State of Alaska
Department of Natural Resources
Division of Forestry
Fairbanks Area

Draft Forest Land Use Plan
Anderson Spruce #1
NC-1403-F
2/25/2015

I. Introduction 3
A. Legal description 4
B. Operational Period 4
C. Timber Disposal 4
D. Objectives and Summary 4

II. Affected Land Owners/Jurisdictions 4
A. State 4
B. Other Land Ownership 4

III. Harvest Methods, Silvicultural Actions, and Management of Non-timber Resources
A. Timber Stand Description and History 5
B. Timber Harvest Activities 5
C. Site Preparation 5
D. Reforestation 6
E. Slash Abatement 7
F. Surface Water Protection 7
G. Wildlife Habitat 7
H. Cultural and Historical Resource Protection 8
I. Other Resources Affected by Timber Harvest and Management 8

IV. Roads and Crossing Structures 8
A. Road Design, Construction, and Maintenance 8
B. Side Slopes/ Mass Wasting 9
C. Crossing Structures 9
D. Road Closures 10
E. Material Extraction 10
F. Other Resources Affected by Roads or Material Extraction 10

V. Approval 11
Appendix A: Timber Sale Maps 12

I. Introduction

Project File Number: NC-1403-F

Division of Forestry Office: Fairbanks
Area Forester: Paul Maki (acting)
Forest Practices Geographic Region (AS 41.17.950):

This Forest Land Use Plan (FLUP) covers proposed forest operations on approximately 122 acres of land west of the Nenana River near Anderson. It is intended to provide the best available information regarding the proposed harvest of timber, and management of other non-timber uses in compliance with AS 38.05.112 and AS 41.17.060, and must be adopted by the DNR before the proposed activity can occur.

[ ] This Forest Land Use Plan is for timber sale(s) which have been determined to be in the best interest of the state pursuant to AS 38.05.035 (e) and 38.05.945;

[x] This Draft Forest Land Use Plan is for timber sale(s) for which the Anderson West (ADL# 420368) Preliminary Best Interest Finding is currently out for review. A final best interest finding must be completed prior to adoptions of a final FLUP pursuant to AS 38.05.035 (e) and 38.05.945;

[ ] This Forest Land Use Plan is for timber to be harvested that does not require a final finding pursuant to 38.05.035 (e) and notification under 38.05.945.

[ ] Other Documents are referenced in this FLUP. This timber sale is designed to be consistent with the management intent of the following documents:

The administrative record for this sale is maintained at the Division of Forestry Fairbanks Area Office filed as NC-1403-F.

A. Legal description (see also map in Appendix A): **F007S009W Sec. 35, 26**

B. Operational Period: 3 Years

C. Timber Disposal

[x] Timber will be sold and will have a contract administrated by the State
[ ] Timber will be available to the public; permits obtained by the public will be issued by the State.
[ ] Other

D. Objectives and Summary

- Develop the State's renewable resources: Sustain and promote a healthy, long-term timber industry here in the interior by providing the raw materials for local manufacturing
- Improve the State's economy: Provide royalties to the State in the form of stumpage receipts as well as contributions such as jobs and wages
- Improve forest health: Improve forest growth and vigor by replacing mature or declining stands with healthy regenerating ones
- Improve wildlife habitat: Meet the statutory wildlife management objectives for the TVSF that protects the needs of wildlife resources necessary to maintain or enhance public use and benefits

II. Affected Land Owners/Jurisdictions

Activity on ownership:	Access Easement	Harvest	Written Representative Approval
A. State			
[ ] Tanana Valley State Forest	[ ]	[ ]	[ ]
[x] Other state land managed by DNR (Forest Classified)	[ ]	[x]	[ ]
[ ] University of Alaska	[ ]	[ ]	[ ]
[ ] Mental Health Trust	[ ]	[ ]	[ ]
[ ] School Trust	[ ]	[ ]	[ ]
B. Other Land Ownership	**[ ]**	**[ ]**	**[ ]**

Land Owner: _____

Land Owner Representative: _____

III. Harvest Methods, Silvicultural Actions, and Management of Non-timber Resources

Forest operations will be designed to:

- Protect fish habitat and water quality in compliance with the best management practices in 11 AAC 95.260-.370,
- Manage for the other land uses and activities identified in AS 41.17.060 and the Best Interest Finding for this timber sale, and
- Ensure prompt reforestation and maintenance of site productivity in compliance with AS 41.17.060(c) and 11 AAC 95 .375-.390.

