Preliminary Best Interest Finding (Revised)

For a

Long Term Timber Sale for Biomass Utilization in Tok, Alaska

NC-1075-T

December 17, 2012

State of Alaska
Department of Natural Resources
Division of Forestry

Contents

Definitions

The following subject specific terms are used throughout the document. The reader is advised to reference these terms prior to reading the document to understand the context and perspective of the document.

All Season Road - A forest road capable of supporting highway and logging equipment throughout the year, however closures may occur during periods of heavy rain or spring break-up.

Annual Allowable Cut (AAC) - The annual allowable cut (AAC) is the average amount of timber that may be sustainably cut from a forest that will maintain a balance between net growth and harvest while meeting the management intent for the land.

Board Foot- Nominally, a rough-sawn, green board 1 in. x 12 in. x 1 ft., or equivalent. Used as a log measure and as a measure of sawn lumber.

Bone Dry- Equivalent to Oven Dry.

Bone Dry Tons (BDT) - 2,000 pounds of woody biomass dried to 0% moisture content.

Bone Dry Unit (BDU) - 2,400 pounds of woody biomass dried to 0% moisture content

Critical Protection - suppression action provided on a wildland fire that threatens human life, inhabited property, designated physical developments and structural resources such as those designated as National Historic Landmarks. The suppression objective is to provide complete protection to identified sites and control the fire at the smallest acreage reasonably possible. The allocation of suppression resources to fires threatening critical sites is given the highest priority.

CUNIT- (CCF) One hundred cubic feet of solid wood. Used as a log measure or as a measure of solid wood content.

Cord- a measure of roundwood or pulpwood representing a stack of such wood 4 ft. x 4 ft. x 8 ft. or 128 ft^3.

Fiber Saturation Point – the point at which all free water has been removed from the wood, but all “bound “water” remains (water in the cell walls). This is approximately 25-30% moisture content, (Oven Dry weight basis), for all species. Below this point shrinkage occurs in the wood.

Forest Management Lands - Lands within the Tanana Valley State Forest and state lands outside the Forest designated in the Tanana Basin Area Plan as either Forestry Primary or Co-primary which are used to determine the Annual Allowable Cut.

Full Protection - suppression action provided on a wildland fire that threatens uninhabited private property, high-valued natural resource areas, and other high-valued areas such as identified cultural and historical sites. The suppression objective is to control the fire at the smallest acreage reasonably possible. The allocation of suppression resources to fires receiving the full protection option is second in priority only to fires threatening a critical protection area

Green- Description of living wood or wood that has been recently harvested and thus has a moisture content in excess of the fiber saturation point.

Green Ton - 2,000 pounds of woody biomass with moisture content in excess of the fiber saturation point.

Land Classification - Identifies the general purposes for which state land will be managed. All classification categories are for multiple uses, although a particular use may be considered primary. Land may be given a total of three classifications in combination.

Mainline Road - A primary forest road collecting secondary and spur roads and serving a large ownership block.

Oven Dry- Having zero percent moisture content. Wood heated in an oven to a constant temperature of 100-105 Centigrade until its weight stabilizes is considered oven dry.

Pole Timber- Is a stand of trees with an average diameter of that is between 5"-8.9" at four feet above expected stump height.

Primary Harvest Area- The area from which the majority of the woody biomass for this project is anticipated to be harvested. This area has been designated as primary for the most part due to its proximity to Tok. The Primary Harvest area is a subset of the Project Area.

Project Area - The general area of state land considered in this Best Interest Finding for harvest or required for the harvest. The area is limited by topography, timber types, land ownership, management intent and access.

Sapling- Is a stand of trees with an average diameter that is less than 5" at four feet above expected stump height.

Saw Timber- Is a stand of timber greater than 9" diameter at four feet above expected stump height.

Secondary Harvest Area- the remaining area from within the Project Area that is not designated as Primary Harvest Area.

Secondary Road - A forest road collecting spur roads and serving several harvest units.

Spur Road - A short, low-standard forest road that usually supports one or two harvest units.

Whole Tree Harvesting - A harvesting method in which the whole tree (above the stump) is felled and skidded to the landing for processing into logs, high quality wood chips or woody biomass fuel..

Winter Road - A forest road that has a load-bearing capacity derived from a combination of soil, frost, snow, or ice that typically only seasonally support highway vehicles and logging equipment.

Woody Biomass - For this finding, refers to the aboveground portions of white and black spruce, birch, aspen and balsam poplar.

I. Introduction

A. Purpose

A previous Preliminary Best Interest Finding (BIF) was published during the spring of 2012. That BIF proposed conducting a 25-year negotiated sale of timber and biomass under the authority of AS 38.05.118 with Alaska Power & Telephone (AP&T) for a similar location and circumstances in Tok, Alaska. Expressed competitive interest and public comment led to the State rescinding that draft finding on September 14, 2012.

The purpose of this Revised Preliminary Best Interest Finding is to provide sufficient information for reviewers to understand the director's determination that the best interest of the State will be served by the Department of Natural Resources (DNR) Division of Forestry (DOF) selling woody biomass material from state lands to supply a proposed cogeneration and forest products facility(s), to be located within the area of Tok, Alaska in the form of a competitive 25-year timber sale contract. The sale contract will be based on the woody biomass volume removed from State land as represented by scale of green tons of woody biomass. Due to the quantity and the duration of the proposed sale, specific units identified for harvest during the sale contract period will undergo their own public review process under AS 38.05.112 (Forest Land Use Plans) and AS 38.05.113.

The public is invited to comment on any aspect of this Revised Preliminary Best Interest Finding with regards to the AS 38.05.035 decision. Comments should be mailed to the Division of Forestry, Tok Area Office, PO Box 10, Tok, Alaska 99780. Comments may also be submitted by e-mail to dnr.fortok@alaska.gov or faxed to (907) 883-5135. Comments must be received at the Division of Forestry no later than 5 PM, February 4, 2013 in order to be considered in the Final Decision of whether or not it is in the State's best interest to sell this sale. To be eligible to appeal the final decision, a person must have provided written comment by this date.

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B. Public Comment and Outreach

The previous Preliminary BIF used a variety of methods to contact interested agencies, organizations and individuals concerning the proposed action in Tok. The comments received are compiled in a separate document available on the DOF website or on request from the DOF. The specific outreach used to obtain these comments included:

Publication of display ad notices in the local Tok, Delta and Fairbanks newspapers, in the Anchorage Daily News, and the Alaska Journal of Commerce; posted on the State On-Line Public Notice web page, plus on DOF's "What's New" and the Tanana Valley State Forest (TVSF) Citizens' Advisory Committee websites; press release sent out through DNR's Public Information Center to Alaska's media; public notices were mailed for posting at area Post Offices and Public Libraries; copies of the BIF were available for viewing at the public

libraries and Area Offices; and public notices were mailed or emailed to the DOF mailing list for FLUPs in the Tok Area and to Alaska Native organizations and tribal groups in the area. Public notices were also sent to the area's state legislators, and e-mailed to the Alaska Northern Forest Cooperative and Alaska Society of American Foresters' members. On May 17, 2012, the draft BIF was discussed and input provided by the TVSF Citizens' Advisory Committee, and on May 31, 2012, a community meeting was held in Tok to discuss and gather input on the BIF.

Based on the past Preliminary BIF process questions and the experiences gained, the DOF has met with the following organizations in the process of assembling this BIF: The Tok Area Forester consulted directly with representatives of various Alaska Native land owners and organizations, including the Native Village of Tanacross, Tanacross Corporation, Tetlin Native Corporation, Tetlin Village Council, Ahtna and Doyon Regional Corporations, and Tanana Chiefs Conference. DOF met with ADF&G to discuss wildlife and habitat considerations, and the Upper Tanana Fortymile Fish and Game Advisory Committee. The TVSF Citizens' Advisory Committee met twice and discussed progress on the draft BIF prior to its release to the public for comment.

In the interest of adequately reaching all interested parties the DOF will conduct an extensive outreach effort based on what took place as described above for the initial BIF. The DOF will hold at least one public meeting in Tok during the comment period, and will continue seeking input from the TVSF Citizens' Advisory Committee.

C. Location

The sale area encompasses state land within an approximate 40 mile radius of the community of Tok, Alaska located in Township 18N, Range 13E, in the Copper River Meridian. Tok is found on the United States Geological Survey 1:63,360 Quadrangle map titled Tanacross B-4. The sale area is shown on the attached Map I - Tok Vicinity & Land Ownership.

Two Alaska Native regional corporations Doyon, Limited and Ahtna, Incorporated, plus the following village corporations own land adjacent to the proposed project: Tanacross Incorporated, Dot Lake Native Corporation, and Tetlin Native Corporation. The Tanana Chiefs Conference Inc. and the Copper River Native Association are the area's regional Native non-profit organizations. The area's Tribal Governments include the Tok Native Association, Northway Native Association, Native Village of Tanacross, Mentasta Traditional Council, Tetlin Village Council and the Village of Dot Lake.

D. Objectives

1. Decrease wildland fire risk. To remove inherently combustible contiguous forest fuel types currently adjacent to the community of Tok as outlined in the Tok Community Wildfire Protection Plan (CWPP). This will improve public safety and reduce the risk of wildland fires to property in the Tok area. Where site conditions make it favorable to do so, promote regeneration on harvested sites from highly combustible spruce forest fuel types to a less combustible hardwood fuel timber type.

2. Meet mandate. To follow one of DNR's mandates 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 use of forest resources in the state, by providing a secure source of timber for local use while protecting other resources such as fish and wildlife.

3. Economic benefits. To provide a long-term fiber supply for a wood products processing facility and/or a biomass fueled cogeneration power plant, as an alternative energy project that has been proposed as a means to lower, stabilize and localize energy costs in the Tok area, provide additional local jobs, and support the local economy. This will also potentially contribute to the State's goal of 50% renewable electricity by 2025. Reducing hazard fuels may decrease the number of large project fires, thus decreasing the suppression cost of wildfires to the State.

4. Proactive forest management. Improve forest growth and vigor by harvesting and replacing mature stands with new healthy young stands, while protecting and maintaining other resource values. The actions authorized under this decision will adhere to multiple-use management principles or as appropriate, the site specific management objectives developed by the Tanana Basin Area Plan or Tanana Valley State Forest Management Plan.

5. Habitat improvement. To provide a mosaic of forest stand types and age classes for a variety of wildlife species that live in the area that is more diverse than the present configuration that is a product of fire suppression activity. Early-successional habitat after harvest has potential to foster public safety by increasing winter browse for moose away from transportation corridors, increase small game habitat including for ruffed grouse and snow shoe hare, and benefit songbird species that utilize shrubs and young forests.

E. Planning Framework

1. Scope of this Decision

The scope of this decision document is to determine if it is in the best interest (AS 38.05.035) of the State to sell approximately 35,000 green tons of woody biomass a year for 25 years in the form of a competitive sale. This document outlines the argument to reserve a defined amount of timber from the Annual Allowable Cut (AAC) in the Tok Management Area of the Tanana Valley State Forest and from other state lands for proposed cogeneration and forest products facility(s) in Tok, Alaska. The potential harvest area depicted and discussed in this document is general in nature and based on a hypothetical economic working area developed by DOF through discussions with AP&T, Young's Timber Inc., a need to reduce hazardous fuels and general knowledge of the area. As specific areas are identified and refined, they will be included in the Division of Forestry's Five Year Schedule of Timber Sales (see II, C, 3, d. below) for review by interested agencies, major land owners in the area, and the public.

The configuration of timber harvest on specific units of land and what type of harvest will occur will take place at a later date in separate documents referred to in AS 38.05.112 as Forest Land Use Plans (FLUPS) The public, agencies, and other interested entities will be requested to comment on those documents at that time. Subsequent field work, agency and community consultation along with site specific analysis by the DOF will be required before the state authorizes actual harvest of even small portions of this sale. Pending adoption of this best interest finding, FLUPS will be developed and reviewed for operating areas and will be required before any harvesting occurs by the purchaser.

2. CWPP

The Community Wildfire Protection Plan (CWPP) is the product of a professionally recognized planning process for encouraging community prioritization and support of pre-wildfire protection actions in a local setting. The greater community of Tok, with broad public input (state and federal agencies, Tok Volunteer Fire Department, Tok Chamber of Commerce, Tok Umbrella Corporation, etc.), developed the Tok CWPP over a two year period concluding in 2007. Although the CWPP is a not a decision document or a State required planning document, it represents a community developed awareness of local wildfire risks and actions that could minimize the effects of wildfire on the community. The CWPP developed for the Tok area considered varying ownership and management goals to propose what might be done on a landscape level and in what order to mitigate wildfire in and around the community. The biomass discussed for sale on State lands classified for settlement outside of the Tanana Valley State Forest will be prioritized based in part on this CWPP.

3. How State Timber Sales are Planned

The decision to offer specific timber for sale is based on a long series of planning decisions, made with public and agency input at each step. A Forest Land Use Plan (FLUP) for a timber sale is one of the final steps in this long planning process and serves as the harvest management plan for a specific piece of state land. 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 the harvest of specific timber in the Tanana Valley is as follows:

a. Fundamentally the Forest Resources and Practices Act (FRPA) and its regulations guide timber harvest activities in all commercial timber sale areas. The focus of the FRPA is the programmatic protection of the forest resources through the use of best management practices that maintain the water quality and soil integrity without significantly impairing fisheries and wildlife habitat (AS.17.010(3) and 11AAC 95.185).

b. The Tanana Basin Area Plan (TBAP – Updated 1991) and the Tanana Valley State Forest Management Plan are broad-scale analysis of the types of land uses appropriate on different areas of state land in the Tanana basin. The *TBAP* covers approximately 15 million acres and includes lands designated forestry. The TBAP is currently undergoing a revision and most of the area covered by this document will be included in the Eastern Tanana Area Plan (ETAP). The TBAP does not include lands within the TVSF. The TVSF Management Plan, however, sets the management goals for the 1.8 million acre State Forest.

c. The process to develop these plans included the means to openly review resource information and public concerns prior to making long-range decisions about public land management. The planning process 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.

d. Next, the Division of Forestry prepares a Five-Year Schedule of Timber Sales (FYSTS). 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.

e. Next the DOF prepares a Best Interest Finding (BIF) that outlines what is the best interest of the State for the scope of the project. In some cases this occurs simultaneously with the Forest Land Use Plan (FLUP) while in other instances, the BIF occurs in a separate document. Separating the BIF from the FLUP is based in large part on the perspective of the project. On longer projects that will be phased, the process can be separated, with the FLUP serving as the site specific planning mechanism and the BIF serving as an intent decision for the resource. For simpler or shorter lived decisions the BIF and FLUP are typically grouped into one document.

f. Finally the FLUP presents detailed information on the location, access, harvest methods, duration, and proposed reforestation for each area harvested. 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 the DOF gather information from the public and other agencies, we make well-informed decisions about uses of resources on state land.

II. Administrative Record

The DOF will maintain an administrative record regarding the decision of whether or not to sell a 25 year biomass and timber sale in the Tok area. This record will be maintained at the DOF's Tok Office filed as NC-1075T.

III. 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).

IV. Discussion of Issues

A. Physical Characteristics of the Sale Area

The topography ranges from the relatively flat Tanana and Tok River bottomland to the rolling hills north of the Tanana River. The elevation varies from 1,450 feet to 3,200 feet. Slopes in the sale area include nearly flat bottomlands and valleys along the major drainages and rolling 20 to 50% slopes in the hills north of the Tanana. Steeper slopes will likely preclude any significant operations.

B. Current Land Use

Much of the state land proposed for the sale area is in the Tanana Valley State Forest or is designated Forestry as its primary or co-primary use in the TBAP (see Map II – State Land Use Designation). In addition, there are a substantial number of tracts near Tok and along the Alaska Highway that are designated Settlement as their primary use and, based on the CWPP, are being considered for some level of harvest under this proposed sale. Any proposed activity on these lands, as well as other lands not designated Forestry will need prior specific approval of DNR's Division of Mining, Land and Water. All State lands around Tok have been incorporated in the Tok CWPP. One of the Plan's objectives is to identify, prioritize and reduce hazardous fuels within and

surrounding the community. The plan focuses on reducing the spruce component of a stand to create a less flammable hardwood forest. To date, fuels treatments have been limited due to no market for the woody biomass that would be generated or available state or federal funding to pay for treatments. As of 2011, some of the biomass being removed under the CWPP was being utilized to fuel the wood-chip boiler at the Tok School.

There are several significant high use public trails including the Eagle, Tetlin, Tanana Crossing-Grundler, Slana-Tanana Crossing, and Tanacross-Ketchumstuk, Dennison Fork Winter, and Johnny Trails within the sale area. Many unnamed minor trails exist in the area as well.

There are several Alaska Native allotments within the project area. The allotments are associated with historical Native use. These allotments are privately held property that is overseen in most cases through an agreement with the allotment owner and the Bureau of Indian Affairs (BIA). The BIA has subsequently empowered the Tanana Chiefs Conference, Inc. to assist in the management of the individual parcels. The specific location, owner and attributes of these parcels are restricted information and are not generally available to the public. The DOF is aware of the location of these parcels through an interagency agreement and will respect the location as it develops site specific management adjacent to them in the FLUP process in consultation with the Tanana Chiefs Conference, Inc.

