

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



Draft Forest Land Use Plan
Win Lake #2
NC-1609-F, ADL# 420572
September 2021

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I. Introduction

Project File Number: NC-1609-F

Division of Forestry Office: Fairbanks Office
Area Forester: Matthew Stevens
Forest Practices Geographic Region (AS 41.17.950): 3

This Forest Land Use Plan (FLUP) covers proposed forest operations on approximately 250 acres of land in the Nenana Ridge area. 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 under the DOF's Nenana Ridge Pocket (ADL# 420367) Final Best Interest Finding and Decision pursuant to AS 38.05.035 (e) and 38.05.945;

This Draft Forest Land Use Plan is for timber sale(s) for which 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.

A draft of this plan was distributed to the Department of Fish & Game (ADF&G) and the Department of Environmental Conservation (DEC) for their review and comments relevant to the consistency of this proposed project with the statutes governing forest land use plans (AS 38.05.112) and the requirements of the Alaska Forest Resources & Practices Act (AS 41.17) and its Regulations (11 AAC 95).

The public and agencies are invited to comment on specific requirements for harvest, access, and reforestation operations in this draft FLUP. The decision on whether or not to offer timber for sale is made through the best interest finding process, and is not subject to review under the FLUP. Objections or comments pertaining to the draft FLUP must be received in writing by the DOF Fairbanks Area Office by **Monday November 1, 2021**.

After public and agency review of the draft FLUP, the DOF will review comments, make changes as appropriate, and issue a final FLUP. A person affected by the final decision who provided timely written comment or public hearing testimony on the preliminary decision may appeal it, in accordance with 11 AAC 02.

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

Tanana Valley State Forest Management Plan
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The administrative record for this sale is maintained at the Division of Forestry Fairbanks Area Office filed NC-1609-F.

A. Legal description (see also map in Appendix A): **F004S007W**

B. Operational Period: 3 Years

C. Timber Disposal

- 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			
<input checked="" type="checkbox"/> Tanana Valley State Forest	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other state land managed by DNR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> University of Alaska	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mental Health Trust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> School Trust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Other Land Ownership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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:

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 harvest units primarily consist of fully mature white spruce with some pockets of birch and aspen present. In subunit 5A of the TVSF, commercially viable stands, which have required relatively little all season primary and secondary road construction for access, historically, have been logged in a similar manner to that outlined in this Draft FLUP.

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	~250	Primarily flat terrain broken up by dry slough channels in the floodplain.	Heavy Partial Cut for spruce	Ground

C. Site Preparation

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:

Season of harvest:

- Winter harvest only
- Non-winter harvest only
- All-season harvest

Clearcut

Partial Harvest 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 as follows:

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

Natural regeneration

List species: White spruce, birch, and aspen

Coppice

List species: Birch and aspen

Artificial regeneration

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

Planting: Date of proposed planting: __tbd__

Source of seedlings (location of seed source):

Natural regeneration: provide known information on the following indicators of suitability for natural regeneration. If a box is checked “no,” please explain/describe the condition. N/A means “not applicable.”

Yes No N/A Unknown

Seedbed and soil conditions suitable for natural regeneration

- | | | | | |
|-------------------------------------|-------------------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Moss layers are shallow ($\leq 4''$) or absent |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Where birch or spruce regeneration is targeted, exposed mineral soil will exist on at least 25% of the harvest area and is well-distributed across the unit |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Where aspen regeneration from suckering is targeted, root damage will be minimal and soil exposure will encourage warming. |

Yes No N/A Unknown

Seed/vegetative reproduction sources available

- | | | | | |
|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Exposure to prevailing winds, if known |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Adequate seed trees exist within 3 tree heights of the reforestation site for spruce or within 2 tree heights for birch |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Where spruce regeneration is targeted, large seed crop in year prior to harvest or current year |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Where vegetative reproduction is targeted the harvest area contains sufficient, well-distributed paper birch, aspen, balsam poplar, western black cottonwood, red alder, or other species known to regenerate vegetatively as approved by the Division (<i>list species</i>). |

Yes No N/A Unknown

Competition and infestation risk

- | | | | | |
|--------------------------|-------------------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <i>Calamagrostis</i> (bluejoint grass) is not visually evident. If <i>Calamagrostis</i> is visually evident, describe abundance and distribution. <u>Note:</u> <i>Calamagrostis</i> coverage of more than 1-2% distributed across the site indicates that grass coverage may expand |
|--------------------------|-------------------------------------|--------------------------|--------------------------|---|

rapidly after harvest without treatment.

- | | | | | |
|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <i>Equisetum</i> (horsetail) is present prior to harvest |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | The site is not currently subject to intense herbivory due to peaks in the hare cycle, dense moose populations, or scarcity of browse in the surrounding landscape. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Existing stands are not infested with bark beetles (<i>Dendroctonus</i> or <i>Ips</i>) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Where spruce regeneration is targeted, harvest areas are free of known incidence of <i>Onnia tomentosus</i> root rot. <u>Note:</u> <i>tomentosus</i> can kill regeneration of spruce and, to a lesser degree, pine and larch. If <i>tomentosus</i> is present, describe the extent of the problem in the notes box below. Design reforestation to minimize continuation or spread of the disease |

Note: If likely competition or other factors indicate challenges for natural reforestation, prompt reforestation through site preparation and/or artificial regeneration is recommended to ensure success and minimize costs.

Landowner requests an extended period for natural regeneration under 11 AAC 95.375(d)(6)

E. Slash Abatement

- 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.
- 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	Tanana River	Type III-B	334-40-11000-2490	100ft Buffer form harvest	

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:

- Timber retention - concentrations of timber surrounding harvest units, or interspersed within harvest units to provide cover.
- Snag Retention- snags or isolated trees left for cavity nesting species.
- 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

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	~1	S. All-season	12-15%	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: 30%

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 NO

General Erosion Control:

- grass seeding erosion control mats wattle Other: Waterbars
- not applicable

C. Crossing Structures:

- 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
Maisch Logging Road Spur	1	All-season	2025	Some personal use harvesters for firewood, houselogs will be permitted

E. Material Extraction:

- 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

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

Fairbanks-Delta Area Forester

Date

Regional Forester

Date

If you have any questions, please contact Kevin Meany of the Fairbanks Area Office at (907) 451-2602 or e-mail kevin.meany@alaska.gov .

Appendix A: Timber Sale Maps