Harvest and Silvicultural Methods:
[x] The silvicultural actions are described in this document, and no prescription was written or is necessary
[ ] A silvicultural prescription has been written and is attached to this document in Appendix B

A. Timber Stand Description and History

The proposed timber sale consists of primarily fully mature white spruce with some small pockets of birch and balsam poplar.

B. Timber Harvest Activities

Timber Harvest Activities are displayed in Table 1.

Table 1. Timber Harvest Activities

Unit ID	Acres	Topography	Silvicultural Action	Logging Method
1	~122	Flat, river floodplain	Heavy Partial Cut	Ground

C. Site Preparation

[x] Site preparation will not be necessary. There is either sufficient residual stocking, or because there has been sufficient soil disturbance by logging to forego scarification.

[ ] Site preparation will be implemented and described in Table 2:

Table 2. Site Preparation

Unit	Acres	Site Preparation Method	Date of Completion

D. Reforestation:

[ ] Clearcut

[x] Partial Harvest:

[ ] Region I: leaving more than 50% live basal area (11 AAC 95(b)(3))

[ ] Region II/III: Relying on residual trees to result in a stocking level that meets standards of 11 AAC 95.375 (b 4). Stocking levels will be calculated subject to the methods below:

Table 3. Stocking Level Requirements

Average DBH (Diameter at breast height)	Residual Trees (Trees / acre)	Minimum Stocking Standard(Trees/ acre)	Percent Stocking
> 9”	0	120	0%
6” to 8”	60	170	35%
1” to 5”	90	200	45%
Total Residual Stocking			80%

Seedlings Required:

Percentage Under stocked = 100 – Total Residual Stocking %

Percentage Under stocked = 100 –80% =20%

Seedlings/ Acre Required = Percentage Understocked/100 x 450

Seedlings/ Acre Required =20% /100 x 450 = 90

[x] Natural regeneration

List species:

White spruce, birch, and balsam poplar

[x] Coppice

List species:

Birch and balsam poplar

[ ] Artificial regeneration

[ ] Seeding-source of seed (general vicinity location of seed source)

_____

[x] Planting: Date of proposed planting: ___tbd____

Source of seedlings (location of seed source): __

E. Slash Abatement

[x] Potential for insect infestations caused by slash accumulations exists. Slash abatement for controlling infestations will be implemented as required by 11AAC 95.370.
[ ] Lop and scatter slash; accumulations will be kept to less than 2 feet in height.
[ ] Slash will be disposed of by the operator [ ] Slash will be disposed of by the State
[ ] Other - method of slash disposal: [ ] removal off site [ ] crushing or grinding [ ] burning
[ ] Burn permits necessary from DOF and DEC to be acquired.
[ ] The operator will contact the Division of Forestry local area office prior to ignition of debris.

F. Timber Harvest—Surface Water Protection:
[ ] There are no streams or lakes abutting or within a harvest unit.
[x] Known surface waters and protection measures are described in Table 4 below.
Locations are included in the operational map in the Appendices

Table 4. Protection for Known Surface Waters

Unit	Waterbody Name	AS 41.17.950 Classification	ADF&G AWC #	Required Riparian Protection	Site-specific actions to minimize impacts on riparian area
1	Nenana River	Type III-B	334-40-11000-2490-3200	100 foot riparian buffer	Winter harvest operations

Surface waters listed above were reviewed by the Department of Fish and Game:
[ ] During the timber sale planning process
[ ] During the agency review conducted for the Best Interest Finding for this sale
[ ] During the drafting of this Forest Land Use Plan
[ ] Stream Crossings (Title 16) Permits are needed per ADF&G Division of Habitat

Surface waters listed above were reviewed by the Department of Environmental Conservation:
[ ] During the timber sale planning process
[ ] During the agency review conducted for the Best Interest Finding for this sale
[ ] During the drafting of this Forest Land Use Plan

Non-classified surface waters are subject to applicable BMPs in 11 AAC 95.

G. Wildlife Habitat:
[ ] Wildlife species and allowances for their important habitats were addressed in writing by the Department of Fish & Game during the Best Interest Finding review.

[ ] Wildlife species and allowances for their important habitats were addressed in writing by the Department of Fish & Game during the drafting of this Forest Land Use Plan.