Existing logging roads include both all weather roads and winter roads. The Porcupine road serves as access from the Taylor Highway into state forest lands north of the Tanana River. The Tok River Road may serve as access for harvest operations within the TVSF. Snow machines, dog mushers and 4-wheelers also use logging roads.

Hunting, trapping, fishing, berry picking are all done in the area. Commercial as well as personal use mushroom harvesters also use the area, especially after recent wildfires.

There exist several mining claim blocks in the area. The area is generally open to mining entry, with the exception of the former ‘Tok Research Forest’ that is protected by Leasehold Location Order #31. There are no active mines in the area.

The University of Alaska tentatively had title to approximately 4,007 acres north of Red Fox Drive. These lands reverted to state ownership and are no longer part of the University system. Prior to this action, the University in conjunction with DOF, as part of their studies on boreal forest systems, established and continues to maintain several permanent forest research plots and an experimental tree species trial in Section 7. These lands are included in the operable area but the DOF intends to work with the University to reserve the study areas from harvest unless it is determined by events that they would be aided by active management.

C. Sustained Yield and Allowable Cut

AS38.04.910 (12) defines sustained yield as “the achievement and maintenance in perpetuity of a high level annual or periodic output of various renewable resources of state land consistent with multiple use”. The annual allowable cut (AAC) is the calculated amount of timber that can be harvested from an area managed under the sustained yield principal.

1. Tanana Valley AAC

In 2000, Parsons and Associates, Inc., under contract with the DOF, calculated the AAC for the Tanana Valley. Their analysis divided the land base into four different Management Areas of which one is Tok. Calculations

were based on lands designated forestry as primary and co-primary in the Tanana Basin Area Plan and lands within the Tanana Valley State Forest henceforth described as forest management lands. The DOF subsequently adjusted the Parsons and Associates estimate to reflect somewhat longer rotation ages and a retention factor to better capture acreage retained for other values. The retention factors are described in Table 10, Chapter 2 of the TVSF Management Plan (http://forestry.alaska.gov/management/tvsf_final_plan.htm). The longer rotation ages were based on comments by professionals who thought the rotations were low for certain areas with low productivity.

In preparation for new biomass uses in the Tanana Valley, the DOF expanded its inventory data to include the higher volume black spruce and mixed black spruce stands that were initially excluded from the Parsons and Associates sustained yield analysis (see attached Map III Operable State Lands). If the Parsons and Associates methodology is used with the adjusted rotation age and retention factors, approximately 3,100 acres are available each year for harvest in the Tok Area on a sustainable basis. With the additional black spruce and black spruce/ hardwood acres the sustained yield is likely to increase and will be updated in the revised TVSF inventory.

2. Other State Land

In the Project Area, there are also 7,900 acres of other state lands managed by the DNR's Division of Mining, Land and Water that could be harvested with their concurrence. The DMLW has collaborated with the DOF in developing the general harvest plan as outlined in this BIF. These lands are not part of the AAC calculations since these lands are designated for conversion to other uses. For example, lands identified for settlement will be subdivided and sold as residential or recreational property making it not appropriate to consider them as being part of a renewable fiber supply although, in the long term, some reoccurring contribution may be available from maintaining defensive space. Most of these lands are part of the Community Wildfire Protection Plan and are proposed for some form of initial treatment. As a result of discussions with the local community during the formation of the Community Wildfire Protection Plan and with the Division of Mining, Land, and Water, the DOF estimates the need to retain 40 % of these lands for aesthetic and other values or demands. This partial harvest is anticipated to make 4,700 acres of land available for biomass harvest from these other state lands. As these treated lands regenerate and grow, over the next 25 years the adjacent untreated lands may also require some level of treatment to keep to the objectives discussed in CWPP.

3. Fire

Fire plays a significant role in the ecology of the Tok Area. Since 1947, the Tok Management Area has burned 205,600 acres within the Tanana Valley State Forest and forest classified lands- averaging 3,200 acres per year. About 220 acres per year or over 14,000 acres of land within the proposed operable area burned during the same 65 year period, (see attached Map X – Historical Fires in Operable Area). The amount of land that may burn during the 25 year period of this project is approximately 7% of the project area. As these burned over stands regenerate and age, they grow into size classes that could be harvested or burn again.

A significant amount of residual timber within past and future fire perimeters may be capable of being salvaged for woody biomass uses for some time after being burned and from "islands" of timber within a fire's perimeter that were not burned.

As the harvest progresses, increased access and stand conversion to less fire prone species such as aspen and birch will reduce the potential for large fires and increase the likelihood of an effectively larger acreage pool being available for future harvest over the long term.

4. Biomass Inventory (State Land)

There is a total of 3,370,000 green tons of biomass in the project area (Map III A). This tonnage is derived from destructive sampling conducted by the DOF, timber typing and forest inventory measurements augmented by the USFS and DOF sampling during 2009. The DOF measured a total of 630 plots in 63 timber stands. The total standard deviation for these 630 plots was 7.9 percent.

The sapling size class was not originally sampled but has been determined to contain useable biomass. To provide an estimate of the sapling type characteristics, the 2009 USFS data has been applied using the same volume and weight equations as the other size classes and timber types. More sampling was done during the summer of 2012 and the data collected will be merged with existing data to produce a final report with a statistical analysis in 2013.

The method of representing and estimating these volumes is complex and based on parameters requiring qualification based on a number of factors. Please see Appendix 1 for further discussion on biomass inventory methodology. Table 1 details the estimated acreage by timber type within the land classes, the resulting volumes of associated timber by species in these respective types (Saw Timber, Pole Timber, Sapling) and finally a weight of the woody biomass (green tons). Table 2 represents the same set of estimates for the Primary Timber Sale Area. See Section L. (Project Timeline and Scheduling) for an explanation of “Primary Timber Sale Area”.

Table 1. Project Area Timber Type Summary

	TVSF		Forest Classified		Other State		Total	Total	Total
	CCF	Tons	CCF	Tons	CCF	Tons	CCF	Tons	Acres
Sawtimber									
Acres	1,481		357		0				1,838
Aspen	23	153	21	123			44	276	
Balsam Poplar	288	1,558	66	358			354	1,916	
Birch	460	3,165	51	397			511	3,562	
Black Spruce	726	6,485	167	1,489			893	7,974	
White Spruce	36,692	142,888	8,664	33,066			45,356	175,954	
SubTotal	38,189	154,249	8,969	35,433	0	0	47,158	189,682	
Poletimber									
Acres	13,092		7,803		1,473				22,368
Aspen	19,332	101,141	6,065	34,068	1,078	6,144	26,475	141,353	
Balsam Poplar	27,379	143,177	957	4,731			28,336	147,908	
Birch	8,875	50,673	4,360	22,652	1,019	5,244	14,254	78,569	
Black Spruce	2,745	17,026	1,760	11,833	278	1,878	4,783	30,737	
White Spruce	136,206	608,964	97,289	429,237	18,233	80,985	251,728	1,119,186	
SubTotal	194,537	920,981	110,431	502,521	20,608	94,251	325,576	1,517,753	
Sapling									
Acres	24,063		10,460		6,388				40,911
Aspen	19,732	208,872	8,577	90,791	5,239	55,452	33,548	355,115	
Balsam Poplar	6,257	32,486	2,720	14,121	1,661	8,624	10,638	55,231	
Birch	1,684	14,679	732	6,380	447	3,897	2,863	24,956	
Black Spruce	11,310	130,665	4,916	56,797	3,003	34,690	19,229	222,152	
White Spruce	92,885	591,001	40,375	256,893	24,660	156,901	157,920	1,004,795	
SubTotal	131,868	977,703	57,320	424,982	35,010	259,564	224,198	1,662,249	
GrandTotal	364,594	2,052,933	176,720	962,936	55,618	353,815	596,932	3,369,684	
GrandTotal Acres	38,636		18,620		7,861				65,117

Table 2. Primary Timber Sale Area Summary

Sawtimber									
Acres	235		236		0				471
Aspen	5	35	18	103			23	138	
Balsam Poplar	48	258	42	227			90	485	
Birch	277	1,854	32	263			309	2,117	
Black Spruce	120	1,076	106	945			226	2,021	
White Spruce	6,621	26,182	5,609	21,254			12,230	47,436	
SubTotal	7,071	29,405	5,807	22,792	0	0	12,878	52,197	
Poletimber									
Acres	3,354		6,746		1,473				11,573
Aspen	7,032	35,900	4,175	23,160	1,078	6,143	12,285	65,203	
Balsam Poplar	3,541	17,380	600	3,009			4,141	20,389	
Birch	2,232	12,446	3,719	19,310	1,019	5,242	6,970	36,998	
Black Spruce	646	4,147	1,649	11,081	278	1,878	2,573	17,106	
White Spruce	33,930	151,759	87,557	383,766	18,230	80,973	139,717	616,498	
SubTotal	47,381	221,632	97,700	440,326	20,605	94,236	165,686	756,194	
Sapling									
Acres	4,156		9,341		6,388				19,885
Aspen	3,408	36,070	7,660	81,082	5,238	55,451	16,306	172,603	
Balsam Poplar	1,080	5,610	2,429	12,611	1,661	8,624	5,170	26,845	
Birch	291	2,535	654	5,698	447	3,897	1,392	12,130	
Black Spruce	1,953	22,565	4,390	50,723	3,003	34,689	9,346	107,977	
White Spruce	16,040	102,060	36,057	229,421	24,659	156,898	76,756	488,379	
SubTotal	22,772	168,840	51,190	379,535	35,008	259,559	108,970	807,934	
GrandTotal	77,224	419,877	154,697	842,653	55,613	353,795	287,534	1,616,325	
GrandTotal Acres	7,745		16,323		7,861				31,929

D. Stand Conditions

1. Existing

There are five different tree species present in the Tok Area: white spruce (*Picea glauca*), black spruce (*Picea mariana*), paper birch (*Betula neoalaskana*), quaking aspen (*Populus tremuloides*), and balsam poplar (*Populus balsamifera*).

White spruce occurs in pure stands and in mixed stands with birch, balsam poplar, aspen and black spruce. It attains its best development on well drained to moderately well drained silt and sand loams. The well-stocked white spruce type represents the most productive sites (Viereck et al. 1992. *The Alaska Vegetation Classification*). The white spruce type is considered to be the climax vegetation type on the well-drained upland sites. Over several centuries on some floodplain sites, or in upland sites in the absence of fire, white spruce types may be replaced by black spruce as permafrost develops on the site.

Black spruce occurs in pure stands but may have a mixture of white spruce and hardwoods. Black spruce occurs commonly on organic soils with poor drainage, often underlain by permafrost. Generally, pure stands of black

spruce are less than 25 feet in height but some stands occurring on better sites can reach pole timber size of 5 inches diameter at 4.5 feet (DBH).

Paper birch occurs in pure stands but may have a mixture of white spruce, black spruce and other hardwoods. Birch attains its best development on well-drained silt loam soils. The stands generally result from fires where adjacent unburned birch trees spread considerable amounts of seed on the newly exposed sites. Upland stands typically grow on aspects other than due north or due south. Stands will also grow on flood plain sites, but are usually not associated with the most actively flooding zones. In these areas balsam poplar is the dominate timber type.

Quaking aspen occurs in pure stands but may have a mixture of white spruce, black spruce and other hardwoods. Aspen attains its best development on well-drained silt loam soils, but on areas that are warmer than the birch sites. Stand development results from fire similar to birch. Aspen can also be regenerated vegetatively (coppice sprouting). This is accomplished by totally removing the aspen overstory which allows shoots to sprout from the roots. These shoots become new trees which are actually clones of the original stand.

Balsam poplar is generally found in nearly pure stands on floodplains, but may have a mixture of white spruce. These stands are usually found where erosion and flooding are active. These sites usually are quite productive, but are limited in nature to river bottomlands. Balsam poplar stands develop as a successional sequence that begins with alder-willow thickets on exposed sandbars. These stands eventually develop into white spruce forest.

2. Harvest Prescription

The predominant harvest method will be patch clear-cuts with reserves. The patches will be separated by uncut timber stands while the reserves will consist of uncut clumps of trees within the patch clear-cut. Unharvested areas which include the reserves and uncut timber between the patches will be approximately 40% of the area. Size and shape of each cut will be determined by site specific characteristics such as terrain, soils, and water bodies and will be addressed in the Forest Land Use Plan that will be required prior to harvest.

3. Expected Regeneration Conditions

The sale will encourage the regeneration of hardwoods for use as a fire resistant buffer for the community of Tok. Where aspen is present, the total removal of the aspen and spruce overstory will promote aspen's natural reaction to grow new shoots from its roots – a common practice where aspen is managed as a forest crop.

Where birch is present, the common practice in Alaska is to rely on natural seeding from adjacent stands or seed trees left in the harvest unit. Once the unit has been harvested, the unit will be scarified to provide an optimum seedbed by exposing mineral soil.

High utilization of browse by moose and hares at the time of stand establishment may have a strong effect on successional trajectory, potentially reducing hardwood biomass and increasing spruce dominance (and fire risk) at the desired rotation period. Depending on site specific management objectives, logging debris such as non-merchantable tops can deter or reduce browsing by ungulates to allow survival of hardwoods to the free-to-grow stage for future biomass production. Management objectives for biomass production, stand composition, herbivore abundance, and herbivore harvest will need to be integrated in the Forest Land Use Plan to increase the potential for the desired forest structure and composition. Artificial structure created from retained logging debris can also serve as denning or nesting sites for some species.

Hardwood regeneration will be encouraged over the spruce near settled areas to promote a more fire resistant forest. Although the spruces in these areas are not the desired species, both produce seed every year and some will become established after a harvest. They are both shade tolerant and if given the time will outlast the shorter lived hardwoods and dominate the site. Harvested spruce stands outside the desired fire resistant buffers described above will be encouraged to regenerate freely to continue to provide for timber products and the forest mosaic needed for diverse wildlife habitat.

E. Wildland Fire Management

Most of the forest stands in the area are the result of wildfires. After a fire, seeds from surrounding spruce and hardwoods regenerate the area. The faster growing hardwoods typically dominate the site for many years while the spruce remains in the understory. Early on, the stand is relatively fire resistant as hardwoods offer little fuel for a wildfire. Spruce, on the other hand, provides fuel with their low dead limbs acting as a ladder for ground based fires to reach the explosive needles in their crown. As the stand ages, these longer lived spruce eventually take over creating conditions ripe for another wildfire and starting the process all over again.

Fire management options include letting wildfires burn where they do not threaten life and property. Much of the more remote parts of the Tok Management Area are managed in this manner. Fires are monitored for possible threats. These fires result in a forest with a mosaic of forest stands ranging from young stands dominated by hardwoods to older spruce stands that have not seen fires for a hundred years.

Management options for wild land fires in and around communities require a more aggressive approach to protect life and property. These fires are suppressed, creating, after many years, an older forest where fire prone spruce dominates the landscape. If these stands are left unmanaged, they can evolve to a level where a fire becomes a catastrophic event.

Active forest management can reduce the likelihood of a wildfire becoming a threat to a whole community. The interest in biomass for fuel to produce heat and power has created a use for trees that, not so long ago were considered a waste product, communities would have to pay to remove and alleviate the risk of wildfire. Tok is in a position where a local business could pay a market based fee to cut trees to fuel their manufacturing and/or electrical generating facility. The stands next to the community could be managed for hardwood by removing the spruce and encouraging hardwood reproduction creating a forest resembling the younger early successional forests present outside the community where wildfires are allowed to burn if they do not threaten life and property. Harvest operations further out from the community would mimic the disturbance frequency of the existing fire regime by harvesting the stands rather than allowing them to burn. As a result, a mosaic of multi-aged forest stands would reemerge as a landscape feature.

As the term of the contract proceeds, more timberland is converted to hardwood, substantially reducing the chance of a catastrophic wildfire. Fuels within a hardwood stand are mostly on the forest floor. There are far fewer lower limbs (ladder fuels) on birch and aspen to allow the fire to burn to the tree tops and create a dangerous fast moving crown fire. Fires on the forest floor tend to be slow moving creeping fires because of higher moisture content and the reduced influence from wind.

F. Wildland Fire Historical Costs and Projection

The majority of the operable area is in Critical or Full. These protection levels require aggressive firefighting strategies during the most fire prone part of the season. Fires in Limited Protection, however, are usually

monitored and are only fought if they threaten life and property. These protection levels are discussed and agreed by all the different private, Native, state and federal land managers.

Fighting fires is expensive. For example, the last large fire in Tok was the 18,000 acre Eagle Trail Fire in 2010 and cost the state $9,295,884 and the federal government over $4,000,000. Costs associated with large fires threatening communities vary between $500,000 and $20,000,000. These fires are typically fueled by white and black spruce and are very difficult to control.

Once aircraft and additional crews and equipment are ordered, costs quickly escalate. Following are estimated costs for various resources:

Cost for a load of jumpers: $9,000/day

Cost for a helicopter and bucket: $3,500/day plus $1,250/hour

Cost of air tanker: $8,995/day plus $3,000/flight hour

Cost of Type 1 crew: $9,310/day.

Cost of Type 2 crew: $6,090/day

There are five levels or types of crews: Type I Interagency Hotshot Crews (IHC), Type 1, Type 2-Initial Attack (IA), Type 2, and Type 3. Type 2 crews are often made up of seasonal firefighters whereas a Type I IHC crew are "Hotshots" and have at least seven full time, career firefighters on the crew (Superintendent, Assistant Superintendent, 3 Squad Bosses).

