 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. There would be no significant contribution to the state and local economies. This alternative would delay the management objectives planned for the area, would deny making a source of raw materials available to the local wood products industry, and would delay the harvest of dead trees, mature trees, disease infected trees, and trees at risk to insect infestation. Decay in infected and infested mature spruce and birch trees results in loss of economic value.

VIII. Best Interest Decision

The purpose of this decision is to determine if the Department of Natural Resources, Division of Forestry, will make available timber located in portions of Section 19, T.1N, R.12W, Seward Meridian. After due consideration of all pertinent information and alternatives, the Division of Forestry has reached the following **Final Decision: To offer the sale as proposed in Alternative 1.** The Division of Forestry finds that this final decision satisfies the objectives as stated in this document and it is in the best interest of the State to proceed with this action under its authority of AS 38.05.035(c) and AS 38.05.120.

A person affected by this Best Interest Decision who provided timely written comment may request reconsideration in accordance with 11 AAC 02. Any appeal must be received by December 19th, and must be mailed or delivered to Dan Sullivan, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; or faxed to (907) 269-8918, or sent by electronic mail to dnr.appeals@alaska.gov. If reconsideration is not request on or by December 19th, or if the commissioner does not order reconsideration on his own motion, this decision goes into effect as a final order and decision on December 20th

Failure of the commissioner to act on a request for reconsideration within 30 days after issuance of this decision is a denial of reconsideration and is final administrative order and decision for the purposes of an appeal to Superior Court. The decision may be appealed to Superior Court within a further 30 days in accordance with the rules of the court, and to the extent permitted by applicable law. An eligible person must first request reconsideration of this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

If you have any questions, please contact Hans Rinke Kenai-Kodiak Area Forester at (907) 260-4200 or by e-mail hans.rinke@alaska.gov.