Silvicultural practices to be applied to minimize impacts to wildlife habitat or wildlife management:
[x] Timber retention - concentrations of timber surrounding harvest units, or interspersed within harvest units to provide cover.

[x] Snag Retention- snags or isolated trees left for cavity nesting species.
[x] Large Woody Debris – concentrations of downed timber or logging debris interspersed within harvest units to provide cover left on site.
[ ] Other actions

H. Cultural and Historical Resource Protection:

[ ] This project was reviewed by the State Historic and Preservation Office (SHPO).
[ ] No artifacts have been reported within the project area(s).
[ ] Known or likely sites have been identified and a mitigation plan is in place. (Describe the mitigation actions.)

I. Other Resources Affected by Timber Harvest and Management

[ ] There are other resources and areas of concern besides surface water, fish habitat, and wildlife habitat that may be affected. Mitigations actions were addressed in the Best Interest Finding.

Table 5. Other Affected Resources/ Areas of Concern.

Impacted Resource	Reviewing Agency	Impact/ Mitigation Actions
	.	

[x] There are no affected resources or areas of concern other than surface water, fish habitat, and wildlife habitat, which are addressed in this Forest Land Use Plan.

IV. Roads and Crossing Structures

A. Road Design, Construction, and Maintenance:

Roads will be designed, constructed, and maintained to prevent significant adverse impacts on water quality and fish habitat (AS 41.17.060(b) (5)), and site productivity (AS 41.17.060(c) (5)). Roads will comply with the best management practices in the Forest Resources and Practices Regulations (11 AAC 95.285 – 95.335)

Roads or other means required for the access and removal of this timber from the harvest area(s) or unit(s) are listed in Table 6.

Table 6. Road Construction and Use

Road ID	Harvest Unit	Road Miles	Road Type	Maximum Grade	Constructed by	Maintained by
1	1	2	S. Winter	0%	Operator	Operator

**Note: Roads must be less than 20% grade per 8 AAC 61.1060 Additional Logging Standards*

B. Side Slopes / Mass Wasting:

For slopes over 50%, identify indicators of unstable areas (landslide scars, jack-strawed trees, gullied or dissected slopes, high density of streams or zero-order basins, or evidence of soil creep). Attach location specific road design that potentially mitigates identified areas of unstable soils.

Maximum percent side slopes: _0%_
[x] There are no slopes >50%
[ ] There are no indicators of unstable areas where roads will be constructed
[ ] Indicators of unstable areas were identified and will be mitigated by actions indicated below.
- [ ] Full benching will be constructed to help ensure slope stability
- [ ] Full benching is not required for roads in this project
- [ ] End hauling will be implemented to help ensure slope stability
- [ ] End hauling is not necessary for roads in this project.

Are you removing or replacing drainage structures? [ ] YES [x] NO

General Erosion Control:
[ ] grass seeding [ ] erosion control mats [ ] wattle [ ] Other: Waterbars
[x] not applicable

C. Crossing Structures:

[x] No crossing structures are needed within the project area.
[ ] Crossing structures will be placed along access roads as described in the table below:

Table 7. Required Drainage and Crossing Structures on Known Surface Waters

Road	Mile / Station	Diameter Culvert	Bridge Type: -Log Stringer -Fabricated -Ice	AS 41.17.950 Stream Classification	Fish & Game AWC Number	Duration of crossing structure in place

D. Road Closure:

Roads constructed for the timber sale that are left open will be subject to maintenance standards under 11 AAC 95. 315. Otherwise, roads constructed for the timber sale will be closed, subject to standards under 11 AAC 95.320.

Table 8. Road Closures

Road ID	Unit	All Season/Winter	Estimated Closure Date	Projected Road Use after Timber Harvest
1	1	Winter	Spring 2018	No road use projected unless reopened for further harvests

E. Material Extraction:

[x] There will be no material extraction sites in the project area.
[ ] Material extraction and associated overburden disposal will be located outside of riparian areas and muskegs. Material extraction and disposal will be located as shown on the operation map, in a manner that prevents runoff from entering surface waters.
[ ] Other:

F. Other Resources Affected by-Roads or Material Extraction:

List resources other than water, habitat or cultural resources potentially impacted by road construction, and indicate how impacts will be mitigated. Other affected resources could be, but are not limited to mining claims, scenic areas, recreational trails, etc.