In addition to the direct costs incurred while fighting fires, the National Institute of Standards and Technology reports, during 2008, the nation suffered the death of 18 people, 257 injuries and a property loss of 3.1 billion dollars as a result of 364,000 wildfires (Hamins et al 2012).

A managed forest will create conditions favorable to the reduction of highly flammable fuels and to more effective and efficient initial response to new fires. The breakup of fuel types by harvesting older contiguous spruce stands and encouraging hardwood regeneration will reduce the threat of crown fires and drop fires to the ground where they are much more manageable with existing personnel.

Roads are constructed during timber harvest operations allowing firefighters access to areas they would normally have to hike, use jumpers, or use expensive helicopters or air tankers. Even closed roads act as much better access than having to hike through heavy brush. Quick response allows firefighters to contain a fire early, reducing the probability of the fire reaching a size where local resources are unable to contain the fire and additional crews are needed.

G. Project Timeline and Scheduling

In keeping with the primary objective of the BIF (to reduce hazardous fuels), the operations will first target areas nearest the community of Tok, then transition to the forest lands outside the community. This process of setting up defensible space near the community will take between 5 and 10 years. The BIF maps depict the project area that the DOF may operate in over the proposed project life span. The project area is subdivided on the maps showing area outlines from within which the harvesting is likely to occur (primary harvest areas)

along with approximate timelines; the remaining is depicted as "secondary harvest areas". The secondary area will be used at the DOF's discretion once the initial objective of reducing hazardous fuels near Tok has been accomplished. The plan is to recover the majority if not all of the volume required for the contract from the "primary areas". If conditions change in the primary area, (land use, major burn, etc.) the secondary area will be utilized to meet contract obligations in keeping with the objectives of this BIF. The areas depicted on the maps represent a pool from which the harvest will occur; the complete area outlined will not be harvested during the course of contract. Harvest units in the primary and secondary areas will be chosen by professional judgment of the DOF in order to make the best use of the State's resource. These specific decisions will be described in the associated FLUPs.

H. Wildlife Habitat

The basis for wildlife habitat protection and enhancement on state land is provided in AS 41.17.010(1) and AS 41.17.060(c) (7), and on the Tanana Valley State Forest is provided in AS 41.17.400(e).The following section has been provided by the Department of Fish and Game:

The term "wildlife" broadly includes birds and mammals in Alaska. Some resident wildlife is managed by the Alaska Department of Fish and Game (ADF&G) on the sustained yield basis for harvest, such as moose, caribou, and gallinaceous birds (grouse, ptarmigan). Migratory wildlife is managed by the U.S. Fish and Wildlife Service (USF&WS) under international treaties; in forested ecosystems this includes waterfowl harvest and songbird conservation. USF&WS does not list any wildlife species with a range overlapping the sale area as endangered, threatened, or as a candidate for listing.

Per FRPA a no-harvest radius of 330 feet will be planned for and established to protect the nest site of bald eagles. Peregrine falcons (formerly listed) will be treated in a similar manner, and the USF&WS will be notified about nest locations discovered during sale layout.

Wildlife habitat is composed of food, water, and cover at the proper spatial scale and arrangement to meet the life requirements of a given species to live in an area. In forested ecosystems, living and dead wood provide food (e.g., shrubs and hardwood saplings are winter forage for moose, dead wood harbors insects for birds) and structure (e.g., overhead cover against predation, cavities for nesting) at the stand level. Larger structures used by wildlife generally are found in older or dead trees and are comparatively rare on the landscape. Some late seral features require time to develop and cannot be hastened by silvicultural practices to increase rate of tree growth (structural size). For example, the biomass or volume of terricolous, fruticose lichens (especially those of the genus *Cladina*) attractive to barren-ground caribou as winter range takes >50 years to re-develop after disturbance by fire or heavy grazing and trampling (reviewed in Joly 2011). Potentially it takes at least the same period on wood harvest sites if lichens are crushed by equipment or if post-logging site conditions initially favor competing vegetation, such as grasses and forbs.

Habitat suitability for a species is also a factor of the arrangement of harvested and non-harvested stands and other vegetation types in a broader landscape, particularly for avian and larger mammal species that have home ranges or migratory routes across multiple stands. The quality of habitat is ultimately expressed in the fitness of animals through success in reproduction and survival. Understanding fitness requires life history studies of individual species using specific habitat types. The focus on individual species management, typical for harvested species, is considered a "fine filter" approach to maintaining a wildlife species at the desired abundance. Information on fitness is lacking for most non-harvested species, so maintaining their presence and

relative abundance in a managed landscape is often sought through a "coarse filter" approach of maintaining the present (or achieving a desired) mix of stand types, stand age classes, and their spatial pattern among other vegetation types in the landscape.

Mimicking the patterns and features of natural disturbances is a first approach with a coarse filter. The future distribution of stand ages across the landscape will be affected by the desired rotation for biomass production. As stands are identified for harvest during the course of this contract period, the design of harvest unit size, shape, and position on the landscape relative to areas not harvested should include consultation with ADF&G staff to consider the needs of wildlife populations and habitat.

Roads and associated clearings are a habitat attribute that may function as a corridor or filter (hindrance or barrier) for movement by wildlife, depending on the species and its type and scale of terrestrial use (e.g., rodent or ungulate). Roads for forest management are also a major source of hunter and trapper access by highway vehicle, ATV, or snow machine from the road system near Tok. An increase in road access can increase wildlife harvest (including Dall sheep (*Ovis dalli dalli*) at higher elevations outside forest) and may require regulatory restrictions (e.g., from any bull to antler restrictions on moose) to ensure sustained yield. Such antler restriction can reduce the harvest while still providing opportunity to hunt. Aside from habitat considerations, planning of new roads on public lands, including temporary or season access, should involve consultation regarding uses with communities and the locally affected state Fish and Game Advisory Committees.

1. Existing Habitat

The existing wildlife habitat in the Tok area may be approximated from forest inventory data combined with knowledge from fitness studies on selected species or guilds (groups of species, such as insect gleaning or cavity nesting songbirds) from similar ecosystems. In lieu of fitness, data on species diversity and relative abundance may be instructive, such as point counts for migratory passerines. Species and habitat information then could be used with a statement of goals and objectives to identify Best Management Practices for maintaining or improving wildlife habitat features at the stand and landscape level with respect to biomass harvest and silviculture. For example, consult with a local ADF&G wildlife biologist before allowing timber harvest near a mineral lick used by ungulates to avoid displacement by disturbance or vegetation removal. Another example is that confirmed bear dens should be protected from mechanical damage by equipment, and disturbance of the immediate area should be avoided during winter harvest operations.

Invertebrates and non-vascular plants provide the greatest species diversity in boreal forests (Pastor et al. 1996). Below are selected vertebrate species managed for harvest in forested habitats and for which knowledge of habitat requirements is relatively better known compared with species that are not hunted or trapped.

Black and brown bear (*Ursus americanus* and *Ursus arctos horribilis*)—Both bear species occur in the sale area, although brown bears are less abundant and more likely present near subalpine terrain. Both species consume young vegetation in spring, prey on young ungulate calves, salvage ungulate carcasses, and concentrate on ripe berries and roots in fall. Forb, root, and berry production could be increased with forest harvesting. Black bears may den in lower elevation forest where suitable digging is afforded on hillsides or old river terraces.

Caribou (*Rangifer tarandus granti*)—Caribou typically occur in small groups but can aggregate at times in larger herds in the sale area. They travel through frozen marshes, burns, and other large open areas. Forested

areas where biomass of lichen understory is adequate and snow is loosely consolidated to allow digging can serve as winter range. If wildland fire burns an increasing proportion of winter range for the Fortymile and Nelchina caribou herds, the area of late-seral woodland with lichen understory may decline. Mitigation of forest management effects on lichen biomass could become important if harvest of open or woodland forest with dense lichen understory increases. At this time this type of forest is not a targeted harvest type. If lichen is encountered, the effects can be mitigated by limiting equipment operation with a minimum of 6 inches of snow cover (Paragi, personal communication).

Grouse and ptarmigan—Three species of grouse inhabit forest the upper Tanana Valley: spruce grouse (*Falcipennis canadensis*), ruffed grouse (*Bonasa umbellus*), and sharp-tailed grouse (*Tympanuchus phasianellus*). Spruce and ruffed grouse nest in mid-late seral forests, with brood rearing habitat optimal in adjacent shrub or hardwood stands in dense early-seral regeneration, proving concealment or escape from predators. Young birds eat insects for protein and transition to an adult grouse diet of primarily leaves in spring and summer, berries in fall, and woody buds in winter (and spruce needles for spruce grouse). Sharp-tailed grouse inhabit more open habitats such as grassland, agricultural fields, woodland forest, or recent burns. During winter, rock or willow ptarmigan may occupy forested areas to consume buds.

Lynx (*Lynx canadensis*)--This carnivore preys primarily on snowshoe hares and grouse, and its abundance tracks these prey species. Maternal dens are commonly in or near deadfall.

Marten (*Martes americana*) –Martens eat primarily small mammals and berries and occasionally snowshoe hares. Abundance is correlated spatially with small mammal biomass, which often peaks with forb and grass abundance after wildland fire. Deadfall provides hunting access to subnivean spaces, particularly in burns. Maternal dens are commonly in or near deadfall or in larger tree cavities.

Moose (*Alces alces*)—Moose forage on a wide range of aquatic plants, forbs, and woody plant leaves during summer to gain nutritional reserves as muscle and fat but exist almost entirely on browse during winter, generally a period of declining nutritional reserves. Moose often concentrate on winter range where hardwood or willow regeneration is abundant in active river floodplains and recent burns. Forest management may increase woody forage in certain circumstances and attract local moose to sites where they are more visible to hunters for a few years, but an increase in the moose population may be restricted by predation. Increasing forage near highways could increase risk of vehicle collisions during migration or winter concentration. Migratory moose use lower elevations of the Tok River drainage during winter (NC-837-T FLUP, amended 2003).

Snowshoe hare (*Lepus americanus*)—Abundance of this keystone species fluctuates sometimes dramatically on a roughly decadal basis, influencing local and regional abundance of several mammalian and avian predators. Dense early-mid seral hardwoods, shrubs, and spruce regeneration provide optimal forage and concealment cover from predators, but hares may be forced to inhabit poor quality habitats during peak abundance.

Wolf (*Canis lupus*)—Wolves are a primary predator of caribou and moose and broadly occupy the sale area. Their relative abundance is correlated spatially with ungulate density. Wolves are sought by trappers as a fur resource, and their abundance may be controlled by management activities to increase abundance of caribou and moose.

2. Projected Habitat

Fire suppression and limited timber markets presently hinder maintenance of early seral hardwood forest and shrubs for wildlife habitat near settlements in interior Alaska (Haggstrom and Kelleyhouse 1996). Future amount and distribution of habitat in the sale area is expected to be influenced primarily by forest management (including hazardous fuels reduction) and wildland fire on upland sites and fluvial action in active riparian areas. Mineral development and other surface activities may also influence vegetation. Trends in climate may influence the rate of vegetative response to disturbance through potential effects on nutrient cycling, growing season length, soil moisture, and other ecological effects.

Biomass harvest will provide an opportunity to create stand type and age class diversity in areas where wildland fire suppression has maintained contiguous spruce forest, particularly near communities. However, biomass harvest will differ from the present sawlog harvest by utilizing more hardwoods and smaller diameter spruce trees and by salvage of standing dead wood and tops from larger trees. Regeneration of shrubs and hardwoods on harvested spruce sites may require mechanical or prescribed fire scarification where grass (especially *Calamagrostis canadensis*) exists and its dense regeneration can hinder woody species. Maintenance of late-seral features (snags, cavity trees, spruce rust brooms), particularly the larger, more rare features in the landscape, will require operator education to identify them for avoidance. Open canopy spruce forest with dense lichen understory will require identification during sale unit layout to evaluate the potential for minimizing lichen damage in caribou migration corridors or on winter range. The migration corridor has been documented to be generally outside the project area. This may be important in the context of recent fire history where lichen biomass was greatly reduced but will not be a significant amount of the project area and should be able to be avoided under most circumstances.

Due to the existing stand conditions and migration habits of the vertebrate game species, the area being harvested generally is not considered critical habitat though it contains values for these species due to the extent of its coverage on the landscape. Since the annual and total harvest areas from this contract will be significantly larger than those associated with typical harvest activities of the past 30 years, additional measures may need to be included to accommodate important wildlife habitats in the contract area. ADF&G staff from the divisions of Wildlife Conservation and of Habitat will work with DOF to develop preliminary BMPs for large game, furbearers, birds, and small mammals to assist in meeting that objective.

To monitor the effects of road networks, biomass harvest, and forest regeneration on wildlife populations and habitat, and the effectiveness of those preliminary BMPs, it will be important to understand the present conditions and be able to forecast future scenarios based on clearly stated assumptions developed in coordination with DOF. Such an improved understanding of how vegetation and wildlife species respond to treatments at the stand and landscape scales will allow adaptive management to incorporate scientific information over time to potentially modify the preliminary BMPs. Public education during the planning process will also allow informed engagement on policy decisions.

Some bird and small mammal species known to use habitats that will likely be affected by biomass harvest are considered Species of Greatest Conservation Need (SGCN) in Alaska's Wildlife Action Plan. That Plan aims to keep species from becoming listed as threatened or endangered. The opportunity to work with DOF on first developing and then field testing BMPs is timely since ADF&G's Wildlife Diversity Program is considering a potential project aimed at a pre- and post-treatment inventory of SGCN birds and small mammals at biomass

sites. Any BMPs that successfully minimize impacts to species of concern will have important benefits in present and future sale areas.

I. Fisheries and Water Quality

The Forest Practices Act and its Regulations establish standards for timber harvests and forest road construction and maintenance. The sale areas will be designed, and operations will be conducted, in a manner which is in compliance with the Alaska Forest Resources and Practices Act (FRPA). To maintain water quality during road construction and harvest operations, the Division of Forestry will mandate implementation of FRPA's Best Management Practices in the timber sale contract. To protect water quality of non-fish bearing water bodies a combination of retention areas, directional felling, partial suspension of logs, split-yarding, and removal of logging debris from stream channels will be required.

The Alaska Forest Resources and Practices Act best management practices have been determined to provide adequate protection from potential water degradation. Information from field inspections, compliance monitoring, and the state's Alaska Clean Water Actions database indicate that FRPA is effective in protecting water quality. The annual report from the Department of Environmental Conservation (DEC) on the effectiveness of FRPA concluded that, "when properly implemented, the BMPs are effective at protecting water quality." No streams have been identified or listed for violation of water quality standards as a result of forest operations subject to the FRPA best management practices.

These standards are designed to minimize the potential for adverse effects to water quality due to forest harvesting activities. Issues specific to a harvest unit will be addressed in subsequent FLUPs.

Anadromous and resident fish streams will be managed in accordance with AS 41.17.118. *Riparian standards for state lands*., AS 41.17.950. *Definitions*. and the regulations 11 AAC 95.260. *Riparian standards*. The Habitat Division of the Department of Fish and Game will be consulted during the process of writing specific Forest Land Use Plans. Habitat permits will be secured if stream crossings are needed.

In addition to the riparian standards required under the Forest Resources and Practices Act, the following water bodies have special management zones required by the Tanana Valley State Forest Management Plan. The width of the zone is determined on a case-by-case basis but in no case will it be less than 100 feet:

Tanana River	Sand Creek	Bear Creek
Billy Creek and Associated Lakes	Fish Lake	Mansfield Creek and Associated Lakes
Mansfield Lake	Robertson River	Round Lake
T Lake	Porcupine Creek	Clearwater Creek
Little Tok River	Tok River	

J. Erosion

The Forest Practices Act and its Regulations establish standards for timber harvests and forest road construction and maintenance. These standards are designed to reduce the likelihood of erosion caused by road construction or harvesting equipment. Issues specific to a harvest unit will be addressed in subsequent FLUPs.

K. Subsistence

The harvested units will revert to younger early successional plant species which will, in turn, support wildlife adapted to those plant communities such as moose and ruffed grouse, allowing for a potential increase in those wildlife populations and increased hunting opportunity. Required riparian and wetland zones will keep habitat required by species needing an older forest. Furbearer trapping success may increase, remain stable, or decline for a period of time in logged areas depending on the forest harvest and silvicultural practices applied and the population response and habitat use of the animal species. Berry picking should increase as stands are opened up allowing existing plants to multiply or by allowing new berry plants to get established. With adherence to the FRPA and its protection of water bodies, no noticeable effect on fishing should be evident by the proposed harvest activities.

Roads resulting from harvest operations will increase access whether the roads are closed or kept open for subsequent forest management activities. Highway vehicles may not be able to use the closed roads but ATV's, snow machines, and mushers will take advantage of the closed roads rather than have to brush their own trails.

L. Recreation

Increased access will be the primary impact to recreation. The roads associated with the harvest will allow people broader access to streams, hunting and berry and mushroom picking areas. Closed roads will be used by ATV's, snow machines, skiers, mushers and hikers.

