

Fairbanks North Star Borough
Division of Land Management

Five Year Timber Harvest Schedule

And

Voluntary Plan of Operation

2015 – 2019

Introduction

The purpose of the Fairbanks North Star Borough (FNSB) five year timber harvest schedule and voluntary plan of operation is to identify and plan areas where timber harvesting operations could take place on Borough owned lands. These areas of timber harvesting would meet some of the demands of local firewood businesses while providing revenue for the Borough. This plan also identifies areas that could supply wood energy facilities with raw material to meet the needs of local mills and other value added processors.

In recent years there has been greater demand for FNSB to make its timber resource available to the local forest products industry. Until recently, the FNSB Division of Land Management has attempted to meet these demands by making sales available on an individual basis. With the creation of this plan, the Division of Land Management is attempting to take a more proactive approach by planning where harvest operations occur in the near future. This planning effort is also an attempt to save valuable staff time by providing the FNSB assembly with the information they need to approve or modify the planned harvest units in one consolidated, executive action. It provides regulatory agencies with information on where the borough intends to harvest timber, and meets the intent of a voluntary plan of operation as specified in the Alaska Forest Resource Practices Act. It also provides the local forest products industry with an idea of how much material the borough is planning to provide to the local markets and how far those sites are from local processing facilities. This information aids their operations by allowing them to more accurately estimate harvest and transportation costs.

The maps, acres and volumes of timber in this plan are estimates only. Cruising (sample plots) will be conducted before sales are opened for bid as there has been minimal site reconnaissance associated with this planning effort. The proposed harvest units are delineated with analysis of forest cover type and topography using air photos and satellite images. The FNSB consulting forester used available data to determine if the site appeared operable with ground based harvest systems typical for interior Alaska. Proposed roads are located so that access to proposed harvest units is economically feasible, minimizes impact to soil and water resources, and enters the harvest unit avoiding adverse grade (up-hill hauling) as much as possible. The FNSB consulting forester will visit these sites to do a more thorough cruise of the standing timber, and conduct a final layout of the harvest unit and road once the plan has been approved. It is intended that road and unit locations will remain as close to what is laid out in this plan as possible. However, once site specific issues are identified, boundary and road locations may alter slightly from what is proposed in this document.

FNSB Forestry program

Since the spring of 2012, the FNSB has sold 2201.9 cords of birch and spruce fuelwood on seven timber sales totaling 105.6 acres. The borough has collected \$31,403.49 in timber sale receipts. Using an estimate of \$250.00 per cord, local firewood businesses grossed approximately \$550,475.00. The borough has two spruce sawtimber sales available over the counter worth \$66,456.95 in stumpage. Local businesses have expressed renewed interest in these sales as well.

There are many benefits to making borough owned timber available for commercial purposes. Local firewood cutters are working in the woods and meeting the demands of their customers while adding to the local economy. Silvicultural systems are being utilized to improve forest health or meet desired forest conditions and reforestation of harvested units is being monitored to ensure forest lands stay in production. Also, in many cases, wildlife habitat for some important game species is improved upon with silvicultural systems that promote hardwood regeneration.

Local Forest Products Market

There continues to be a growing demand for firewood and biomass as an energy source in the Fairbanks North Star Borough. A local pellet mill continues to produce pellet fuels using raw material provided by local loggers and log truck drivers. They have recently expanded their operation by producing pellet logs that can be used in traditional wood stoves. The pellet logs are made with a mix of aspen and spruce which opens new opportunities in managing aspen stands where none had existed before.

Commercial firewood cutters continue to meet the demands of local residents. It is difficult to gauge the economic impact that firewood cutters are having on the local economy because it is impossible to track the volume of wood coming off a variety of land ownerships. The Division of Forestry sells the most volume of commercial firewood sales, however, loggers are also actively working on FNSB, Army, Native Corporations and private land through land clearing contracts. Commercial firewood cutters are getting upwards of \$250.00 or more for cut, split and delivered firewood. Fuel oil continues to be an expensive option for heating so many people use firewood to reduce heating costs.

There is a sustainable market for sawn products in Fairbanks. Local construction and oil field support operations have a need for dimensional lumber and dunnage which can be produced with local spruce. Local mills contract with loggers and log truck drivers for delivered material in addition to employing people with these skills.