Table 9. Other Affected Resources

Impacted Resource	Reviewing Agency	Impact/ Mitigation Actions

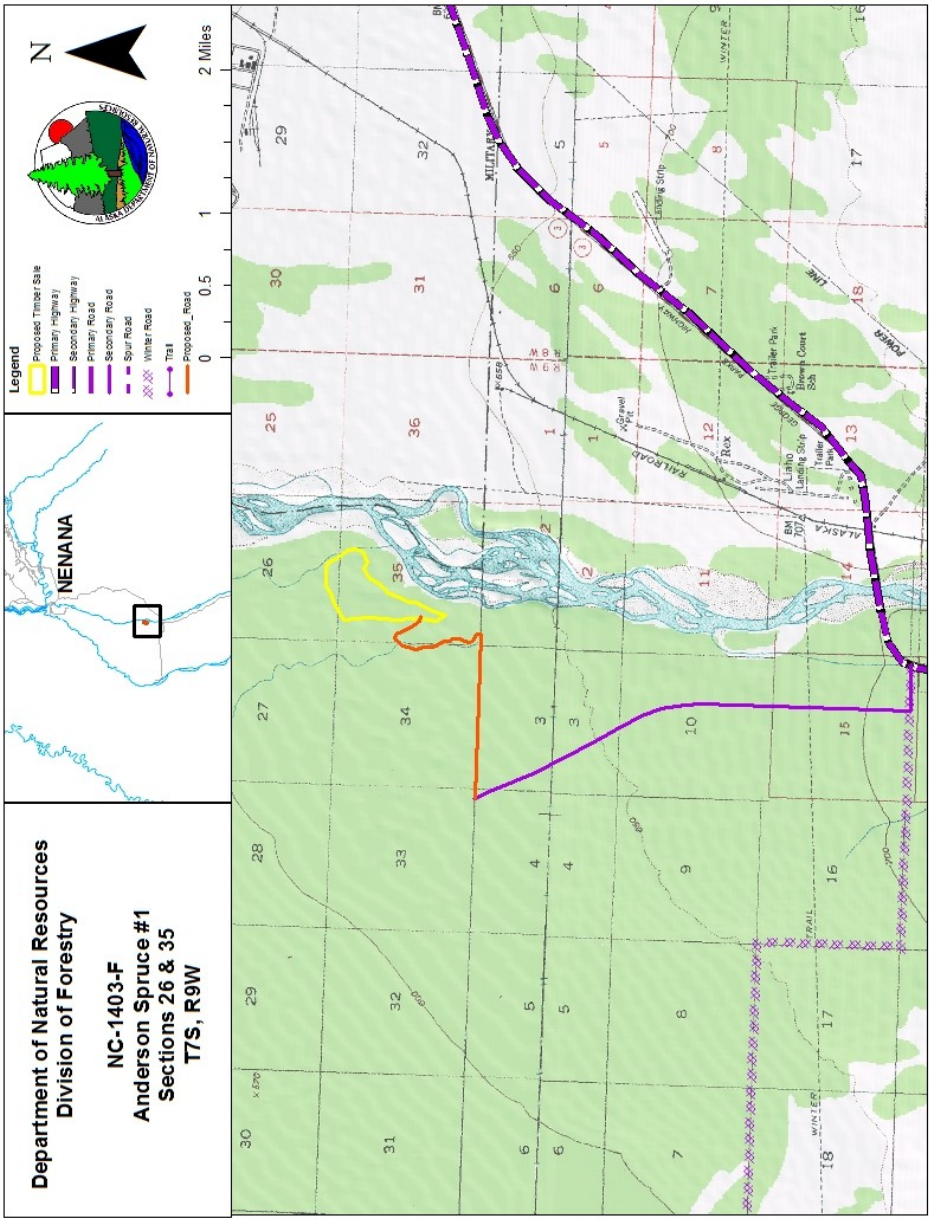
V. Approvals

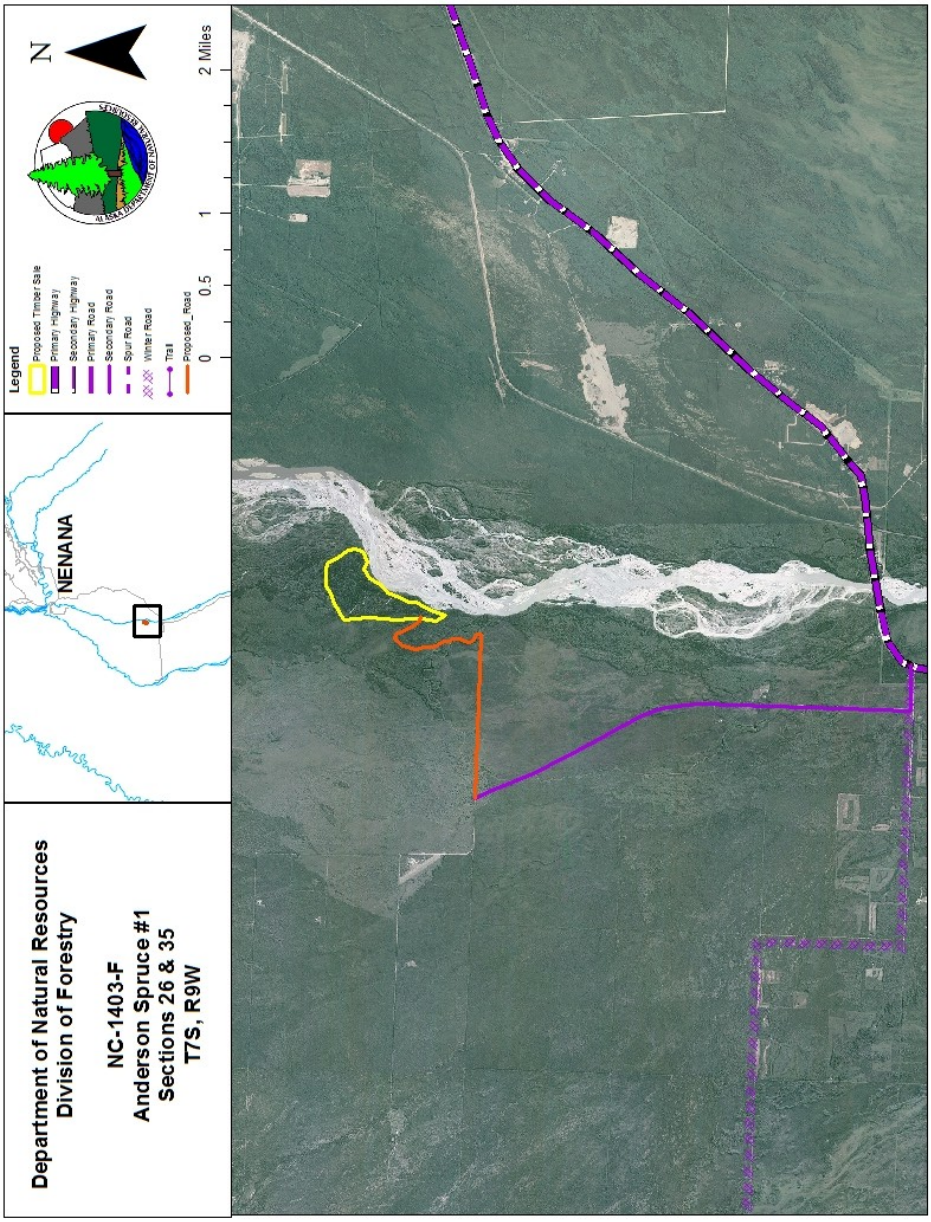
If you have any questions, please contact Paul Maki of the Fairbanks Area Office at (907) 451-2601 or e-mail paul.maki@alaska.gov.

This Draft Forest Land Use Plan has been reviewed by the Division of Forestry and provides the necessary information for public and by agency review of the project described in this document.

_____ _____

Fairbanks Area Forester **DateAppendix A: Timber Sale Maps**


Department of Natural Resources
Division of Forestry
NC-1403-F
Anderson Spruce #1
Sections 26 & 35
T7S, R9W
NENANA
Legend
Proposed Timber Sale
Primary Highway
Secondary Highway
Primary Road
Secondary Road
Spur Road
Winter Road
Trail
Proposed_Road
0
0.5
1
2 Miles
N


Department of Natural Resources
Division of Forestry
NC-1403-F
Anderson Spruce #1
Sections 26 & 35
T7S, R9W
NENANA
Legend
Proposed Timber Sale
Primary Highway
Secondary Highway
Primary Road
Secondary Road
Spur Road
Winter Road
Trail
Proposed_Road
0
0.5
1
2 Miles
N