M. Scenic Resources

A significant portion of the harvest associated with the CWPP will be adjacent to the community of Tok and will initially be partially visible. State lands designated for settlement will be harvested to create harvested and unharvested areas that provide the necessary wildfire protection while also allowing for the forest stands that many people desire in their backyards and neighborhoods. The targeted species for reforestation near the community is aspen. Aspen is a fast growing tree and should quickly reforest the site. Where feasible given access routes and ownership, harvest units outside the community will be designed with irregular borders following natural terrain breaks and stream corridors. These units, once revegetated, will look much like the past burns scattered throughout the region. No harvest is expected to be seen from the Alaska Highway.

N. Cultural Resources

Besides the several historical trails in the operational area, there is the potential for archeological sites. Prior to committing to individual harvest areas, the DOF and the Office of History and Archaeology/ State Historic Preservation Office (SHPO) will develop an assessment model for the overall project area covered by this BIF. This model will be used to focus and prioritize field surveys. In addition, SHPO will have the opportunity to review each individual Forest Land Use Plan.

As specific harvest areas are planned, local tribal governments and associations will continue to be consulted to identify and address concerns about potential impacts on traditional uses or archaeological sites.

During the course of activities associated with this sale, cultural resources (historic, prehistoric, and archaeological sites, locations, remains, or objects) may be inadvertently discovered. Should such a discovery occur, the site shall be protected from any disturbance, and DOF will contact SHPO immediately to evaluate whether the resources should be preserved in the public interest and their concurrence shall be requested for continuing improvements (as specified at Section 41.35.070[d]).

1. Burials/Human Remains

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 Alaska State Troopers, State Historic Preservation Office (SHPO), and the State Medical Examiner shall be contacted for further guidance pursuant to State laws and protocols pertaining to the discovery of human remains within the State of Alaska.

O. Mining Impact

Mining is a subsurface land interest. Timber harvest is generally allowed on these lands. The new road access from this harvest can be of benefit to existing and future mining claims.

Individual mining claims will be addressed as site specific FLUPs are presented for review.

P. Harvest Methods

Harvesting forest biomass for energy is relatively new to Alaska. For the project to succeed, systems using mechanical falling and skidding is the only method that can efficiently and economically harvest stands with large number of small diameter stems. There are systems developed in Canada and Scandinavia specifically for small diameter wood which may fit the conditions for this project.

Once the trees are skidded or forwarded to a roadside, the trees can then be loaded on conventional trucks to be processed at the energy plant or chipped in the woods and loaded in chip vans and delivered to the plant ready for the boilers.

By processing the wood at the plant, conventional logging trucks and loaders could be used. This method would not lend itself to whole tree harvesting where the limbs as well as the bole are utilized. An in-the-woods delimber and ample log storage space at the plant would be needed for this system.

Chipping in the woods is a common approach for this type of operation but has not been done in Alaska for any length of time. Whole trees are chipped and then hauled to the plant. A mobile chipper, chip vans, and a chip storage facility at the plant would be required for this system. Road construction standards may need to be more refined than normal logging roads because some types of chip vans have less clearance and are less tolerant of bumps and sudden changes in grade.

Q. Nutrient Cycling

Chipping and processing in the woods does retain more nutrients on a site than removing whole trees for processing off-site. Whole tree harvesting has the potential to remove non-merchantable fines that include nutrients left on site during wildland fire (as ash) or conventional logging (as tops). Large and small woody debris along with other soil organic matter, once released by decomposition, are, however, a major source of nutrients that promote plant productivity (Chapin, Kielland, McGuire, Valentine, and Van Cleve 2006). The warming of these soils has the potential to promote decomposition and improve the availability of nitrogen and other nutrients (Van Cleve, Oliver, Viereck, and Dyrness 1983). Short rotation intensively managed forests require, in most cases, fertilization in order to maintain productivity. The long rotations required in the Tanana Valley State Forest Management Plan will allow the replenishment of any nutrient loss prior to the next harvest. For example Van Cleve estimates the amount of nitrogen removed by harvesting a birch trunk would be replaced by forest floor reserves in two years and those reserves, with the help of nitrogen fixating alder, would be made up in about fourteen years (Van Cleve, Weber, Viereck, and Dyrness 1979).

Certain soil types are prone to poor nutrient availability to vegetation. Thin, porous soils have a tendency to leach needed nutrients while poorly drained soils are less likely to decompose the organic layer subsequently not making nutrients available to growing plants. The identification of these soils types and the potential effect of nutrient removal from these sites will be considered in the Forest Land Use Plan harvest prescription.

The DOF will continue to monitor and encourage research to better understand the dynamics of soil nutrients and harvesting and use the results to manage the state's forests. For example, DOF is collaborating with the forest researchers at the University of Alaska Fairbanks who are implementing the Boreal Alaska-Learning, Adaption, and Production (BAK-LAP) project whose purpose is to investigate biomass questions.

R. Transportation

1. Characteristics

Roads used to access the harvest areas will need to include existing maintained and unmaintained roads as well as new forest roads. The Tok Cut-Off, the Alaska Highway, and the Taylor Highway (Alaska Routes 1, 2, & 5) are the major state highways serving the Tok area. Other secondary roads serving subdivisions will be used to access stands for treatment proposed by the local CWPP. Unmaintained roads such as portions of the Eagle Trail and abandoned Alaska Highway will need to be reconditioned prior to use. Over the years, the DOF has also constructed roads as part of its timber sale program. New secondary and spur roads will be developed off of these existing roads. Maintenance of the existing and proposed roads will also be planned. Proposed new road routes will be shown in the DOF's Five Year Schedule of Timber Sales when known. Comments on these routes are encouraged so the DOF can address issues in the more detailed FLUP and subsequent management of the area. The FLUP also provides an opportunity for further public input on the type of long term access.

New road construction will include both winter and all weather roads. Winter roads are generally used where terrain such as muskegs make it very difficult to build conventional roads. Winter roads are built on frozen ground, only removing material that is necessary for a smooth road at an acceptable grade. Snow and ice bridges are typically used for winter roads. All weather roads, on the other hand, require much more excavation and movement of material to get a good running surface at an acceptable grade. Manufactured bridges and culverts are required for this type of road construction. These roads are much more expensive but they can be used year round.

All forest roads used in timber and biomass operations are subject to the road construction and maintenance standards in 11 AAC 95.285 to 11 AAC 95.335. In addition forest roads in the Tanana Valley State Forest are required to follow guidelines in the Transportation section of the Forest's Management Plan as well as the Plan's standards described in the Plan's Appendix F.

2. Management

Existing and new road management will require consultation with other agencies, local governments, land managers, and the public.

a) Access

Concern for public safety may require limited access to forest roads during active harvest operations but will not preclude access to residences.

b) Closure

Once forest roads are deemed not necessary for future forest management activities, they will be closed as required under 11 AAC 95.320 [Road Closure]. Closed roads require the removal of drainage structures, the shaping of roads to provide drainage and prevent erosion, and preventing their use by highway vehicles. Decisions to close specific roads and limit road access will be made during the FLUP process. Agencies and the public will have the opportunity to comment on these actions at that time.

Roads may be closed if they are determined to be an undue maintenance expense, aide in environmental degradation (widespread illegal dumping or stream bank degradation) or serve as access for trespass on adjacent private land.

In addition, roads may be temporarily closed as access for hunting by the Alaska Board of Game as a regulatory action to manage for sustained yield of some species like moose.

V. Economics and Market Conditions

A. Current Regional Timber Prices

The recent timber sale in Fairbanks sold spruce saw logs for $31.13/ CCF. This equates to approximately $18.31/ green ton. Birch fuel cordwood stumpage in Fairbanks sold for $25.03/ CCF which is equivalent to $10.01/ green ton. Both of these conversions are based on volume tables utilizing to a 6” and 4” top respectively and tons/CCF ratios of 1.7 and 2.5 respectively.

Superior Wood Pellets is currently paying operators approximately $40/ green ton for residual round log wood delivered to their pellet mill in Fairbanks. This type of wood is a mix of spruce, birch and some aspen not meeting the quality required for saw logs.

Several small mill operators and firewood suppliers operate in the Tok area. Young’s Timber Inc. has a 10 year contract with the DOF expiring in 2018 for $40/ MBF for saw logs and $8 per cord for low grade wood. The amount of timber required for this commitment is relatively small compared to this proposed biomass harvest and is exclusive of the ground proposed for this BIF.

In the fall of 2012 a blow down event occurred across the interior of Alaska. A number of areas near Tok experienced concentrated amounts one of them being in the Dry Creek area. Recent sale of this wood has started at $10/ MBF for saw log, $5/ cord and $1/green ton for biomass. Location and cost of operating in blow down influenced these figures.

B. Woody Biomass

Woody biomass used for heat or power generation is generally a product of residual or waste from timber and sawmill operations in most parts of the world. Woody biomass comes in a variety of forms. The most common are byproducts of sawmills with some recent efforts for increased recovery of woods wastes and as an alternate method of site preparation prior to reforestation efforts. Minimum handling, transportation and processing of the material is typically an underlying theme along with avoidance costs of disposal of the material. With increasing costs of petroleum based energy, industry has been able to increasingly justify using what once was considered purely a waste product and recover basic costs within varying economic working circles. With

increasing petroleum costs, harvesting costs increase but not as significantly as they do when petroleum is the source of the heating energy. The added use of the material has to a certain extent improved the technology of handling the material and in areas where quantities meet economies of scale, is increasingly used. These "working circles" typically are products of land owner end goals and the local cost of energy. The shift in the use of forest biomass in the past three years has been additionally stimulated particularly in the lower 48 with various federal government incentives.

1. Tok Woody Biomass (State)

Based on timber stand inventories, the DOF estimates that timber harvested as part of this proposed operation could produce saw logs, cordwood and residual woody biomass. The project area of this sale area will encompass a variety of stand sizes and types. The majority of the wood fiber harvested will take the shape of what would in the past have been considered sub merchantable due to its smaller size. In 2007 the DOF started a pilot study looking at available fiber and its net energy value in a variety of timber types. Based on the Tok sampling, indications are that the stands generally contain more weight in fiber and thus more BTUs of potential energy than traditionally documented. Traditional volume tables for these timber types focused on saw log and cordwood products; whereas recent work has included all trees in the stand. Whole tree harvesting systems is the focus of this study where not just the bole of a tree is used but also the limbs, tops, and bark are used for fuel. With this perspective the usable timber types were also expanded to include the black spruce pole timber types that are not considered "dwarf" (less than 25 foot total tree height).

An initial outcome of this work was the construction of the Tok School wood heat boiler that is powered by whole tree chipping and wood waste from the local area. The initial goals were also to reduce energy heating costs and wildfire risk near the school and community. A secondary phase of the project added electrical generation capacity to the system to reduce their monthly electrical costs of $30,000. Indications over its first year of operation, is that it will achieve its goals. The DOF has encouraged the processes by guiding and encouraging the location of harvesting operations within the community on private and public land to mitigate wildland fire. The DOF estimates the school needs 40 acres per year to supply its boiler. Currently there is a 4-7 year supply of decked wood harvested as part of a fuel reduction project available for the school boiler. The 40 acres/ year required is relatively small compared to this BIF and is exclusive of the ground proposed for the BIF project. The school paid the DOF $2/GT in stumpage for the fuel and incurred a contract cost of $52/GT this spring for delivering it to the school. This is a relatively high delivery cost but within their operating budget and below the displaced cost of diesel. Economies of scale appear to be driving this high delivery rate and limit market interest because of the small quantity over which to amortize operating costs. Costs estimates based on time and motion studies indicate this cost should be roughly a quarter less with greater scale of the operation as proposed for this BIF.

In 2010 AP&T starting looking into displacing diesel fuel used for the generation of electrical power in Tok with a combined heat and power facility (CHP). The study is funded partially through a funding grant from the Alaska Energy Authority (AEA). The study is ongoing and has precipitated AP&T's and other market interest in a woody biomass supply from the State land base in the Tok area.

As presented to the DOF, potential purchasers are developing varying complexities of business models linked to the generation of power in Tok. With most power generation, and in particular with woody biomass, low grade heat is a byproduct of the electrical generation process. A variety of things can be done with it such as building

heating or drying facilities adjacent to the facility. Recovering heat as part of the plan increases the overall efficiency and economics of the plan. Secondary opportunities also are being talked about for densified fuels generated from some of the wood stream that would enter the facility. The goal of densifying the fuel typically is to make an economically transportable fuel that has an increased amount of recoverable heat per unit of weight. Typically this also achieves a more efficient burn where it is ultimately used than raw chips or cordwood. Examples of densified fuels are pellets, fuel bricks, briquettes or torrefied wood. Once produced it could be sold as a commodity. Packaging multiple woody biomass products (electricity, heat, lumber, densified wood, etc.) together has the potential to ultimately lower delivered electrical rates to the consumer in Tok when considered as a whole. On the other hand it also introduces dependency that may at some point in the future affect the viability of the project if the market conditions change for any one product.

2. Other Sources of Woody Biomass

The other major owners of forested land in the area are the various Alaska Native entities. Some of these organizations have voiced interest in managing their timber lands with the potential outcome being a contribution of some level to the woody biomass supply. If this happens, it will aid in creating a more resilient and economic fiber supply. It will also achieve other potential goals for the land owner such as forest health, wildlife habitat improvement and possibly desired access. As outlined previously there is not a large potential for revenue on the landowner side of the equation due to the value of resource. The value to the landowner comes potentially in other forms.

C. Economic Effect on Current and Projected Forest Resource Use

The total gross annual acreage available for harvest in the Tok Management Area is 3,300. Historically, less than 1 % of the "timber" on the management area is burned annually. Current timber sales in the area use an average of 200 acres per year of which 66% has been salvaged timber from previous burns which reduces the saw log demand for green timber to 70 acres per year. In addition, it is expected for the Tok School biomass facility to need 40 acres per year to produce heat and electricity. Removing these historical and anticipated needs from the available acreage in the Tok Management Area leaves 3,000 acres for timber sales. The estimated need for this sale is 700 to 900 acres depending on the timber type targeted in a given year. This would leave approximately 2,200 acres per year in the management area for future projects.

This anticipated use off of State land associated with this BIF will likely enable greater management flexibility for all land owners due to the added possibilities of low end utilization. Due to the value of the material being used the direct economic benefit to the land owner will be modest.. At times during the proposed project, the saw log and cordwood quantities potentially available to the local market will exceed demand due to the increase in stand access. Over all price for the more desired logs (that could be used for a variety of uses including biomass) will vary somewhat but not significantly because this aspect of the market is constrained by the price the market is willing to pay for the quality of the products that can be produced from the material. The demand and price for these logs generally will follow the cost of comparable substitutes regionally, not the local availability of the log. The projected future use of the fiber and logs will likely be constrained more by other factors like community size than the availability of the resource due to its location relative to the world market. The quality and density of the resource is also not of a type that will be significantly influenced by the world demand for wood fiber to the point that it will be a major contributor beyond the region any time soon.

Other potential demand in the region may come from the proposed Fort Greely combined heat and power facility that Siemens Industry Inc. is working towards with the US Army. This project will require in the neighborhood of 110,000 green tons per year of biomass or, in other words, 1,000 to 5,000 acres per year. The Fort Greely project may be enabled by the Tok project's experience and contractor pool or cause a competing demand. Given the distance to Fort Greely, the amount of direct competition will likely be limited once the supply source for that project has been defined and secured by Siemens. Siemens has voiced interest in purchasing timber in the Delta Area from the State. Until that supply is defined, some portions of the Tok area could potentially be considered operable in some business models for the Fort Greely project. Once supplies are determined for the projects, the market for competent contractors will be influenced by the two parallel operations and sway some costs until the market pool stabilizes. Reliable loggers and contractors should have opportunity not present at his time.

D. Method of Appraisal

Provisions of the Alaska Statutes Title 38 (Public Land) and Alaska Administrative Code Title 11 (Natural Resources) are applicable as well in forming the terms of the contract with a purchaser of state resources. Per 11 AAC 71.092 (Pricing for sale of timber).

> (c) …"the department will sell timber on the basis of its appraised price. The appraised price is a formal determination of the timber's fair market value and is determined by an appraisal conducted by the commissioner. The commissioner will, in the commissioner's discretion, select and apply one or more appraisal methods to determine the appraised price of the timber. Appraisal methods include, at the discretion of the commissioner, comparative market or transactional evidence; end or residual values; other methods customarily used for appraising timber; or another method designed to yield fair market value as determined by the commissioner. To make the appraisal, the commissioner will, in the commissioner's discretion, use costs, prices, values, and other information obtained from prudent operators, state and federal agencies, industry associations, price or market reporting services, or other sources that the commissioner considers reliable.
>
> (d) The commissioner will, in the commissioner's discretion, adjust the appraised price or adjust the method of appraisal under (c) of this section to allow for operating costs. Operating costs that the commissioner may allow include, but are not limited to, costs for activities such as recovering, removing, handling, storing, or transporting the timber.
>
> In addition to the initial appraisal of the timber value, the contract rate will be redetermined at an interval of approximately every five years or when the DOF determines that a major change has occurred in the market of the resource."