Small niche markets for value added products like wood bowls, log furniture, cabinets, doors, and birch crafts such as carved boxes, jewelry, birdhouses, etc.,

exist in Fairbanks. Still other niche markets feature wood chip silt socks for erosion control, and even a business building traditional caskets. Some local operations supplement their value added business by providing firewood. They sort material at the landing that can be used to produce their crafts and sell the rest as firewood.

Alaska Forest Resources and Practices Act (FRPA)

The Alaska Division of Forestry (DOF) is the regulatory agency for timber sales on private and municipal land. For every timber sale, a detailed plan of operations (DPO) must be submitted to DOF that outlines volume harvested, road location and silvicultural activities (11 AAC 95.220). The DPO is also a commitment to reforestation by the landowner. Once DOF receives the DPO they submit it to the Alaska Department of Fish and Game, the Alaska Department of Environmental Conservation and anyone requesting to be on the mailing list (11 AAC 95.225) to review the proposed sale for fish habitat or water quality issues. Once the DPO is accepted the timber sale is subject to inspection for compliance with FRPA regulations.

This five year timber harvest schedule is not meant to satisfy the required DPO, but it does meet the intent of a voluntary plan of operations (VPO) (11 AAC 95.210), which can expedite the DPO review period. Much like the DPO process, a VPO is distributed by the DOF to regulatory agencies and interested parties to identify potential issues and make comments that will make the DPO process more streamlined. It avoids the situation where fish habitat and water managers are surprised by forest management activities on municipal land. Without the use of a VPO, regulatory agencies typically only see timber harvest plans on municipal land for the first time when the DPO is submitted, which can prolong the process as potential issues are being resolved.

Once the DPO is submitted, it must address the plan for reforestation (11 AAC 95.375). The reforestation plan must identify the preferred species, regeneration technique and site preparation technique that the landowner will use to accomplish reforestation. In region III (northern Alaska) 450 trees per acre must have survived on the site for a minimum of two years as of seven years after harvest.

All road construction and maintenance requirements identified in FRPA will be adhered to when constructing roads to access proposed sales identified. Roads pose the most risk of a harvest operation becoming non-compliant with FRPA. A set of best management practices (BMP's) has been developed for timber harvest and road construction/maintenance operations in Alaska. Adhering to these BMP's ensures compliance with FRPA. Also, the dimensional standards of forest roads outlined in the Tanana Valley State Forest management plan are useful for planning forest road construction on FNSB land.

