STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY
NORTHERN REGION

FAIRBANKS AREA

FOREST LAND USE PLAN

FOR A PROPOSED TIMBER SALE

FINAL REPORT AND BEST INTEREST FINDING

Old Valdez Trail Spruce
NC-1547-F

ADL 419887

April 2013

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Resource Management Forester

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I. INTRODUCTION

A. Purpose

The purpose of this Forest Land Use Plan (FLUP) is to provide sufficient information for reviewers to ensure that the best interest of the State will be served by the Department of Natural Resources (DNR), Division of Forestry, Fairbanks Area, offering this proposed timber sale. This FLUP deals with site specific considerations of the sale. The boundaries and precise volume of the sale may be refined if and when the sale is developed. Site specific research has been completed on title considerations, land classifications, applicable land management plans, appropriate silvicultural techniques, regulatory and statutory requirements, and physical conditions that apply to the proposed sale area. The proposal is for the harvest of approximately (+/- 10%) 50.6 acres of land that is predicted to yield approximately (+/- 10%) 705 CCF of spruce saw and fuel wood. The sale design may be altered to mitigate potential conflicts. It will be the responsibility of the Forester-In-Charge to ensure that any purchaser of this sale harvests timber per the sale design and sale contract provisions and adheres to Alaska Forest Resources and Practices Act (AFRPA) best management practices.

B. Five-Year Sale Schedule

The general area and timber type that this proposed sale occupies has been shown as a potential sale area in the current Five-Year Schedule of Timber Sales (FYSTS) for Fiscal Years 2012-2016 as required by AS 38.05.113. It has been listed in previous schedules.

C. Location

The proposed sale is located roughly 37 miles southeast of Fairbanks within the Fairbanks North Star Borough and within the boundaries of the Doyon Region. Coastal Zone Management considerations do not apply. The proposed sale area is located within Section 32 Township 5 South Range 4 East, Fairbanks Meridian. The sale area is shown on the attached map and is within the United States Geological Survey 1:63,360 Quadrangle map titled Fairbanks B-1 and Big Delta B-6. The tract is accessed from Fairbanks by driving southeast on the Richardson Highway to milepost 319. Turn right (west) on the old Valdez Trail. This road traverses a residential area and turns to the north. Travel along this road until it ends at the Tanana River. This is where a new winter road will be started to gain access to the sale. The sale is located 1.7 miles north along the proposed winter road.

D. Title, Classification and Other Active or Pending Interests

The acquisition for the land upon which the sale is proposed is based on General Selection 545. The title was transferred by Patent 50-75-0098. There are no title restrictions on the area. The primary land classification for the area is Forestry per Classification Order NC-82-065. The proposed sale area is within Unit 7A of the Tanana Valley State Forest (TVSF).

E. General Timber Sale Program Objectives

1. Develop the State's Renewable Resources

To follow the DNR's constitutional mandate to encourage the development of the State's renewable resources, making them available for maximum use consistent with the public interest. Sustain and promote a healthy, long-term timber industry in the State, through providing a secure source of timber for harvest that produces raw materials for local manufacturing plants when practical while protecting other resources such as fish and wildlife.

2. **Improve the State's Economy**

   To help the State's economy by providing royalties to the State in the form of stumpage receipts, as well as contributions to local economies through wages, purchases, jobs, and business.

3. **Improve Forest Health**

   To improve forest growth and vigor by harvesting mature and or declining stands and replace them with new healthy regenerating stands. The stand replacement will be accomplished while protecting and maintaining other resource values. The actions authorized under this decision will follow the constitutional mandate of sustained yield and shall adhere to multiple use management as described in the Tanana Basin Area Plan.

4. **Improve Wildlife Habitat**

   Meet the statutory wildlife management objectives for the TVSF (AS 41.17.400(e)) that provides for the economic development of other natural resources while protecting habitat needs of wildlife resources necessary to maintain or enhance public use and economic benefits.

II. LEGAL AUTHORITY

The Division of Forestry is taking this action under the authority of AS 38.05.035 (e) (Best Interest Finding); AS 38.05.110-120 (Alaska Land Act Statutes); 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 case file ADL 419887 and the Tanana Basin Area Plan constitute the administrative record for this finding.