The DOF believes that it is in the state's best interest to appraise this sale specifically as follows:

- A standard for wood utilization will be developed that reflects the majority of the woody forest material on the targeted forested sites in the Tok area, best available technology, industry operating practices, FRPA and other environmental requirements.
- The DOF will estimate the highest and best use of the products in the project area.
- Based on transactional evidence and market demand for saw logs and cordwood (round log products) or biomass, the DOF will apply a likely value for those delivered products. The State will be compensated based on that market rate minus the estimated total cost of delivery to market. The DOF will factor in local demand, timber type and economies of scale in its decision to differentiate the round log products

from the remainder of the biomass in a given FLUP. It will be the purchaser's decision to use the log at that price for round wood products or biomass energy production. It is anticipated that the method of payment will be based on a green ton scaled basis of woody biomass removed from State land. As part of the timber sale contract, the timber and biomass value will be redetermined to reflect fair market value (11 AAC 71.092) at least every 5 years.

- It is anticipated that these collective costs will not leave a significant amount of residual value for stumpage return to the State. The collective stumpage due the state will at a minimum recover the costs to the State of preparing and administering the sale. These costs will include the costs of designing, engineering, laying out the harvest and transportation systems along with estimating the timber volume and values, and developing the specific FLUPs. Other agency costs not specifically paid by the legislature in designated or operating funds that are needed to ascertain site specific issues that affect the long term viability of the land and resources will also be included. The subsequent administration by DOF of the sale to protect the State's interest will be as well. The DOF has done projects of similar scope in other parts of the state. Having said that, this project has several unique aspects due to location and likely harvesting techniques. The DOF has a proximate idea of the reoccurring costs of design and engineering. New technology and its applicability to this style of harvesting will likely play a key role in managing administration costs but will not eliminate the need to actively look out for the State's best interest with an active field presence. At this time the DOF estimates it will require the addition of one full time Forester II to manage the contract and a full time Forest Technician III to assist in the various field duties. Costs of training, outfitting and mobilizing staff and supporting them are all real costs of doing business. The costs associated with FRPA administration will be paid (as typically done) by general operating funds and augmented with timber and biomass sale revenue with the expectation that where state sale activity occurs, the added FRPA costs are essentially synonymous to the contract administration.

- Reforestation costs are not anticipated to be significant for the state based on past harvest experience in the area. The cost of needed road construction will be born by the purchaser unless it is deemed to be in the State's interest to develop higher standard roads for longer use. Prior to building permanent road the long term maintenance will be addressed in a FLUP for the area it serves. The majority of the roads associated with this proposed sale will be temporary in nature. Existing roads used as part of this operation will be maintained as part of the biomass contract proportional to their use.

In 2012 the Legislature appropriated $200,000 in the form of a Tok Biomass Capital Improvement Project (CIP). The DOF is using this CIP for the various startup costs of assessing the applicability of the biomass resource and developing the administrative systems necessary to sell this resource. Although the DOF has extensive history selling saw log timber and cordwood, this is a relatively new format with regard to whole tree biomass. Initial costs being: inventory analysis, this BIF, contract development and interagency consultation expenses to insure adequate resource protection.

E. Jobs

1. Plant

The construction of the facility will contribute to an influx of capital and manpower in the community over one to two years. The actual CHP complex will likely require an increased number of personnel to operate over a comparable diesel generation facility primarily due to the material handling requirements and added machinery. These personnel will be semi-skilled laborers and there may also be a need for trained technicians and mechanics to run the plant. The numbers required will ultimately depend on the final design and if the purchaser's business plan requires diversification of the end products other than heat and power.

2. Harvesting

The harvesting operations will likely employ six to eight skilled laborers, loggers and mechanics year round to support the operation. Some road building capability will also be added to the employment base. The roads will generally be minimal in scope due to favorable soil conditions of alluvial outwash gravels near Tok and winter road construction elsewhere. Soil conditions where all weather roads are likely to be economic will be on well drained sites (not muskegs). Most of the ground is generally capable of supporting truck traffic during the majority of the year with the removal of only the duff layer but the rivers of the area will force a large majority of the remote construction and hauling to occur in the winter.

3. Support

The operation will require a number of additional support staff that may be accommodated by the existing methods of business in the region. The added machinery and manpower will likely generate some economic spin off to the local community along with Fairbanks and Anchorage due to the complexity of the systems typically employed in the plant and the harvesting equipment.

F. Energy Discussion

1. State Energy Policy

"AS 44.99.115. Declaration of state energy policy" was signed on June 16, 2010 by Governor Sean Parnell. The following are sections are applicable in whole or part to this project:

"The State of Alaska recognizes that the state's economic prosperity is dependent on available, reliable, and affordable residential, commercial, and industrial energy to supply the state's electric, heating, and transportation needs. The state also recognizes that worldwide supply and demand for fossil fuels and concerns about global climate change will affect the price of fossil fuels consumed by Alaskans and exported from the state to other markets. In establishing a state energy policy, the state further recognizes the immense diversity of the state's geography, cultures, and resource availability. Therefore, it is the policy of the state to

(2) encourage economic development by

(A) promoting the development of renewable energy resources, including geothermal, wind, solar, hydroelectric, hydrokinetic, tidal, and biomass energy, for use by Alaskans and for export;

(B) N/A

(C) working to identify and assist with development of the most cost-effective, long-term sources of energy for each community statewide;

(D) creating and maintaining a state fiscal regime that encourages private sector development of the state's energy resources;"

2. Existing Conditions

Electrical power in the Tok area is generated locally by a relatively large diesel generation plant. In Fiscal Year 2011 Tok calculated average residential electrical rates were at 51.02 cents / KWHR. The legislature through the Power Cost Equalization (PCE) program offset that cost by 32.56 cents /KWHR. The PCE is applicable to rural residential users for the first 500 kWh per month of electricity; use over that is at the calculated average

residential rate. Other rural users such as State and federal offices, commercial entities and schools pay as determined by the rates developed by the utility under the oversight of the Regulatory Commission of Alaska (RCA). The rates developed by the RCA reflect the cost of electricity in a regulated environment for profit driven utility companies in Alaska. The scope of the regulation limits the profit and guides a number of other parameters that are beyond the scope of this document. Detailed information on the RCA can be found on their web site http://rca.alaska.gov/RCAWeb/home.aspx. Efficiency upgrades have also been ongoing to the Tok diesel generators since 2006.

3. Alternative Sources of Energy Considered

AP&T has looked at a variety of energy sources in efforts to decrease cost. Alternatives considered include natural gas, hydro, wind and woody biomass. Natural gas is not likely to be an alternative until a gas line is in the proximity of the area; natural gas's energy density to price is less than diesel and likely will not be competitive without a proximate and low cost source. The hydro potential of Yerrick Creek was examined and initial indication was that it could be economically practical to build a "run of the river" facility to provide power for a portion of the year that the creek runs (May- October). Peripheral issues of land ownership during permitting and licensing have tabled this project. Another seasonal "run of river" site is also being considered near Clearwater Creek and was recently notified in the Federal Energy Regulatory Commission process by AP&T. Wind and solar resources have been examined but indications are that the resources are not economically viable relative to the demand.

4. Future Electrical Rate Determination

The DOF does not set electrical rates. The development and long term viability of woody biomass CHP facilities is a product of operating and capital costs being less than revenue. From the DOF's role as steward of the State's forest resource it is statutorily required to seek fair market value for its resources. At present time, AP&T has indicated they will seek to achieve electrical rates that are comparable or lower than predicted diesel generated electricity rates. AP&T is a regulated utility and must account for its costs in an RCA defined manner. A CHP facility run by an independent energy or forest products company is not required to be certified by or directly regulated by the RCA: additional margins exist for renewable energy facility owners to recover costs up to the value of the displaced cost of generation by the utility (in this case using diesel). All that is required of the utility is that it pays no more in purchasing the power than the cost it would by running petroleum based fuels. The purpose of these State and Federal exemptions is to promote growth in the field of renewables during a time of emerging technology and markets. The prime value to the community and the State comes in terms of decreased fire risk and potentially stable power costs. It is in the best interest of the State for the cost of power in Tok to be at a low rate as long as environmental and social factors are mitigated and fair market prices are considered as these stands are converted to a less fire prone landscape around Tok. In the event that one of these variables becomes unbalanced, the interests of the state may not be served and the arrangement will be modified or terminated.

VI. Action Alternatives Considered

1. Negotiate an agreement to the state's best interest under AS 38.05.118 with a purchaser for the harvest of approximately 700-900 acres/year of timbered land for a contract period of 25 years to provide woody biomass for an electrical cogeneration plant located in the vicinity of Tok. Competitive interest in the resource precludes this perspective at this time. The default method of sale of State resources is through a competitive process.

Options for sale by negotiation are relatively limited in applicability. In the interest of fair access to public resources it is generally not utilized in a competitive market unless extenuating circumstances exist or there is only one interested party.

2. Offer woody biomass on the open market from timbered land in a manner outlined in AS 38.05.110-120 (competitive sale disposal procedure) notwithstanding AS 38.05.118 that meets anticipated market demand of approximately 700-900 acres/year for a contract term of 25 years. This option offers equal opportunity to public resources and provides sufficient time to amortize the large capital costs of CHP facility development by either a utility or forest products company.

3. Sell timber as needed per market demand on a short term basis (1-3 years). Under this alternative the DOF would offer timber to meet the industry demand up to the AAC for the area. This option would potentially offer reoccurring opportunity to multiple purchasers. Given the capital expenses of a CHP facility, the confined land base and unknown willingness of other timber supplies, this option is not a practical. The high capital costs of developing CHP facilities also tend to dictate longer time horizons for investors. In a more accessible land base a short term model may be applicable but not in Tok. The DOF will monitor the market in the future and make efforts to make state resources available not part of this proposed finding commensurate with industry demand on a yearly basis.

4. Do nothing. This option does not meet the DNR's constitutional mandate in light of the market interest unless significant harm will come to the state's resources. This document has outlined the existing framework that is in place to protect the State's resources and interests under the alternatives considered.

VII. Preliminary Finding and Best Interest Decision

The purpose of this finding is to determine if it is in the best interest of the Department of Natural Resources, Division of Forestry, to sell approximately 700-900 acres/ year of timber to provide biomass for a cogeneration facility in the vicinity of Tok, Alaska. After due consideration of all pertinent information and alternatives, the DNR has reached the following **Preliminary Finding: To competitively sell woody biomass as described in Alternative 2**. In addition, the DNR finds that this preliminary finding satisfies the objectives as stated in this document and it is in the best interest of the State to proceed with this action.

Signature on File

December 17, 2012

_____ _____

Chris Maisch Date

State Forester

Abbreviations

ADFG: Alaska Department of Fish and Game

AAC: Annual Allowable Cut

AP&T: Alaska Power and Telephone

BIA: Bureau of Indian Affairs

BIF: Best Interest Finding

BMPs: Best Management Practices

CWPP: Community Wildfire Protection Plan

DEC: Department of Environmental Conservation

DNR: Department of Natural Resources

DOF: Division of Forestry

DOT/PF: Department of Transportation/Public Facilities

ETAP: Eastern Tanana Area Plan

FF: Final Finding

FLUP: Forest Land Use Plan

FRPA: Alaska Forest Resources and Practices Act

FYSTS: Five Year Schedule of Timber Sales

MBF: One Thousand Board Feet of Lumber

RCA: Regulatory Commission of Alaska

SHPO: State Historic Preservation Office

TBAP: Tanana Basin Area Plan

TVSF: Tanana Valley State Forest

Links to Planning Documents

Tanana Basin Area Plan

http://dnr.alaska.gov/mlw/planning/areaplans/tanana/

Tanana Valley State Forest Management Plan

http://forestry.alaska.gov/management/tvsf_final_plan.htm

Parsons and Associates Sustained Yield Report

http://forestry.alaska.gov/pdfs/sustn_yld.pdf

Annual Allowable Cut Report – DOF

http://forestry.alaska.gov/pdfs/aac.pdf

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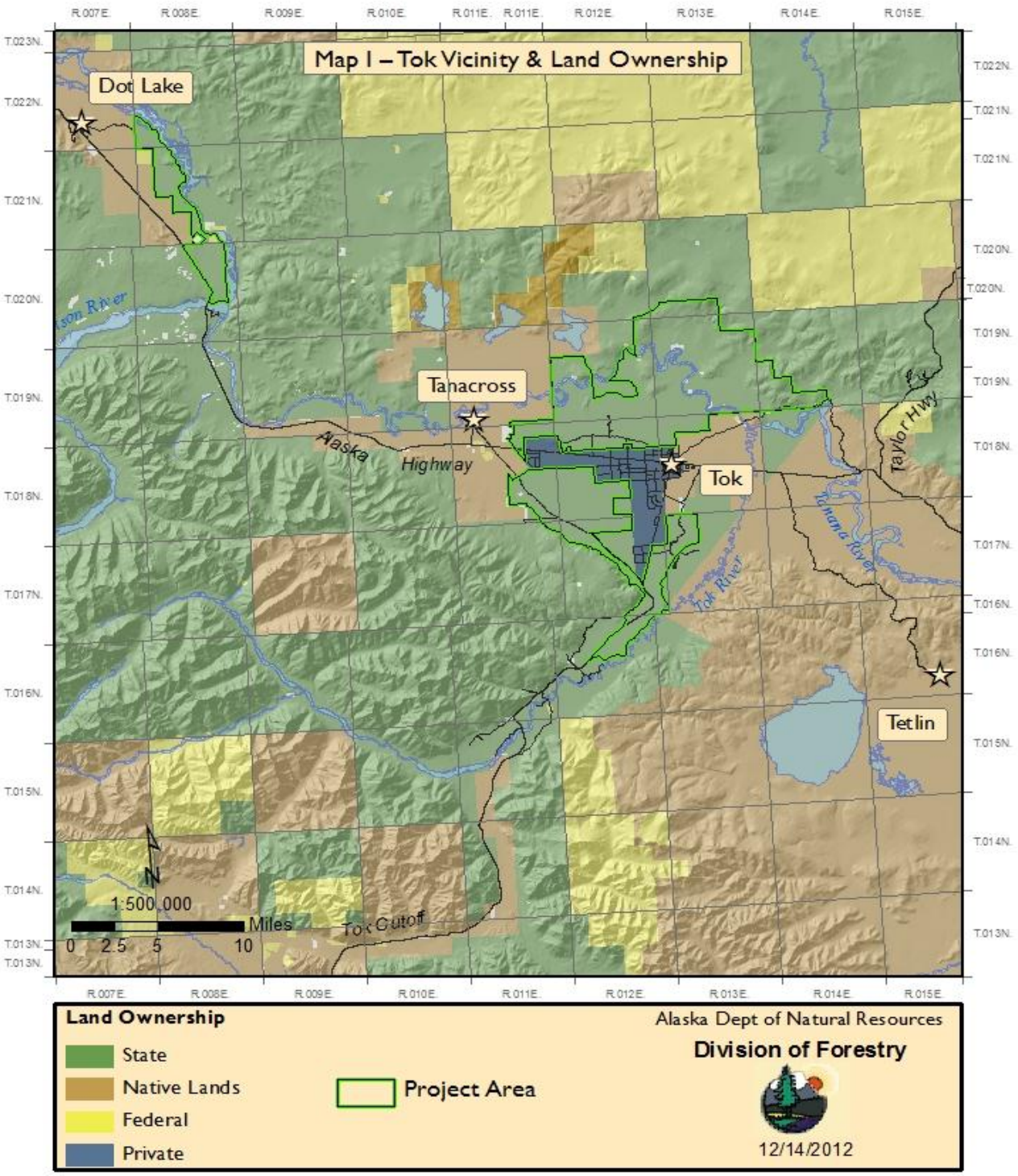
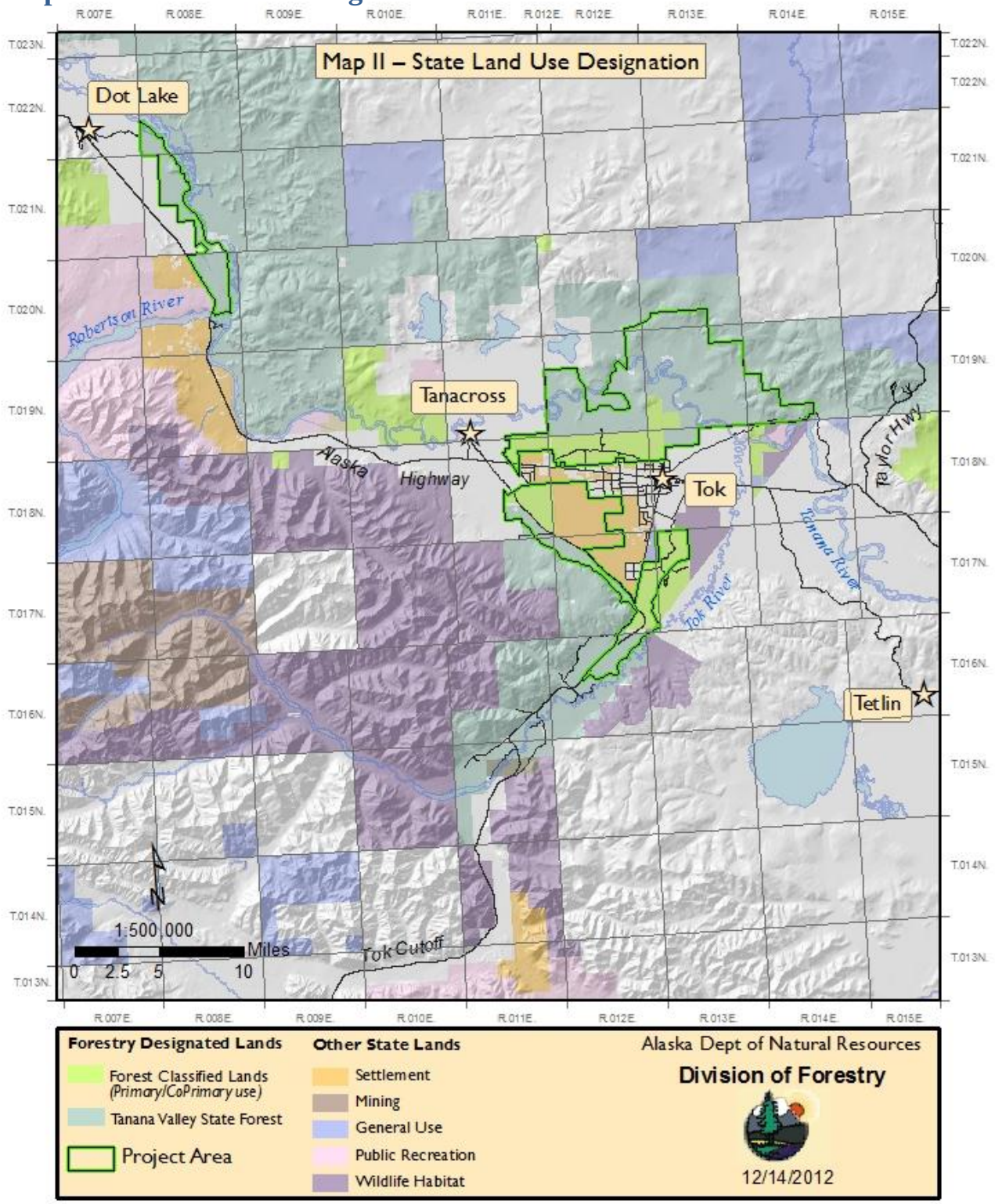
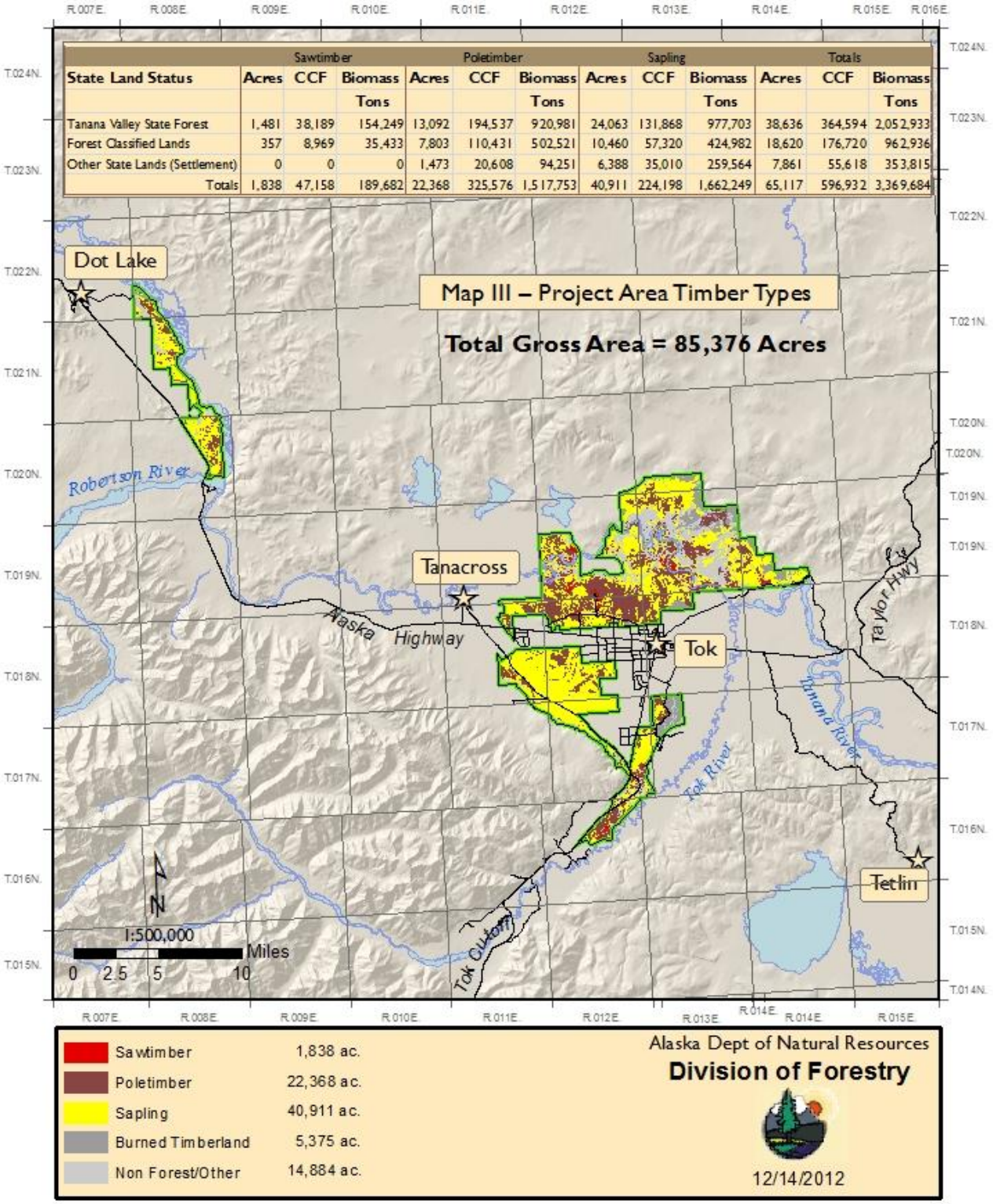
Map I Tok Vicinity & Land Ownership