Harvest Schedule

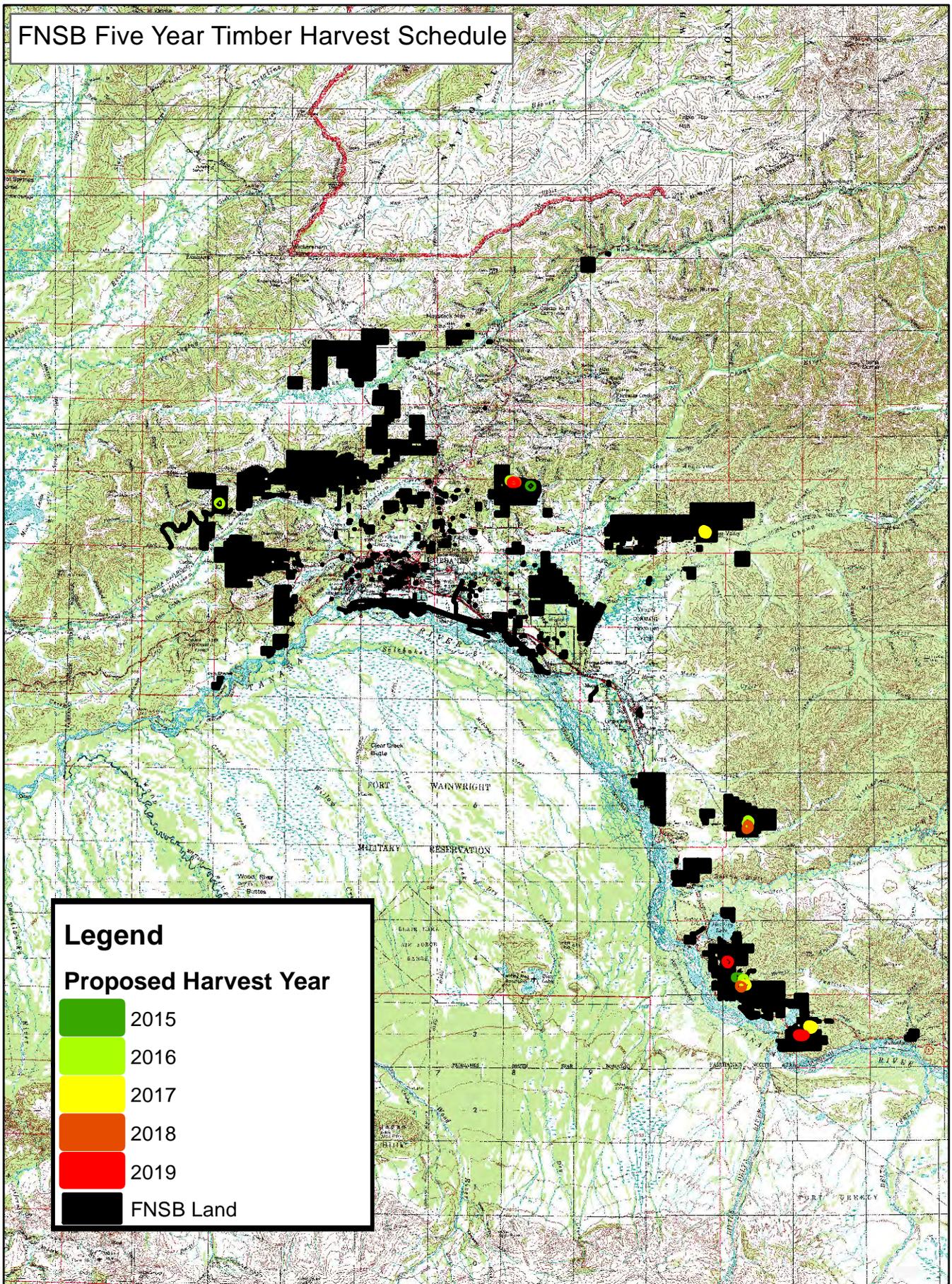
Table 1: Proposed schedule of timber harvest by year, acres and volume.

Year	Acres	CCF (birch & aspen)	MBF (spruce saw)
2015	30	567	0
2016	67.7	1156	0
2017	104.3	777	614
2018	66.5	1169	0
2019	106.1	927	505
Total	374.3	4596	1119

This proposed schedule lays out areas where the FNSB Division of Land Management foresees timber harvesting on borough managed land. It is intended to meet some of the demands of the local forest products industry while also meeting FNSB timber management objectives, improving forest health and in many cases improving wildlife habitat. The silvicultural systems used will be based on existing conditions and desired future conditions to meet the management objectives of the Division of Land Management. The volumes, acres and areas of this proposed schedule are estimates only and may change slightly once the unit is laid out by the forestry consultant.

The "Harvest Operations Area" in the schedule covers an area much larger than the footprint of the proposed harvest unit. For example: a proposed sale may be 16 acres in size but the harvest operations area could be 4 sections. Once the site is visited by a forester, he/she may find that it does not make sense to place that proposed sale in the planned location (as identified in this schedule), and that the sale should be moved to another location within the harvest operations area. This provides some flexibility for the borough to manage its timber resource while also maintaining transparency to interested parties. The borough may amend its harvest plan, subject to assembly approval, in order to meet new demands, address land use conversion, or mitigate forest health issues