IV. DISCUSSION OF ISSUES

A. Physical Characteristic of the Sale Area

1. **Topography**

   The site is on a flat island within the floodplain of the Tanana River. Elevation is at 640 feet. The terrain is generally flat with small undulations and some old drainage channels. General slope angle across the sale is 0 percent.

2. **Soils**

   Soils in this sale area are classified as an Eielson-Piledriver, occasionally flooded, complex. These are somewhat poorly drained lowland loam soils that have formed

from alluvium. These soils have no restrictive layer within the first 72 inches of the soil profile and are found in floodplains.

3. **Waterbodies**

   This sale is on an island within the Tanana River flood plain. There are old drainage channels on the island but not within the boundary of the sale. A 100' buffer will be maintained between the edge of the unit and any channels associated with the Tanana. The sale area presents no obstacles that would prevent implementation of the best management practices of the AFRPA to maintain water quality.

4. **Stand Conditions**

   The timber stand and proposed harvest unit consists of 120 year old white spruce. There is evidence of butt rot with some wind throw particularly around openings. The pole timber is stagnant and the same age as the sawtimber because of a thick moss layer keeping the soils cold. Budworm is moderate in this area and cone production has been minimal. Understory vegetation includes horsetail, rose and some alder. The moss depth averages 6 inches. The grass component is light in this stand and is estimated to cover 5% of the area. This unit has approximately 190 spruce trees per acre and a basal area of approximately 88 square feet/acre.

B. Historic and Current Land Use

The historic uses of land in the general area have been logging, hunting, trapping, and general trail use. The current uses of the area are recreation, wood cutting, hunting and trapping.

C. Wildlife Habitat

Wildlife typical of the interior can be found in this area and during ground reconnaissance moose, grouse, and hares were observed. Moose damage in the form of bark stripping on some of the aspen trees was also observed. No raptor nests were observed within the proposed sale area. Should an eagle nest tree be discovered in the sale area, the nest tree will be marked on the ground and a 330 foot no-harvest radius will be established in order to protect the tree. No critical habitat has been identified for this area (TVSF Management Plan), nor has any become apparent during ground reconnaissance.

Treatments proposed for this stand are projected to enhance habitat conditions for ruffed grouse, moose, voles, hares, and ultimately, lynx, marten and fox. In the past, Alaska Department of Fish and Game, Division of Wildlife Conservation (ADFG) and now the DNR Office of Habitat Management and Permitting (OHMP) have recommended managing for as much diversity as possible when prescribing harvest unit size, shape and position to mimic the results of wildfire or other stand replacement phases such as insect outbreaks or flood events. To accomplish these objectives, snags will be retained to provide late-successional wildlife habitat for hole nesting birds, woodpeckers, small mammals, and other species requiring perching habitat. The units will be laid out with uneven edges along and between timber types. This layout design will create varied edge effects which are beneficial to many wildlife species.

D. Fisheries and Water Quality

Best management practices will be implemented to ensure water quality standards in all water courses. During review of the FY 2012-2016 FYSTS, the ADF&G, Division of Habitat mentioned that the sale is in a relatively unstable portion of the Tanana river floodplain when bank erosion is active. This will be mitigated by maintaining 100' buffers from the channel itself, leaving residual trees for soil stabilization and only allowing harvest when the ground is frozen to minimize ground disturbance. There is no expectation that this harvest will have negative impacts on the main branch of the Tanana River.

Approximately 1.7 miles of new winter road construction will be required for this sale. An ice bridge will also be required to gain access to the island. A fish habitat permit will need to be acquired from ADF&G to account for the ice bridge. Construction and maintenance of this road set to the BMP standards outlined in the AFRPA will be required. Erosion within the unit will be mitigated by backfilling skid trails with debris and through the installation of water bars if necessary.

E. Subsistence

The sale area lies within the Fairbanks Non-subsistence Area. The proposed sale of timber is anticipated to have no deleterious effects on subsistence activities. Subsistence activities of fishing, trapping, hunting and gathering of berries and other non timber forest products may occur on State owned lands.

F. Recreation and Tourism

Recreation use of this particular area is moderate due to the existence of all season forest roads and winter and summer trails. Primarily it consists of hunting and trapping activity, as well as some recreational snowmachining and dogmushing along a winter trail located to the south west of the proposed unit. During the hunting season in the fall the all season roads are used heavily. Depending on the level of road snow cover, hunting continues for grouse and hares through the winter.