Map II State Land Use Designation

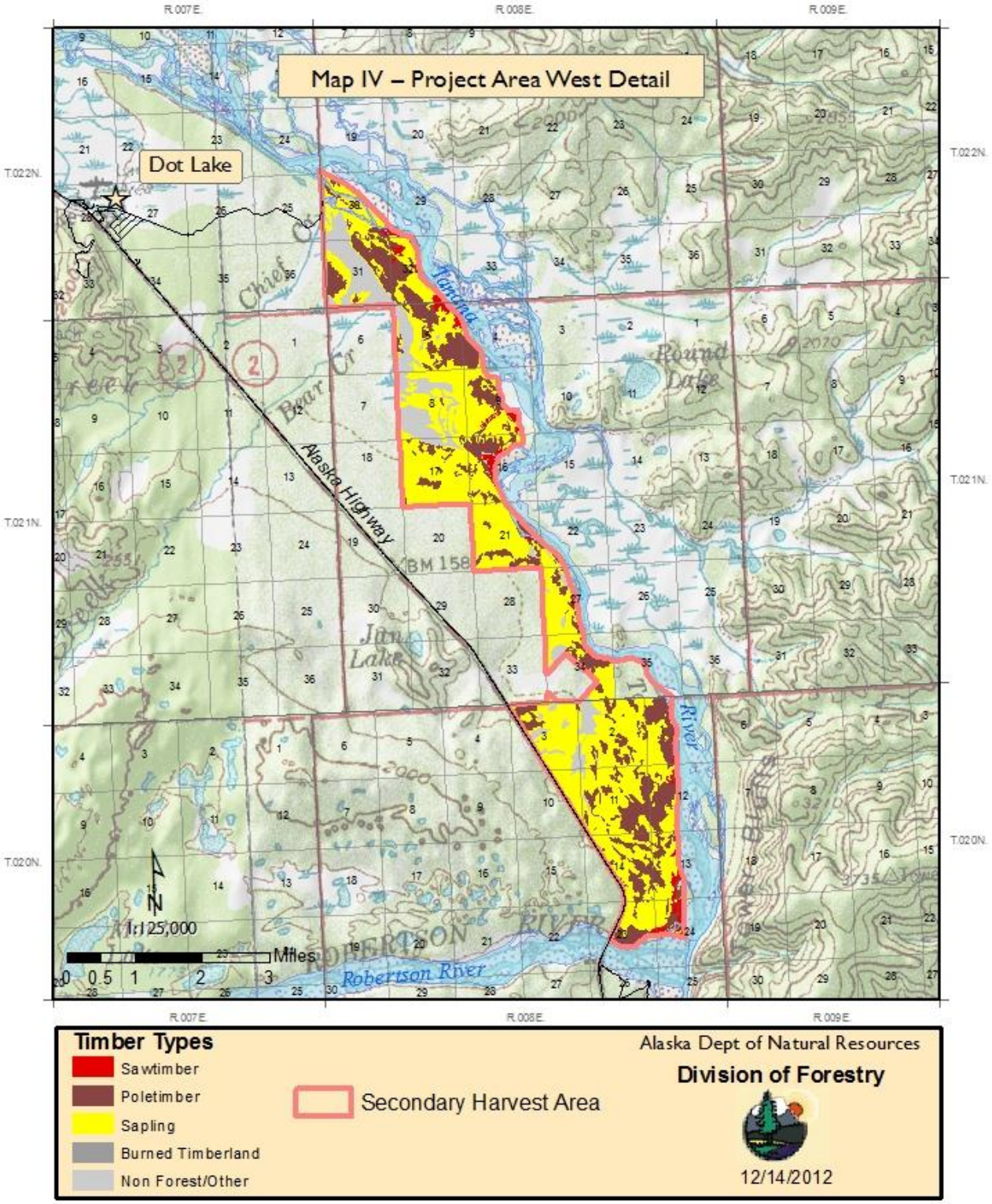


Map III Operable State Lands

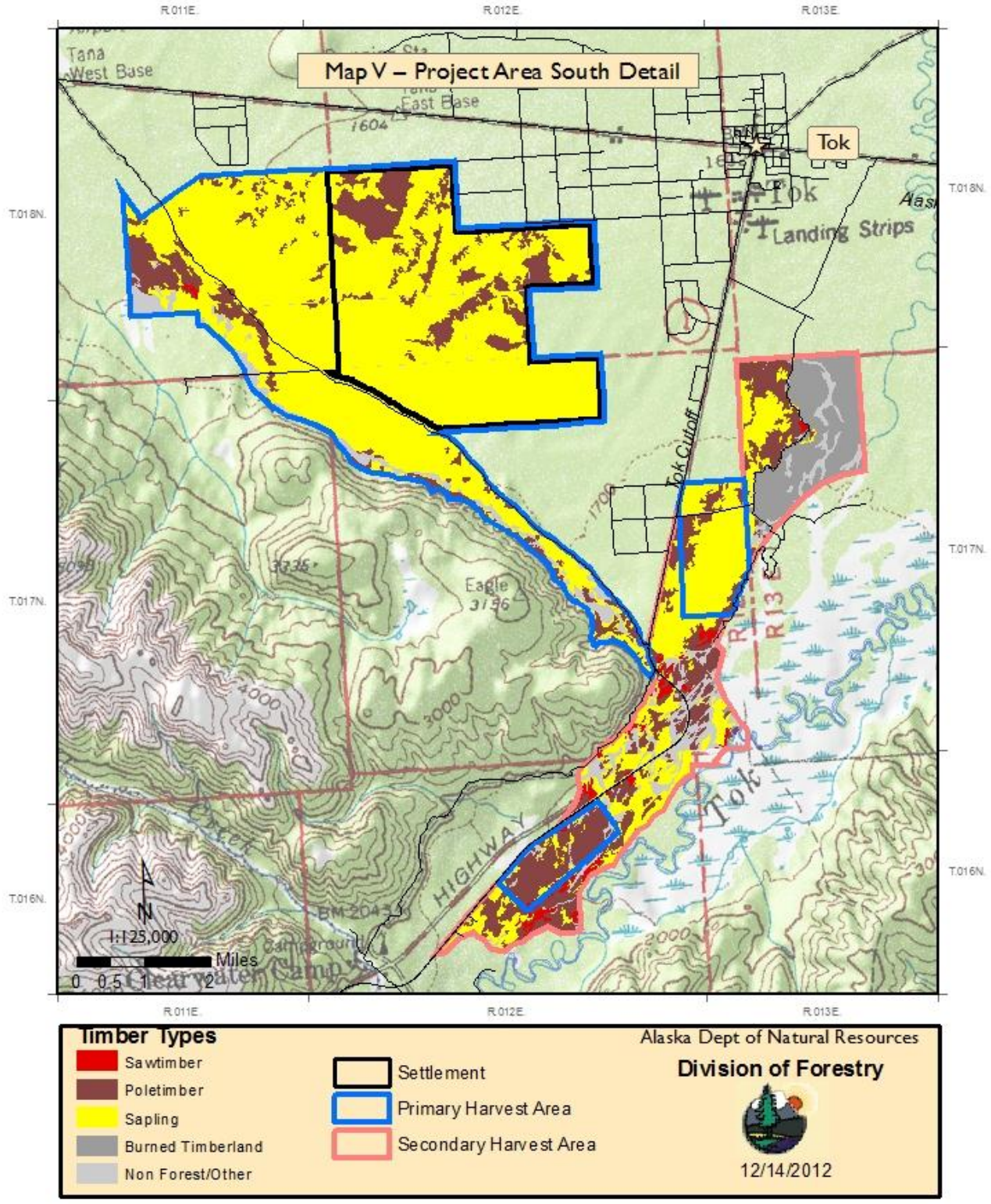


State Land Status	Sawtimber Acres	Sawtimber CCF	Sawtimber Biomass Tons	Poletimber Acres	Poletimber CCF	Poletimber Biomass Tons	Sapling Acres	Sapling CCF	Sapling Biomass Tons	Totals Acres	Totals CCF	Totals Biomass Tons
Tanana Valley State Forest	1,481	38,189	154,249	13,092	194,537	920,981	24,063	131,868	977,703	38,636	364,594	2,052,933
Forest Classified Lands	357	8,969	35,433	7,803	110,431	502,521	10,460	57,320	424,982	18,620	176,720	962,936
Other State Lands (Settlement)	0	0	0	1,473	20,608	94,251	6,388	35,010	259,564	7,861	55,618	353,815
Totals	1,838	47,158	189,682	22,368	325,576	1,517,753	40,911	224,198	1,662,249	65,117	596,932	3,369,684