FNSB Five Year Timber Harvest Schedule



Five Year Timber Harvest Schedule
And
Summary of Volume and Acres by Year

FAIRBANKS NORTH STAR BOROUGH
DIVISION OF LAND MANAGEMENT
FIVE YEAR TIMBER HARVEST SCHEDULE

Year	Sale Name	Harvest Operations Area	Acres	Species	Volume	Measure	Management Unit
2015	Whales Head Aspen #1	T1N, R2E, Sec 5	9.1				Whales Head
				Aspen	203	CCF	
2015	Mosquito Creek East #1	T6S, R5E, Sec 29, 30, 31, 32	20.6				Mosquito Creek
				Birch	364	CCF	
2016	Whales Head Aspen #2	T1N, R2E, Sec 6	13.9				Whales Head
				Aspen	308	CCF	
2016	Mosquito Creek East #2	T6S, R5E, Sec 29, 30, 31, 32	16.9				Mosquito Creek
				Birch	299	CCF	
2016	Johnson Road South #1	T4S, R5E, Sec 20, 21, 28, 29	25.3				Johnson Road
				Birch	365	CCF	
2016	Cache Creek #2	T1N, R3W, Sec 18	11.6				Cache Creek
				Birch	184	CCF	
2017	Mosquito Creek East #3	T6S, R5E, Sec 29, 32, 33	20.7				Mosquito Creek
				Birch	366	CCF	
2017	Jenny M Spruce #1	T1N, R4E, Sec 26, 27	31.1	Spruce	264	MBF	Jenny M
2017	Canyon Creek West	T7S, R6E, Sec 17, 18, 19, 20	52.5	Spruce	350	MBF	Birch Lake
				Birch	412	CCF	
2018	Whales Head Aspen #3	T1N, R2E, Sec 5, 6	19.3				Whales Head
				Aspen	430	CCF	
2018	Mosquito Creek East #4	T6S, R5E, Sec 29, 32, 33	18.4				Mosquito Creek
				Birch	325	CCF	
2018	Johnson Road South #2	T4S, R5E, Sec 20, 21, 28, 29	28.7				Johnson Road
				Birch	414	CCF	
2019	Whales Head Aspen #4	T1N, R2E, Sec 5, 6	22.6				Whales Head
				Aspen	502	CCF	
2019	Mosquito Creek North #1	T6S, R5E, Sec 19	24.1				Mosquito Creek
				Birch	425	CCF	
2019	Lost Birch #2	T7S, R6E, Sec 19, R5E, Sec 24	59.4	Spruce	505	MBF	Birch Lake

15	# OF SALES	Total Acres	374.3	Sp Saw MBF	1,119
				Birch CCF	3,154
				Aspen CCF	1,443
				Fuelwood CCF	4,597

All Sales are on FNSB Land

Acreage and volume amounts are rough estimates

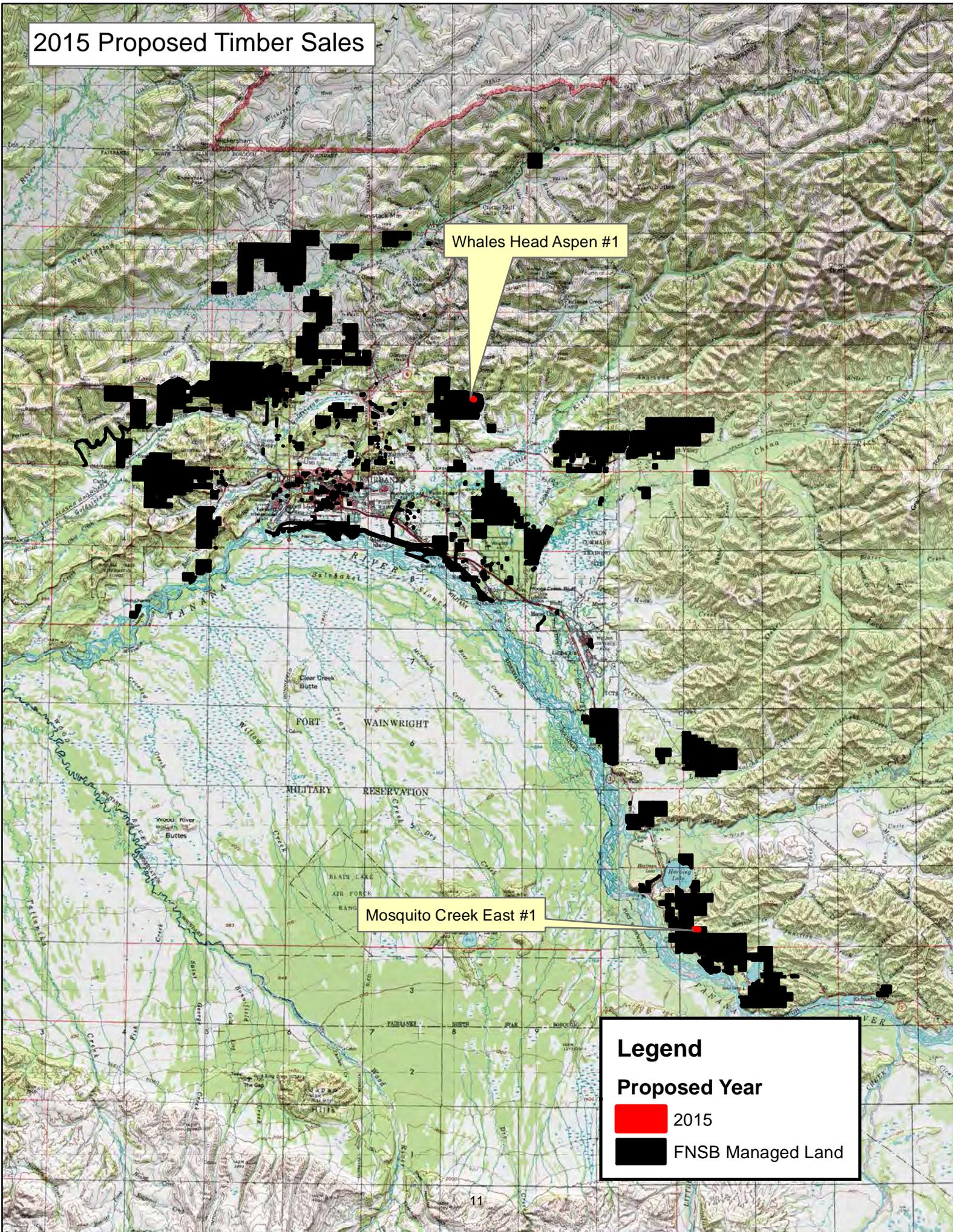
FAIRBANKS NORTH STAR BOROUGH
 DIVISION OF LAND MANAGEMENT
 TIMBER HARVEST SCHEDULE
 Summary by year