G. Scenic Resources

The sale is located in the Tanana River drainage. It will not be visible from the any major roads but it may be visible by private landowners within the Flag Hill area and University of Alaska lands which are located to the east of the sale. Leave trees and residuals will somewhat obscure the harvest area and help blend the cut border with existing landscape.

H. Cultural Resources

The TVSF Management Plan does not list any historic cultural or archaeological sites in the vicinity of the proposed harvest. The State Office of History and Archaeology (OHA) do not list any sites on its inventory. During the course of activities associated with this timber sale, cultural and/or paleontological resources may be inadvertently discovered. Should such discovery occur, these sites shall be protected from further disturbance and OHA will be contacted immediately so that compliance with state laws governing cultural resources may begin.

Under the Alaska Historic Preservation Act (AS 41.35), 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 taken to protect it in

place. OHA and a law enforcement officer will be notified immediately to ensure that proper procedures for dealing with human remains are followed.

I. Sustained Yield and Allowable Cut

The Alaska Forest Resources and Practices Act (AS 41.17.060 (c)) and Article VIII Sec. 4 of the State Constitution require that the State forest land be managed on a sustained yield basis. Sustained yield is defined in the Alaska Forest Resources and Practices Act (AS 41.17.950(25)):

> "Sustained Yield" means the achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of forest land and water without significant impairment of the productivity of the land and water, but does not require that timber be harvested in a non-declining yield basis over a rotation period.

The Annual Allowable Cut (AAC) is the amount that can be harvested from forest land managed for forestry purposes in a year under sustained yield management. The AAC in the Fairbanks Area is based on a ten-year average as determined by the Parsons and Associates, Inc. report titled "Tanana State Forestry Lands Periodic Sustained Yield Analysis". This sale complies with sustained yield/allowable cut principles outlined in the Fairbanks Area Five-Year Schedule of Timber Sales for FY 2012-2016. The AAC for the Fairbanks Management Area is approximately 6,260 acres. The AAC will not be exceeded for this proposed sale.

J. Silvicultural Prescription

1. Stand Silvics

The merchantable tree species here is white spruce. Data and research on regeneration and growth characteristics of these species are compiled within the Resource Analysis of the Tanana Valley State Forest (TVSF) Management Plan. The harvest and reforestations systems available in Interior Alaska are also reviewed and listed in the Resource Analysis. The results of the public and agency discussions for harvest and reforestation are discussed in the TVSF Management Plan. Silvicultural harvest systems that facilitate even-aged (natural) management are generally preferred. They mimic the ecological impact of wildfire and other disturbances and result in the greatest increase in site productivity. Even-aged management is normally accomplished through clear-cuts, patch cuts, and heavy partial cuts (such as seed tree or shelterwood systems) which open up the site to maximum solar gain. This management system results in the greatest production of both young hardwood, that is important to wildlife, and the spruce understory which is valuable years later as timber. Even-aged management techniques are utilized to provide young, vigorously growing stands in juxtaposition to older, undisturbed stands. Such placement of harvest units can optimize natural seeding and the edge effect.

2. Specific Management Objectives

Utilize the current commercial value of this timber stand before the spruce budworm and stem rot inflicts further damage, and then return this site to a productive mixed forest at an equal or greater basal area than currently exists. Opening the canopy will warm soils and reduce moss depth thus creating a more productive site. Spruce

dominates the site accounting for over 90% of the standing timber. It is expected that the spruce component will maintain itself as the dominant component with natural regeneration and release of residual stems. The objective is to remove mature spruce to recover the economic value of the timber before it further degrades. It is reasonable to assume that these objectives will be realized under the recommended prescription and planting of white spruce.

3. **Harvest Methods**

   The sale will be harvested by a clear-cut with reserves silvicultural system. All spruce 6" DBH or larger will be removed. Snags, birch and white spruce smaller than 6" will not be cut. Residual trees will be protected from damage during harvest operations. Harvesting will be by the whole tree yarding system. Slash disposal at the landings will be by burning or by salvage for fuelwood use.

4. **Regeneration**

   Regeneration of white spruce occurs only from seeds. White spruce trees generally produce some level of seed crop every three to five years and large seed crops every five to seven years. Budworm is moderate in this area and cone production has been minimal. When the budworm infestation subsides, white spruce is expected to provide seed. Adjacent spruce and birch stands will likely provide some seed into the unit. The unit will be hand planted soon after logging operations are complete. A regeneration survey will be conducted three years after the harvest. If the survey indicates inadequately stocked areas greater than ½ acre and totaling 4.2 acres then additional hand planting of white spruce seedlings will be performed on non-stocked areas. The goal for regeneration is to achieve a minimum of 450 evenly distributed trees per acre.