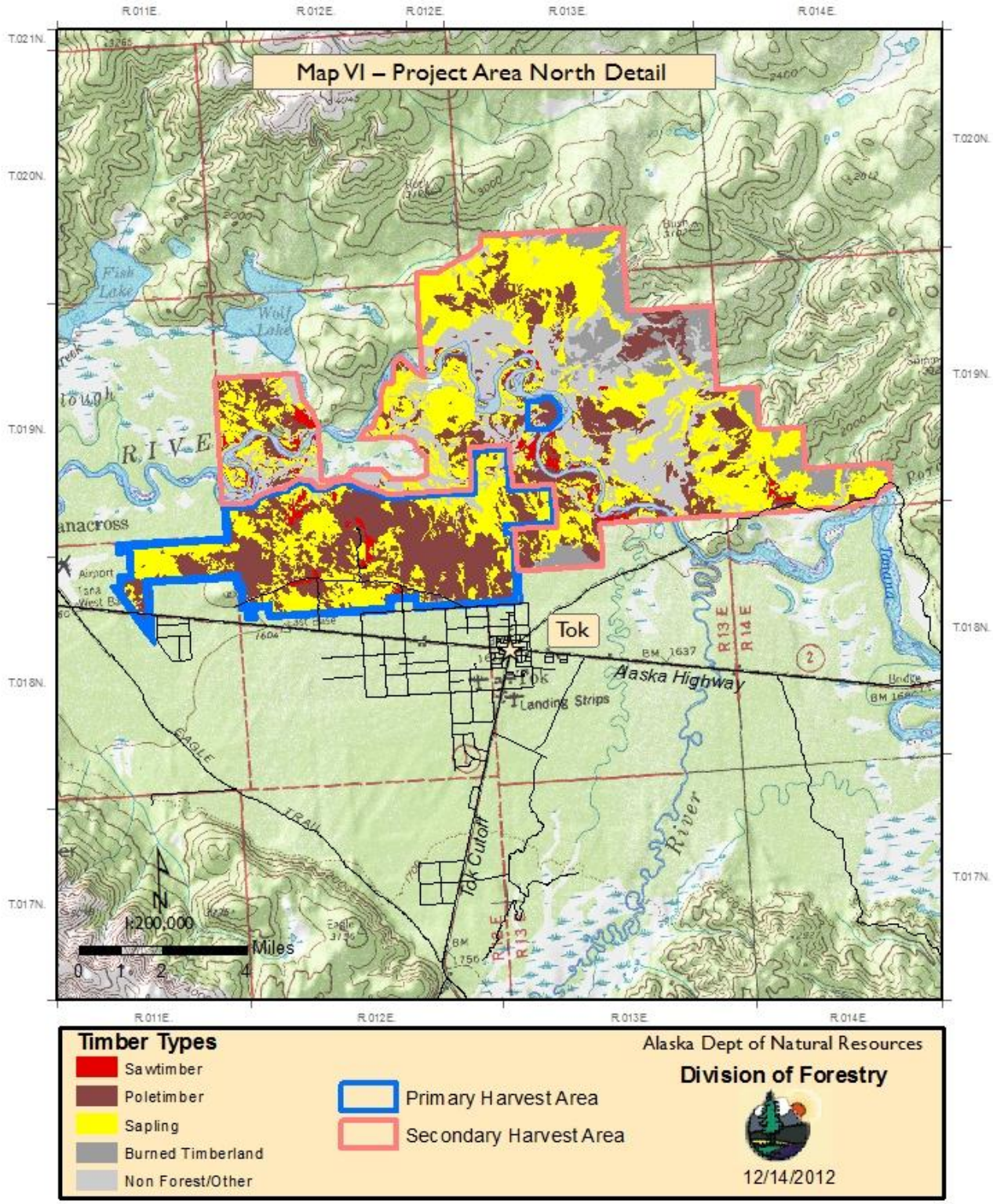
Map IV Project Area West Detail



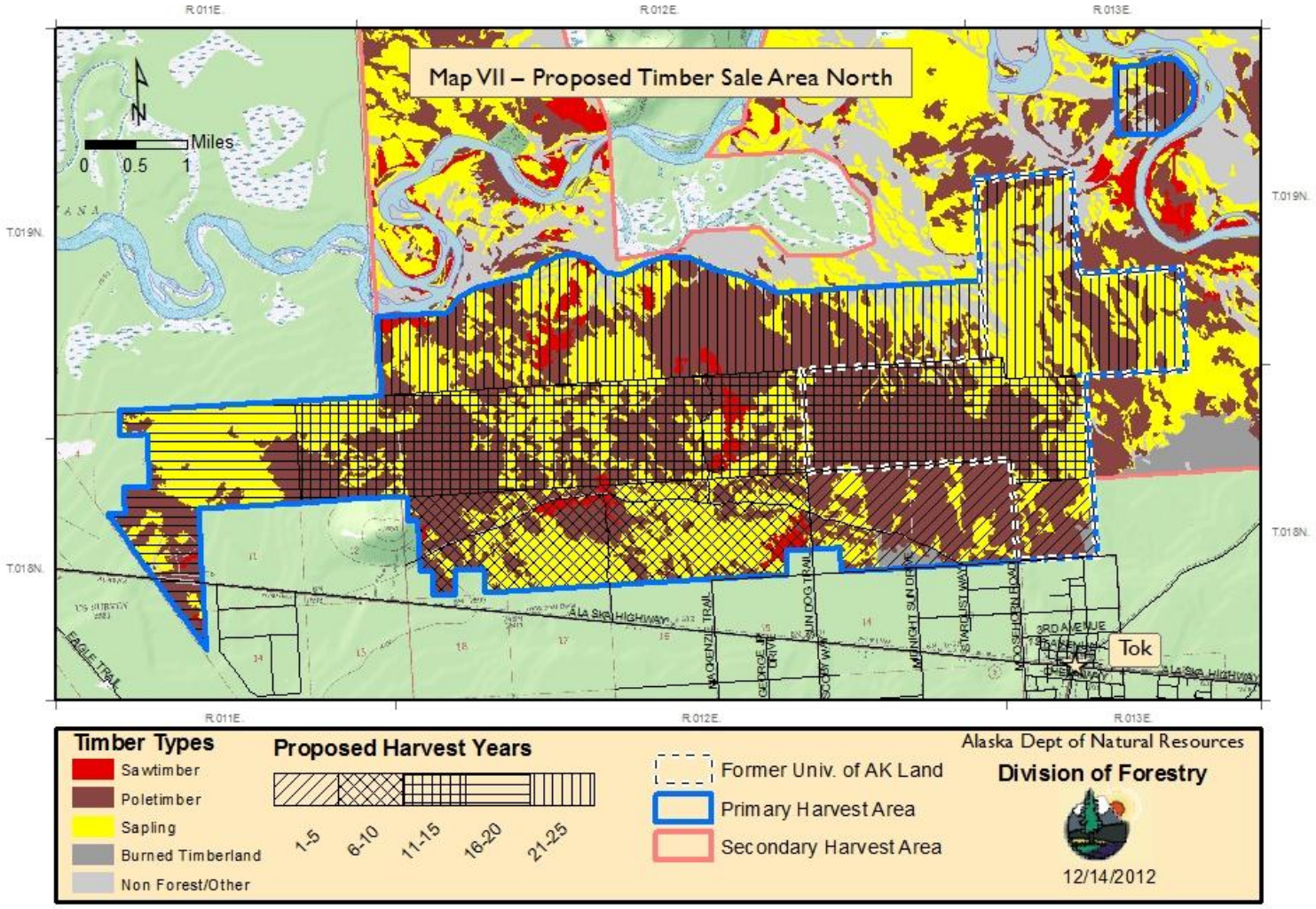
Map V Project Area South Detail



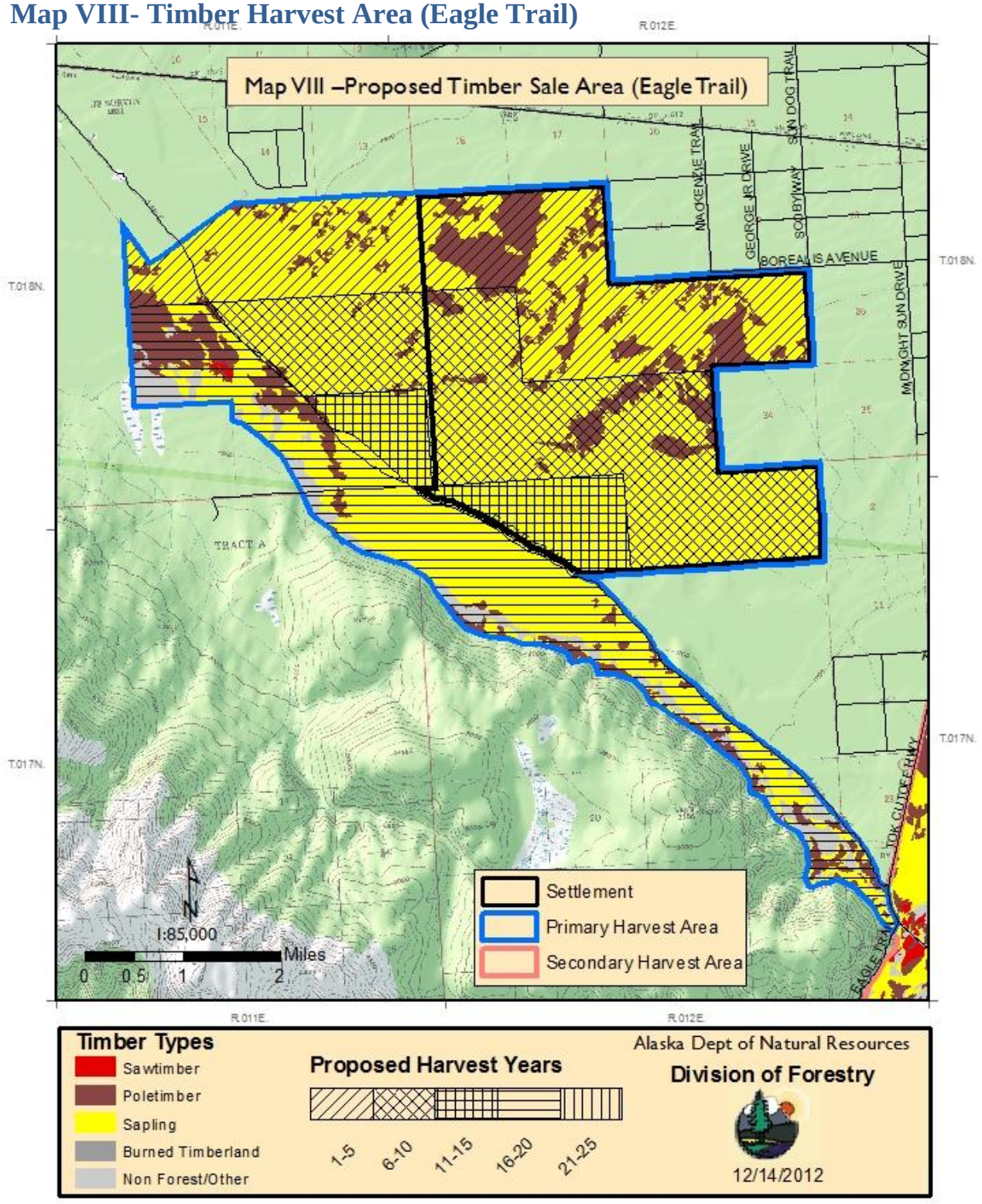
Map VI- Project Area North Detail



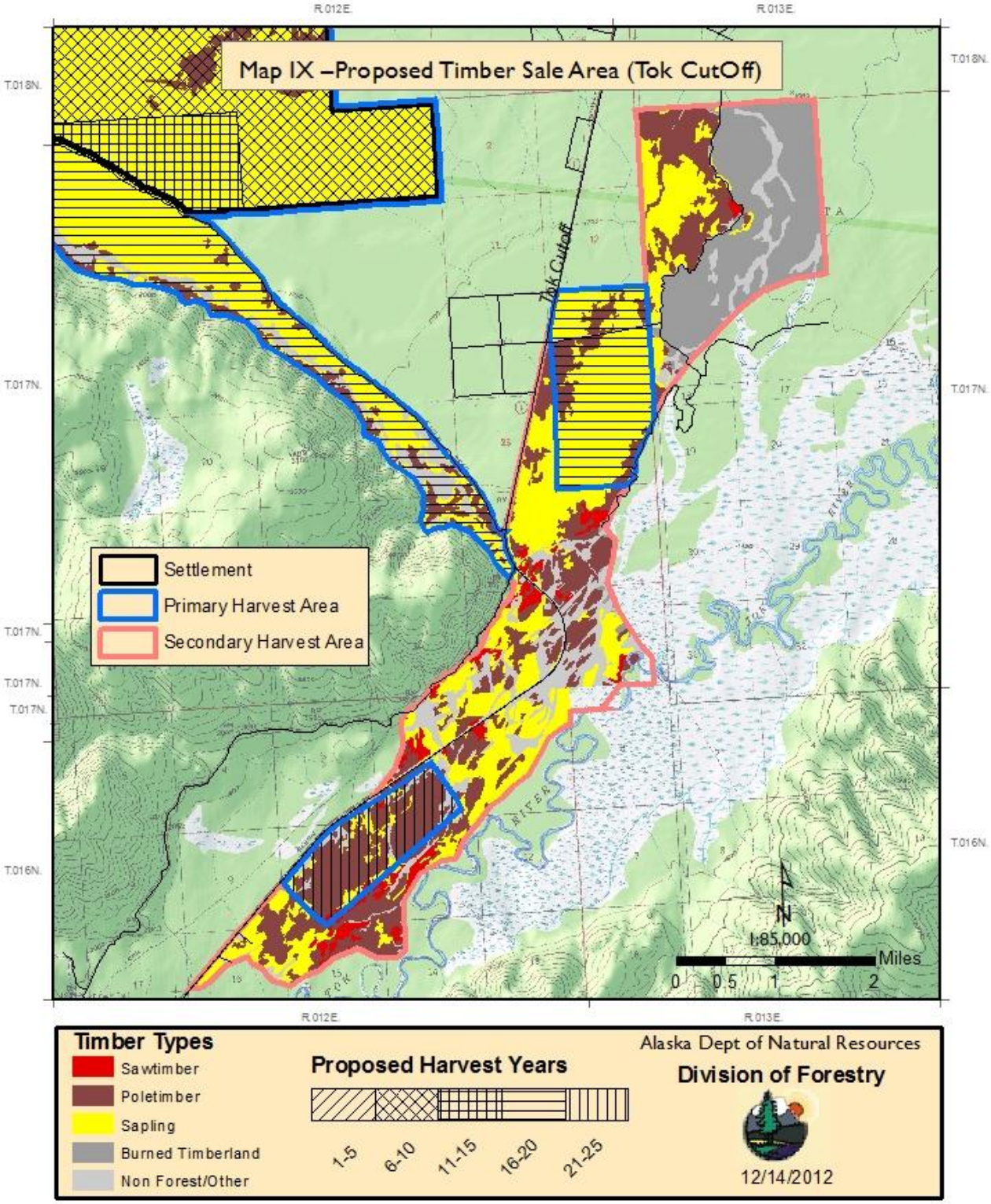
Map VII- Primary Project Area North



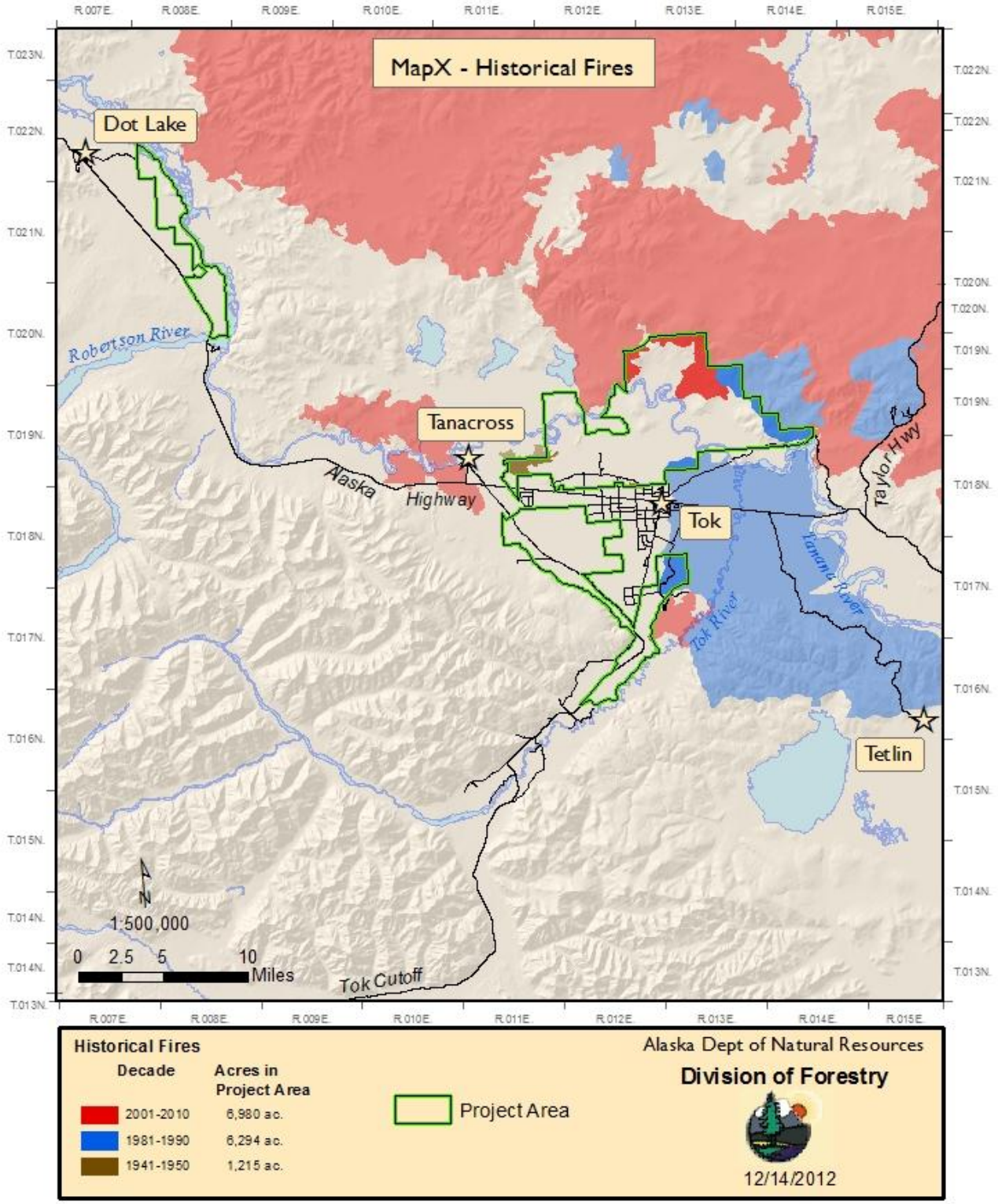
Map VIII- Timber Harvest Area (Eagle Trail)



Map IX- Timber Harvest Area (Tok Cut Off)



Map X – Historical Fires in Operable Area



Appendix 1 Timber Type Volume

A. Inventory Methods

Estimates of timber volume utilize updated timber typing and forest inventory information collected during the 2010 update of the Tanana Valley State Forest (TVSF) inventory (Hanson 2010). This data was combined with U.S. Forest Service samples collected as part of a study to test the use of the Light Detection and Ranging (LIDAR) remote sensing system for timber stand mapping applications (Anderson et.al. 2010). During the TVSF inventory update, field samples were conducted within the pole timber and saw timber components of the forest. For the Tok area a total of 63 individual timber stands were field sampled during the summer of 2009. These field samples comprised 630 individual measurement plots. Reproduction, burned timber, and dwarf timber types (mostly black spruce less than 25 feet tall at maturity) were not sampled initially for the update.

In 2011 a document was prepared that examined biomass supply within various radii of the community of Tok (Hanson 2011). In performing the analysis, reproduction and burned timber types were considered to contain volume useable as biomass. To provide estimates of volume for the reproduction and burned timber types prior to the completion of the TVSF inventory update, the Forest Service plot data that corresponded to those timber types were utilized. The two data sets were merged within a Microsoft Access database for volume and tree attribute calculations. The Forest Service plots were measured during the summer and fall of 2009. A total of 30 plots within sapling and burned timber types were utilized to calculate volumes within these forest types.