	MBF	CCF	Cords	Air Dry Tons	Acres
Total for year 2015					
spruce volume of FNSB timber sales =	0	0	0	0	30
birch volume of FNSB timber sales =	149	364	428	691	
aspen volume of FNSB timber sales =	83	203	239	274	
Total Volume of FNSB timber sales =	232	567	667	965	
<hr/>					
Total for year 2016					
spruce volume of FNSB timber sales =	0	0	0	0	67.7
birch volume of FNSB timber sales =	348	848	997	1,611	
aspen volume of FNSB timber sales =	126	308	363	416	
Total Volume of FNSB timber sales =	474	1,156	1,360	2,027	
<hr/>					
Total for year 2017					
spruce volume of FNSB timber sales =	614	1,498	1,762	2,246	104.3
birch volume of FNSB timber sales =	319	777	915	1,477	
aspen volume of FNSB timber sales =	0	0	0	0	
Total Volume of FNSB timber sales =	933	2,275	2,676	3,723	
<hr/>					
Total for year 2018					
spruce volume of FNSB timber sales =	0	0	0	0	66.5
birch volume of FNSB timber sales =	303	740	870	1,406	
aspen volume of FNSB timber sales =	176	430	506	580	
Total Volume of FNSB timber sales =	479	1,169	1,376	1,986	
<hr/>					
Total for year 2019					
spruce volume of FNSB timber sales =	505	1,232	1,449	1,848	106.1
birch volume of FNSB timber sales =	174	425	500	808	
aspen volume of FNSB timber sales =	206	502	591	678	
Total Volume of FNSB timber sales =	885	2,159	2,540	3,333	
<hr/>					
Five Year Total					
spruce volume of FNSB timber sales =	1,119	2,729	3,211	4,094	374.3
birch volume of FNSB timber sales =	1,293	3,154	3,710	5,992	
aspen volume of FNSB timber sales =	592	1,443	1,698	1,948	
Total Volume of FNSB timber sales =	3,004	7,326	8,619	12,034	

All calculations of volume and acres are estimates only. Acreage is estimated by delineating a potential timber sale boundary on a GIS and calculating the area of that boundary. Volume is estimated by using cruise estimates on adjacent FNSB or DOF timber sales that are similar stand types or by using inventory data from adjacent similar stands within the Tanana Valley State Forest and applying the per acre volume to the estimated acres of the proposed timber sale.