K. Transportation

The planned access to the proposed sale is by existing secondary roads located west of the Richardson Highway and a proposed winter road. The first 2.7 miles are along the Old Valdez Trail which leads to a three way intersection. Once at the intersection turn left (West) which leads to the Main Channel of the Tanana River. An ice bridge is needed to cross a slough that feeds into the Tanana River, which will require a Fish Habitat (Title 16) Permit. After crossing the slough 1.7 miles of new winter road will need to be constructed to access the timber sale. The 2.7 miles of existing secondary road will be maintained to the standards set out in the AFRPR (11 AAC 95.315). The 1.7 miles of new winter road will be constructed and maintained to the standards set out in the AFRPR (11 AAC 95.290 and 11 AAC 95.315).

Erosion

There are two soil erosion concerns: surface erosion and mass wasting of soil and debris. Road construction and poor maintenance of roads primarily causes surface erosion. To avoid erosion, debris will be placed back onto skid trails and water bars installed if necessary. Harvesting will be suspended during periods of thawing soil conditions to assure there is minimal soil disturbance. The location of skid trails will optimize skidding distances and provide for adequate landing areas. The other aspect of erosion (mass wasting and debris avalanches) normally occurs on slopes of more

than 70 percent therefore is not a particular concern because the proposed timber sale is on mostly flat ground.

L. Mining

This sub-unit of the TVSF has moderate mineral potential however; there are no mining claims within the sale boundary or proposed access routes. More detailed information on subsurface resource use is found in the TVSF Management Plan. Other than providing access, and sharing some of the same access roads, this sale will have no impact on the potential mining resources or mining activity in this area.

M. Materials

No rock materials will be required for the construction of access roads.

N. Economics

In addition to generating royalties to the State's general fund, the proposed sale will create economic benefits to the Fairbanks North Star Borough and to other locations in Alaska. The Borough business community will receive direct economic benefits from providing support services for the operators through sales of fuel, food, housing, medical and miscellaneous supplies. The sale is expected to benefit the local economy by providing jobs. The Residents of the Borough will receive an indirect benefit through taxes paid to cities and the Borough by the operator and employees during the course of the timber harvest operation.

The sale is expected to benefit the local economy by providing jobs. It will have a positive impact on local employment by generating significant man-hours of work associated with the harvest and transportation of wood products from this sale. Additionally the public may benefit from access to additional personal use fuel wood areas.

V. MARKET CONDITIONS

Interior Alaska has a growing demand for biomass and firewood and a sustainable market for saw timber. Heating oil continues to be more costly in the interior than the national average therefore residents are looking for an alternative and the only affordable one is wood. Local businesses are currently producing wood pellets as an alternative to traditional firewood. This market addresses an ongoing air quality issue in the Fairbanks area because these manufactured pellets produce almost no emissions. As this market continues to grow, the demand for material will increase. Other businesses are also looking into the use of biomass as a feedstock for producing electricity and heating alternatives in rural Alaska.

With improvements in wood stove technology for reducing emissions, firewood is also a viable alternative to high cost heating oil. The demand for firewood has steadily increased in the past few years and will likely continue to increase. Local suppliers of firewood continue to have a demand for accessible timber sales to deliver their product.

Residential construction and commercial operations throughout Alaska still need sawn products to support their operations. Local businesses that produce these products continue to pay for the delivered material.

These three markets create jobs in the forest products industry. Loggers, log truck drivers, commercial firewood cutters and mill workers all benefit from a sustainable timber market. This sale will provide the material needed to sustain these industries. As the economy continues to rebound there will be more demand for the products that this sector of the labor force provides.

VI. ALTERNATIVE ACTIONS

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

1. **To continue the sale(s) as proposed.**

   This alternative meets the objectives of the Five-Year Schedule of Timber Sales and DNR'S constitutional mandate. It also meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional jobs in Alaska due to the combination of road building, logging, and trucking. This alternative also complies with the management objectives of the TVSF Management Plan for Unit 7A.