The Tanana Valley State Forest inventory continues to be updated and additional plots installed by state forestry in sapling and other types this summer in Tok will be merged into the data to produce a final inventory report sometime in 2013.

Timber volume considered in this preliminary best interest finding does not however include the burned timber types. This decision was based on the high variability of volumes found within these areas and merchantability concerns which will require additional field verification for potential timber sale layout. Salvage of burned biomass volume may occur in future timber sales. Timber volume also does not include dwarf black spruce timber types. Dwarf black spruce is defined as trees that are less than 25 feet in height at maturity. More productive black spruce sapling, pole timber and saw timber is however included as available timber.

1. Volume Definitions

a) Cubic Measurements

The cubic foot measurement includes all timber equal to or greater than five inches diameter breast height and is divided among the live and dead pole timber and saw timber components of the forest. In terms of calculations for wood energy resources, the cubic foot value is important in that it can readily be converted into cords (approximately 90 cubic feet of solid wood per cord) and the measurement relates well to delivered wood in round log form. Volume calculations are based on volume equations produced for Interior Alaska; U.S. Forest Service research note NOR-6. Cubic volume is reported in Smalian's rule and for spruce and hardwoods include volume inside bark to a 4-inch top. Both live and dead volume is reported. Dead volume includes recently dead trees estimated to have died within the last 5 years.

b) Biomass Tons Measurements

In the Tok biomass supply analysis report, computation of above ground biomass tons was derived from published dry weight regressions (Yarie et.al. 2007). Regression equations within this document however produced a range a values that were found not to be truly representative of the Tok area. In 2008 Tok Area Forestry embarked on a research project to produce local total above ground green weight values for its area. A total of approximately 700 trees were measured, cut and weighed to determine total green weight by diameter and height. Regression equations were developed for spruce and hardwoods and applied to the inventory tree dataset to produce revised total above ground green biomass ton estimates. The biomass tons measurement includes all timber equal to or greater than two inches diameter breast height and is divided among the live and dead sapling, pole timber and saw timber components of the forest.

2. Sample Error by Strata

The 2010 TVSF inventory update sampled timber types within the project area which were combined into strata to compute volume estimates. A total of 14 volume strata were identified. Estimates of sample error at one standard deviation of the mean by strata and combined estimates are shown below. Project area maps shown in the preliminary best interest finding use the corresponding volume per acre by strata sorted by size class to produce volume estimates in hundred cubic feet (CCF) and biomass tons by tree size classes of saw timber, pole timber and sapling.

3. Literature Cited

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Yarie, J., E. Kane, M. Mack. 2007. *Aboveground biomass equations for the trees of interior Alaska*. University of Alaska Fairbanks. AFES Bulletin 115.

4. Technical Questions

For specific questions regarding the inventory or to examine the associated data please contact:

State Inventory Forester
Division of Forestry
Fairbanks, Alaska 99709
Phone: 907-374-3755

5. Inventory Summary Table

Strata		Number of Plots	% Sampling Error
1	Black and White Spruce Saw timber	100	4.8
2	Black and White Spruce Pole timber	130	5.0
3	Birch Closed	40	10.2
4	Birch Open	20	21.8
5	Aspen Closed	50	9.3
6	Aspen Open	20	13.1
7	Birch-Aspen Closed	20	16.2
8	Birch-Aspen Open	20	11.7
9	White Spruce-Birch Saw timber	20	16.1
10	White Spruce-Birch Pole timber	40	8.8
11	White Spruce-Birch-Aspen Saw timber	20	15.9
12	White Spruce-Birch-Aspen Pole timber	70	8.2
13	White Spruce-Balsam Poplar	60	8.0
14	Black and White Spruce-Birch-Aspen	20	14.0
		Totals 630	Combined 7.9

Appendix 2 Appeal and Request for Reconsideration Regulations

Note: "Appeal" means a request to the commissioner to review a decision that the commissioner did not sign or cosign. "Request for reconsideration" means a petition or request to the commissioner to review an original decision that the commissioner signed or cosigned. [11 AAC 02.900, Definitions, below.]

TITLE 11. NATURAL RESOURCES.

CHAPTER 02. APPEALS.

11 AAC 02.010. APPLICABILITY AND ELIGIBILITY. (a) This chapter sets out the administrative review procedure available to a person affected by a decision of the department. If a statute or a provision of this title prescribes a different procedure with respect to a particular decision, that procedure must be followed when it conflicts with this chapter.

(b) Unless a statute does not permit an appeal, an applicant is eligible to appeal or request reconsideration of the department's decision on the application. An applicant is eligible to participate in any appeal or request for reconsideration filed by any other eligible party.

(c) If a statute restricts eligibility to appeal or request reconsideration of a decision to those who have provided timely written comment or public hearing testimony on the decision, the department will give notice of that eligibility restriction as part of its public notice announcing the opportunity to comment.

(d) If the department gives public notice and allows a public comment period of at least 30 days on a proposed action, and if no statute requires opportunity for public comment, the department may restrict eligibility to appeal or request reconsideration to those who have provided timely written comment or public hearing testimony on the proposed action by including notice of the restriction as part of its public notice announcing the opportunity to comment.

(e) An eligible person affected by a decision of the department that the commissioner did not sign or cosign may appeal the decision to the commissioner within the period set by 11 AAC 02.040.

(f) An eligible person affected by a decision of the department that the commissioner signed or cosigned may request the commissioner's reconsideration within the period set by 11 AAC 02.040.

(g) A person may not both appeal and request reconsideration of a decision. (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 38.04.900 AS 38.08.110 AS 41.15.020 AS 44.37.011
AS 29.65.050 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 46.15.020
AS 29.65.120 AS 38.05.035 AS 38.50.160 AS 41.21.020 AS 46.17.030

11 AAC 02.015. COMBINED DECISIONS. (a) When the department issues a combined decision that is both a final disposal decision under AS 38.05.035(e) and any other decision, including a disposal decision combined with a land use plan decision, or a disposal decision to grant certain applications combined with a decision to deny others, the appeal process set out for a disposal decision in AS 38.05.035(i) - (m) and this chapter applies to the combined decision.

(b) A decision of the department may include a statement that a final consistency determination under AS 46.40 (Alaska Coastal Management Program) has been rendered in conjunction with the decision. A person may not, under this chapter, appeal or request reconsideration of the final consistency determination, including a requirement necessary solely to ensure the activity is consistent with the Alaska coastal management program as approved under AS 46.40. (Eff. 9/19/2001, Register 159)

Authority: AS 29.65.050 AS 38.04.900 AS 38.05.035 AS 38.09.110
AS 29.65.120 AS 38.05.020 AS 38.08.110 AS 38.50.160

11 AAC 02.020. FINALITY OF A DECISION FOR PURPOSES OF APPEAL TO COURT. (a) Unless otherwise provided in a statute or a provision of this title, an eligible person must first either appeal or request reconsideration of a decision in accordance with this chapter before appealing a decision to superior court.

(b) The commissioner's decision on appeal is the final administrative order and decision of the department for purposes of appeal to the superior court.

(c) The commissioner may order or deny a request for reconsideration within 30 calendar days after issuance of the decision, as determined under 11 AAC 02.040(c)-(e). If the commissioner takes no action during the 30-day period, the request for reconsideration is considered denied. Denial of a request for reconsideration is the final administrative order and decision of the department for purposes of appeal to the superior court.

(d) If the commissioner timely orders reconsideration of the decision, the commissioner may affirm the decision, issue a new or modified decision, or remand the matter to the director for further proceedings. The commissioner's decision, other than a remand decision, is the final administrative order and decision of the department for purposes of appeal to the superior court. (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 38.04.900 AS 38.08.110 AS 41.15.020 AS 44.37.011

AS 29.65.050 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 46.15.020

AS 29.65.120 AS 38.05.035 AS 38.50.160 AS 41.21.020 AS 46.17.030

11 AAC 02.030. FILING AN APPEAL OR REQUEST FOR RECONSIDERATION. (a) An appeal or request for reconsideration under this chapter must

(1) be in writing;

(2) be filed by personal service, mail, fax, or electronic mail;

(3) be signed by the appellant or the appellant's attorney, unless filed by electronic mail; an appeal or request for reconsideration filed by electronic mail must state the name of the person appealing or requesting reconsideration and a single point of contact to which any notice or decision concerning the appeal or request for reconsideration is to be sent;

(4) be correctly addressed;

(5) be timely filed in accordance with 11 AAC 02.040;

(6) specify the case reference number used by the department, if any;

(7) specify the decision being appealed or for which reconsideration is being requested;

(8) specify the basis upon which the decision is challenged;

(9) specify any material facts disputed by the appellant;

(10) specify the remedy requested by the appellant;

(11) state the address to which any notice or decision concerning the appeal or request for reconsideration is to be mailed; an appellant may also provide a telephone number where the appellant can be reached during the day or an electronic mail address; an appeal or request for reconsideration filed electronically must state a single address to which any notice or decision concerning the appeal or request for reconsideration is to be mailed;

(12) identify any other affected agreement, contract, lease, permit, or application by case reference number, if any; and

(13) include a request for an oral hearing, if desired; in the appeal or request for reconsideration, the appellant may include a request for any special procedures to be used at the hearing; the appeal or request for reconsideration must describe the factual issues to be considered at the hearing.

(b) At the time an appeal is filed, and up until the deadline set out in 11 AAC 02.040(a) to file the appeal, an appellant may submit additional written material in support of the appeal, including evidence or legal argument.

(c) If public notice announcing a comment period of at least 30 days was given before the decision, an appellant may not submit additional written material after the deadline for filing the appeal, unless the appeal

meets the requirement of (a) of this section and includes a request for an extension of time, and the department determines that the appellant has shown good cause for an extension. In considering whether the appellant has shown good cause, the department will consider factors including one or more of the following:

(1) comments already received from the appellant and others;

(2) whether the additional material is likely to affect the outcome of the appeal;

(3) whether the additional material could reasonably have been submitted without an extension;

(4) the length of the extension requested;

(5) the potential effect of delay if an extension is granted.

(d) If public notice announcing a comment period of at least 30 days was not given before the decision, an appellant may submit additional written material after the deadline for filing the appeal, if the appeal meets the requirements of (a) of this section and includes a notice of intent to file the additional written material. The department must receive the additional written material within 20 days after the deadline for filing the appeal, unless the appeal also includes a request for an extension of time, and the department determines that the appellant has shown good cause for an extension. In considering whether the appellant has shown good cause, the department will consider factors including one or more of the following:

(1) comments already received from the appellant and others;

(2) whether the additional material is likely to affect the outcome of the appeal;

(3) whether the additional material could reasonably have been submitted without an extension;

(4) the length of the extension requested;

(5) the potential effect of delay if an extension is granted.

(e) At the time a request for reconsideration is filed, and up until the deadline to file a request for reconsideration, an appellant may submit additional written material in support of the request for reconsideration, including evidence or legal argument. No additional written material may be submitted after the deadline for filing the request for reconsideration.

(f) If the decision is one described in 11 AAC 02.060(c), an appellant who believes a stay of the decision is justified may ask for a stay as part of the appeal or request for reconsideration. The appellant must include an argument as to why the public interest requires a stay. (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 38.04.900 AS 38.08.110 AS 41.15.020 AS 44.37.011
AS 29.65.050 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 46.15.020
AS 29.65.120 AS 38.05.035 AS 38.50.160 AS 41.21.020 AS 46.17.030

Editor's note: The address for an appeal or request for reconsideration by personal service and by mail is: Department of Natural Resources, Commissioner's Office, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501-3561. The number for an appeal or request for reconsideration by fax is: 1-907-269-8918. The

electronic mailing address for an appeal or request for reconsideration by electronic mail is: dnr_appeals@dnr.state.ak.us

11 AAC 02.040. TIMELY FILING; ISSUANCE OF DECISION. (a) To be timely filed, an appeal or request for reconsideration must be received by the commissioner's office within 20 calendar days after issuance of the decision, as determined under (c) or (d) of this section, unless another period is set by statute, regulation, or existing contract. If the 20th day falls on a day when the department is officially closed, the appeal or request for reconsideration must be filed by the next working day.

(b) An appeal or request for reconsideration will not be accepted if it is not timely filed.

(c) If the appellant is a person to whom the department delivers a decision by personal service or by certified mail, return receipt requested, issuance occurs when the addressee or the addressee's agent signs for the decision. If the addressee or the addressee's agent neglects or refuses to sign for the certified mail, or if the address that the addressee provided to the department is not correct, issuance by certified mail occurs when the decision is deposited in a United States general or branch post office, enclosed in a postage-paid wrapper or envelope, addressed to the person's current address of record with the department, or to the address specified by the appellant under 11 AAC 02.030(a)(11).

(d) If the appellant is a person to whom the department did not deliver a decision by personal service or certified mail, issuance occurs

(1) when the department gives public notice of the decision; or

(2) if no public notice is given, when the decision is signed; however, the department may state in the decision a later date of issuance and the corresponding due date for any appeal or request for reconsideration.

(e) The date of issuance constitutes delivery or mailing for purposes of a reconsideration request under AS 44.37.011(d) or AS 44.62.540(a). (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 38.04.900 AS 38.08.110 AS 41.15.020 AS 44.37.011
AS 29.65.050 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 46.15.020
AS 29.65.120 AS 38.05.035 AS 38.50.160 AS 41.21.020 AS 46.17.030

11 AAC 02.050. HEARINGS. (a) The department will, in its discretion, hold a hearing when questions of fact must be resolved.

(b) The hearing procedure will be determined by the department on a case-by-case basis. As provided in 11 AAC 02.030(a)(13), any request for special procedures must be included with the request for a hearing.

(c) In a hearing held under this section

(1) formal rules of evidence need not apply; and

(2) the hearing will be recorded, and may be transcribed at the request and expense of the party requesting the transcript. (Eff. 11/7/90, Register 116)

Authority: AS 03.05.010 AS 38.04.900 AS 38.09.110 AS 41.17.055 AS 46.17.030
AS 29.65.050 AS 38.05.020 AS 38.50.160 AS 41.21.020
AS 29.65.120 AS 38.08.110 AS 41.15.020 AS 46.15.020

11 AAC 02.060. STAYS; EXCEPTIONS. (a) Except as provided in (c) and (d) of this section, timely appealing or requesting reconsideration of a decision in accordance with this chapter stays the decision during the commissioner's consideration of the appeal or request for reconsideration. If the commissioner determines that the public interest requires removal of the stay, the commissioner will remove the stay and allow all or part of the decision to take effect on the date set in the decision or a date set by the commissioner.

(b) Repealed 9/19/2001.

(c) Unless otherwise provided, in a statute or a provision of this title, a decision takes effect immediately if it is a decision to

(1) issue a permit, that is revocable at will;

(2) approve surface operations for a disposal that has already occurred or a property right that has already vested; or

(3) administer an issued oil and gas lease or license, or an oil and gas unit agreement.

(d) Timely appealing or requesting reconsideration of a decision described in (c) of this section does not automatically stay the decision. However, the commissioner will impose a stay, on the commissioner's own motion or at the request of an appellant, if the commissioner determines that the public interest requires it.

(e) A decision takes effect immediately if no party is eligible to appeal or request reconsideration and the commissioner waives the commissioner's right to review or reconsider the decision. (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 38.04.900 AS 38.08.110 AS 41.15.020 AS 46.15.020
AS 29.65.050 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 46.17.030
AS 29.65.120 AS 38.05.035 AS 38.50.160 AS 41.21.020

11 AAC 02.070. WAIVER OF PROCEDURAL VIOLATIONS. The commissioner may, to the extent allowed by applicable law, waive a requirement of this chapter if the public interest or the interests of justice so require. (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 29.65.120 AS 38.05.035 AS 38.50.160 AS 41.21.020

AS 03.10.020 AS 38.04.900 AS 38.08.110 AS 41.15.020 AS 46.15.020

AS 29.65.050 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 46.17.030

11 AAC 02.080. DEFINITIONS. Repealed. (Eff. 11/7/90, Register 116; repealed 9/19/2001, Register 159)

Editor's note: The subject matter formerly set out at 11 AAC 02.080 has been moved to 11 AAC 02.900.

11 AAC 02.900. DEFINITIONS. In this chapter,

(1) "appeal" means a request to the commissioner to review a decision that the commissioner did not sign or cosign;

(2) "appellant" means a person who files an appeal or a request for reconsideration.

(3) "commissioner" means the commissioner of natural resources;

(4) "decision" means a written discretionary or factual determination by the department specifying the details of the action to be allowed or taken;

(5) "department" means, depending of the particular context in which the term is used, the Department of Natural Resources, the commissioner, the director of a division within the Department of Natural Resources, or an authorized employee of the Department of Natural Resources;

(6) "request for reconsideration" means a petition or request to the commissioner to review an original decision that the commissioner signed or cosigned. (Eff. 11/7/90, Register 116; am 9/19/2001, Register 159)

Authority: AS 03.05.010 AS 38.05.020 AS 38.09.110 AS 41.17.055 AS 44.62.540

AS 29.65.050 AS 38.05.035 AS 38.50.160 AS 41.21.020 AS 46.15.020

AS 29.65.120 AS 38.08.110 AS 41.15.020 AS 44.37.011 AS 46.17.030

AS 38.04.900

Editor's note: The subject matter of 11 AAC 02.900 was formerly located at 11 AAC 02.080. The history notes for 11 AAC 02.900 does not reflect the history of the earlier section.