/s/ November 30, 2011

Michael Curran Date

Coastal Regional Forester

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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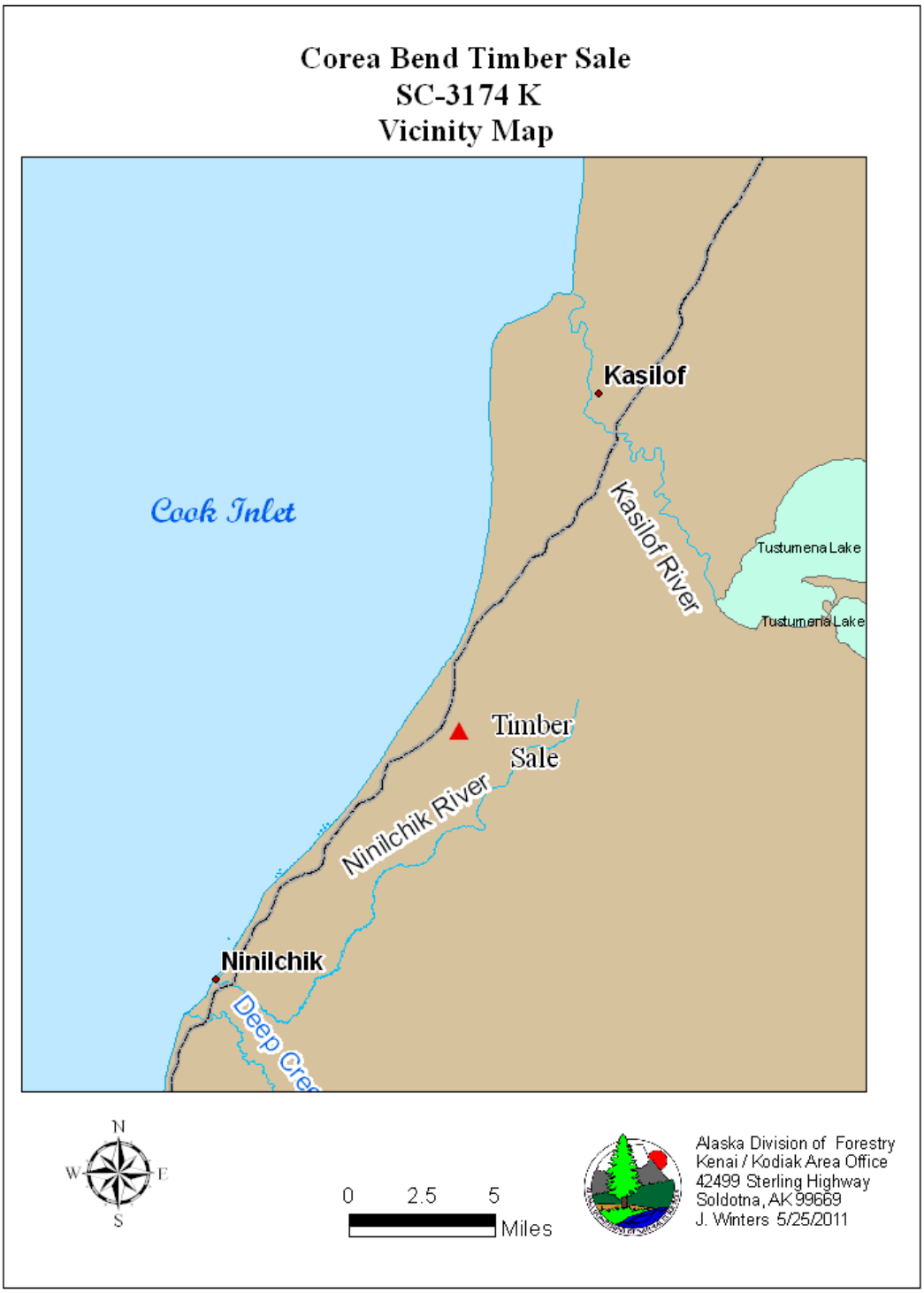
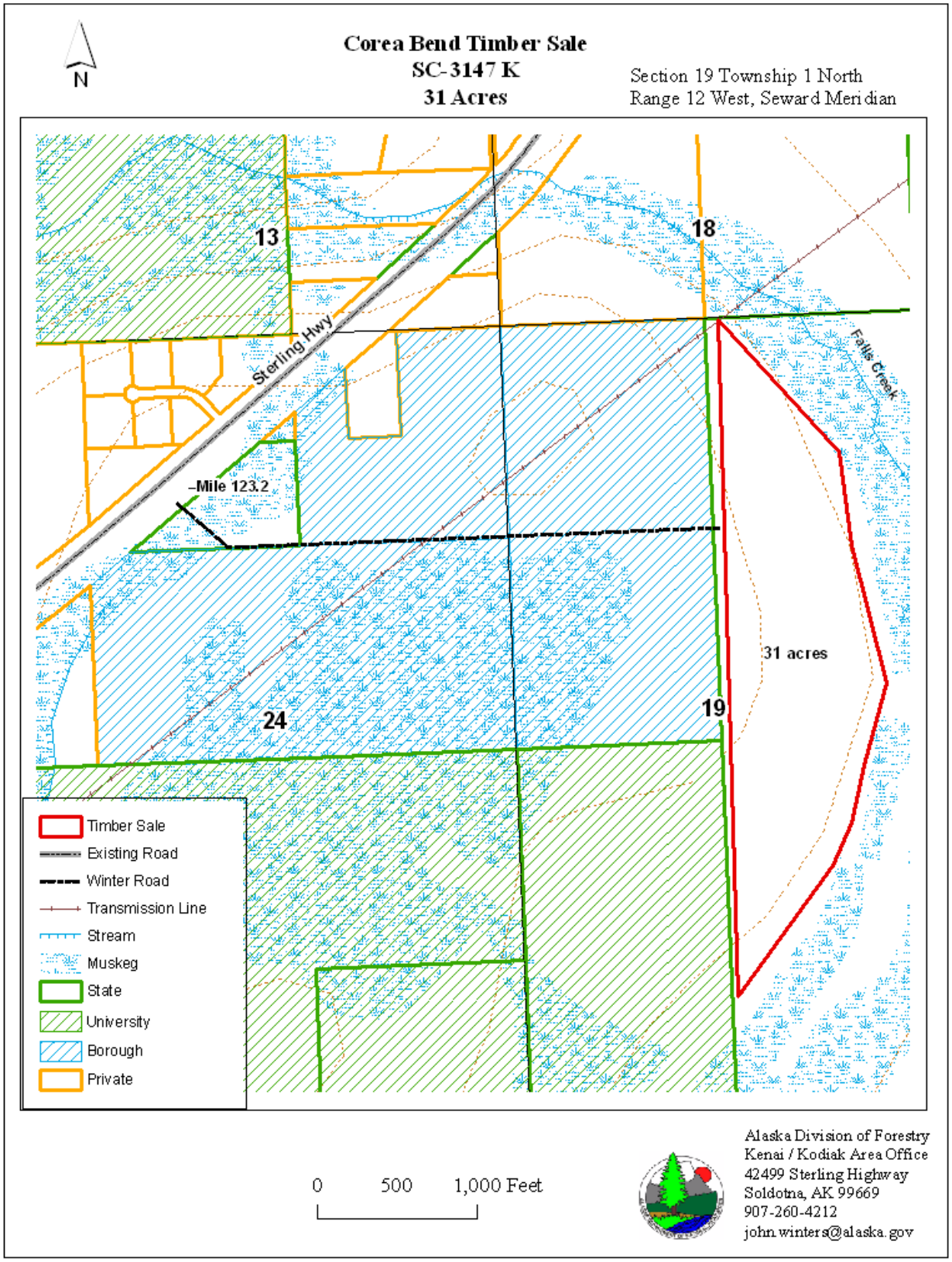
Links to Planning Documents:

Kenai Area Plan: http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf

Timber Sale Maps




N
Corea Bend Timber Sale
SC-3147 K
31 Acres
Section 19 Township 1 North
Range 12 West, Seward Meridian
13
18
Sterling Hwy
Falls Creek
Mile 123.2
31 acres
19
24
Timber Sale
Existing Road
Winter Road
Transmission Line
Stream
Muskeg
State
University
Borough
Private
0
500
1,000 Feet
Alaska Division of Forestry
Kenai / Kodiak Area Office
42499 Sterling Highway
Soldotna, AK 99669
907-260-4212
john.winters@alaska.gov

Corea Bend Timber Sale Comments & Responses
Department of Natural Resources, Division of Forestry
November 2011
The following comments were received during the public comment period on the Corea Bend Timber Sale.

Organization	Author	Location
DNR State Office of Historical Preservation	Judith Bittner	Anchorage
Fish & Game—Division of Habitat	Patti Berkhahn	Soldotna

Commenter	Comment	Response
Bittner--SHPO	Ensure 8 inches of snow cover and frozen ground before proceeding. Utilize muskegs/wetlands when feasible for storage and landings.	Noted. This sale will be logged in the winter where there will be snow and frozen ground. Activity including landings and storage will be confined within the harvest unit.
Berkhahn--DF&G	Trees along the edges of muskegs, as well as pockets of sub merchantable within the harvest units will be retained for the purpose of wildlife cover.	Noted. The harvest unit boundary will be more than 100 feet from the edge of the muskeg.
	Minimize damage to residual trees.	The timber sale contract will require protection of residual trees.
	Scarification of harvest area following harvest to promote seedling establishment and regeneration.	This timber sale will be subject to reforestation requirements under 11 AAC 95.375 of the Alaska Forest Resources & Practices Regulations.