2. **To modify the sale(s) by making them smaller or larger.**

   The proposed sale unit is a logical setting for typical commercial logging equipment in Interior Alaska. The size of the sale is designed to be large enough to be economically viable considering access development and mobilization costs and distance to processing facilities. Sales of this size are appropriately balanced to maintain other resource values as well as provide economic benefits to the Tanana Valley.

3. **Defer the sale of this timber to a later date.**

   Deferring harvest to a later date would fail to meet many of the objectives of the sale program. One of the main objectives is to make State-owned timber consistently available to the timber industry.

4. **Do 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. There would be no significant contribution to the State and local economies. This alternative would delay the management objectives planned for the area, deny making a source of raw materials available to the local wood products industry, and would delay the harvest of mature trees, prior to the onset of disease or insect infestation.

VII. FINAL FINDING AND DECISION

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY
BEST INTEREST FINDING
NC-1547, "Old Valdez Trail Spruce"

I. Formal review and response to objections, comments, or alternatives (summarized):

The Agency and Public review of the Forest Land Use Plan (FLUP) started on February 20, 2013 and ended on March 22, 2013. The FLUP review advertisement was posted on the Department of Natural Resources, Division of Forestry web site on February 20, 2013. In addition, requests for comments were either e-mailed or sent to various agencies, organizations and members of the public.

The Division of Agriculture and the Office of History and Archaeology had no comment. The Alaska Department of Environmental Conservation had no particular concerns or comments to offer for the protection of water quality, particularly since the unit contains no perennial surface waters and the appropriate buffers will be retained along adjacent anadromous and resident fish habitat. ADF&G stated a Fish Habitat (Title 16) Permit would be required for winter ice crossings. Riparian buffer surrounding any anadromous water body will follow Alaska Forest Resources and Practices Act (AFRPA) guidelines and are a minimum of 100 feet in width. The Forester-In-Charge ensures that any purchaser of this sale harvests timber per the sale design and sale contract provisions and adheres to AFRPA best management practices. The sale has been laid out to be screened from the view from the main channel of the Tanana River and adjacent sloughs and streams.

II. Final Finding and Decision:

The purpose of this decision is to determine if the Department of Natural Resources, Division of Forestry, shall make available 50.6 acres of spruce saw timber located in Section 32 Township 5 South Range 4 East, Fairbanks Meridian, Alaska.

1. The sale meets the objectives of the Five-Year Schedule of Timber Sales and DNR'S constitutional mandate.
2. The sale meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional jobs in Alaska due to the combination of road building, logging, and trucking.
3. The sale complies with the management objectives of the Tanana Valley State Forest (TVSF) Unit 7A, which allows for commercial and personal use timber production while protecting important wildlife habitat values.
4. Sale layout and design adhere with Region-III Riparian Standards. This sale is consistent with all statutes and plans.
5. The sale has undergone agency and public review and concerns have been resolved in the preparation, documentation and design of the sale.

The finding presented above has been reviewed and considered. The case file has been found to be complete. The requirements of all applicable statutes have been satisfied. Therefore, it is the finding of the Director that it **is in the best interest of the state** to approve this action under the authority of AS 38.05.035(e) and AS 38.05.110-120.

A person affected by this decision who provided timely written comment may appeal it, in accordance with 11 AAC 71.002. Any appeal must be received by May 14, 2013, and may be mailed or delivered to Dan Sullivan, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or

sent by electronic mail to dnr.appeals@alaska.gov. If no appeal is filed by that date, this decision goes into effect as a final order and decision on May 14, 2013. An eligible person must first appeal this decision in accordance with 11 AAC 71.002 before appealing this decision to Superior Court. A copy of 11 AAC 71.002 may be obtained from any regional information office of the Department of Natural Resources. It is the Division of Forestry's intent to offer this timber sale by auction on or after May 15, 2013. If no qualified bid is received within the time specified during the auction, the Division of Forestry may offer the sale for purchase over-the-counter without re-advertisement for not less than the advertised minimum bid.

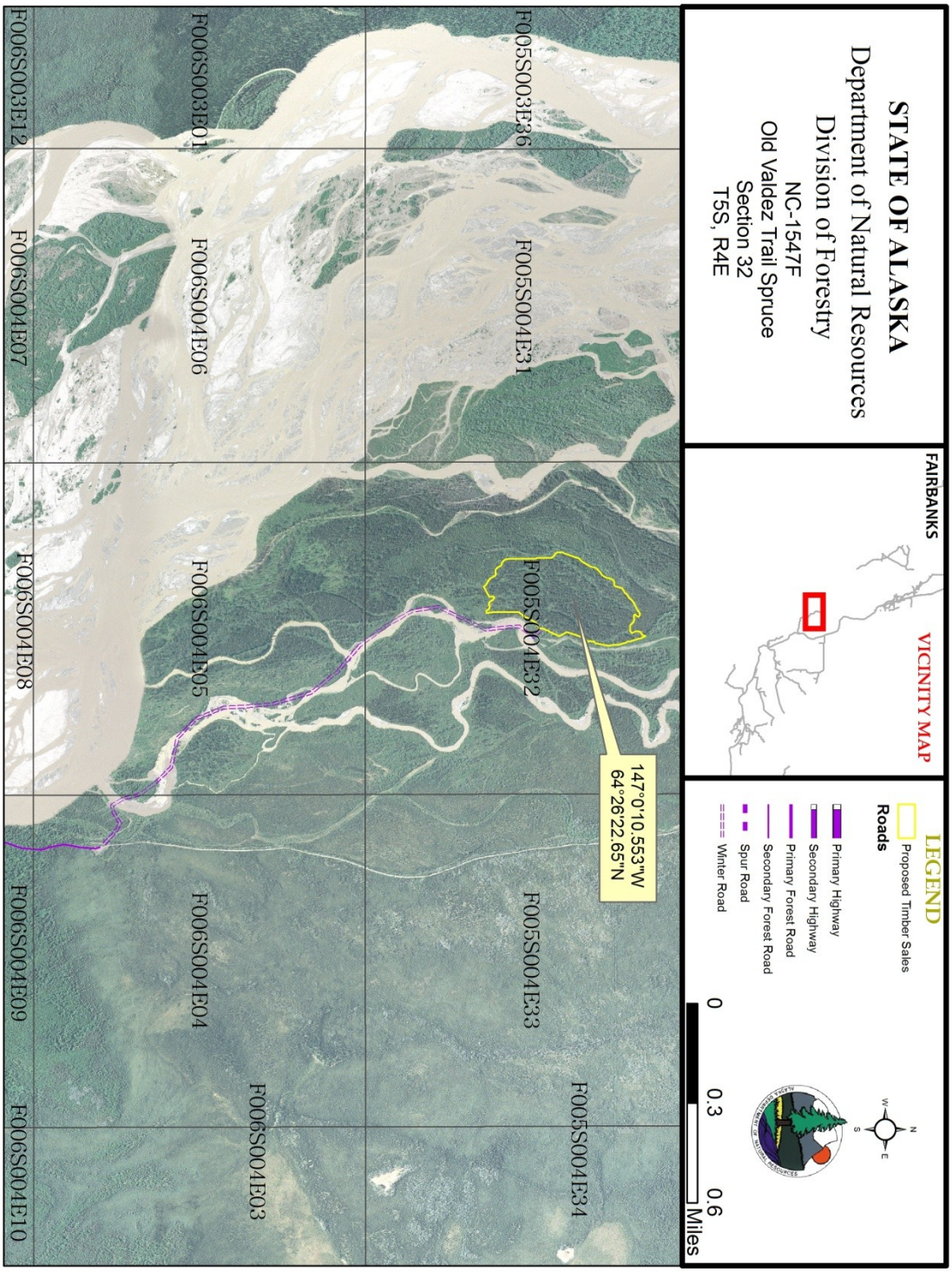
Prepared and Recommended by: Brian Young, Resource Management Forester

Concur (X) Do Not Concur ( )

Kathryn S Pyne

Kathryn Pyne
Fairbanks Area Forester

4/15/13
(Date)


STATE OF ALASKA
Department of Natural Resources
Division of Forestry
NC-1547F
Old Valdez Trail Spruce
Section 32
T5S, R4E
FAIRBANKS
VICINITY MAP
LEGEND
Proposed Timber Sales
Roads
Primary Highway
Secondary Highway
Primary Forest Road
Secondary Forest Road
Spur Road
Winter Road
0
0.3
0.6
Miles
147°0'10.553"W
64°26'22.65"N
F005S003E36
F005S004E31
F005S004E32
F005S004E33
F005S004E34
F006S003E01
F006S004E06
F006S004E05
F006S004E04
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