2015 proposed timber sale maps

2015 Proposed Timber Sales



Whales Head Aspen #1

Mosquito Creek East #1

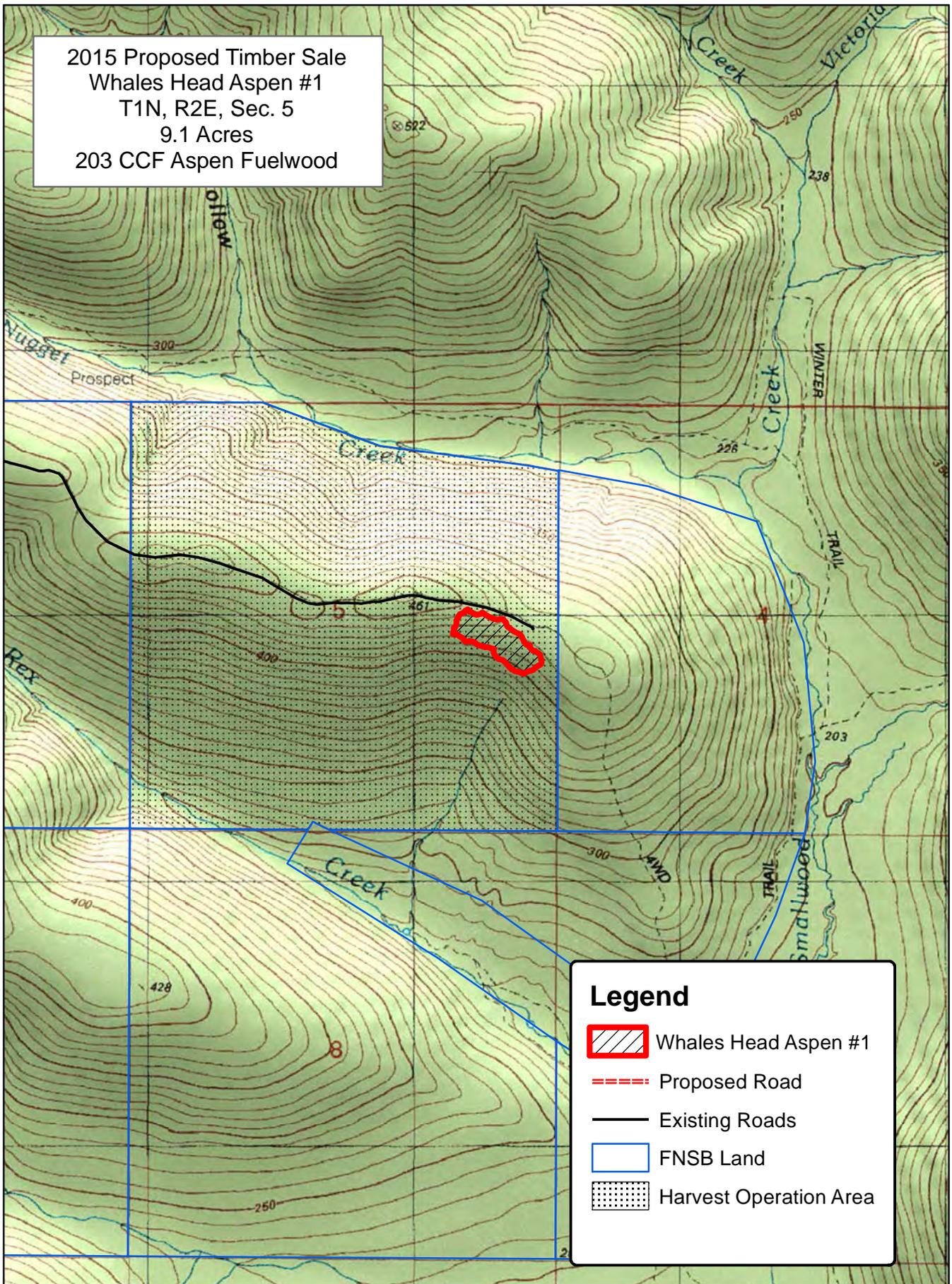
Legend

Proposed Year

- 2015

FNSB Managed Land

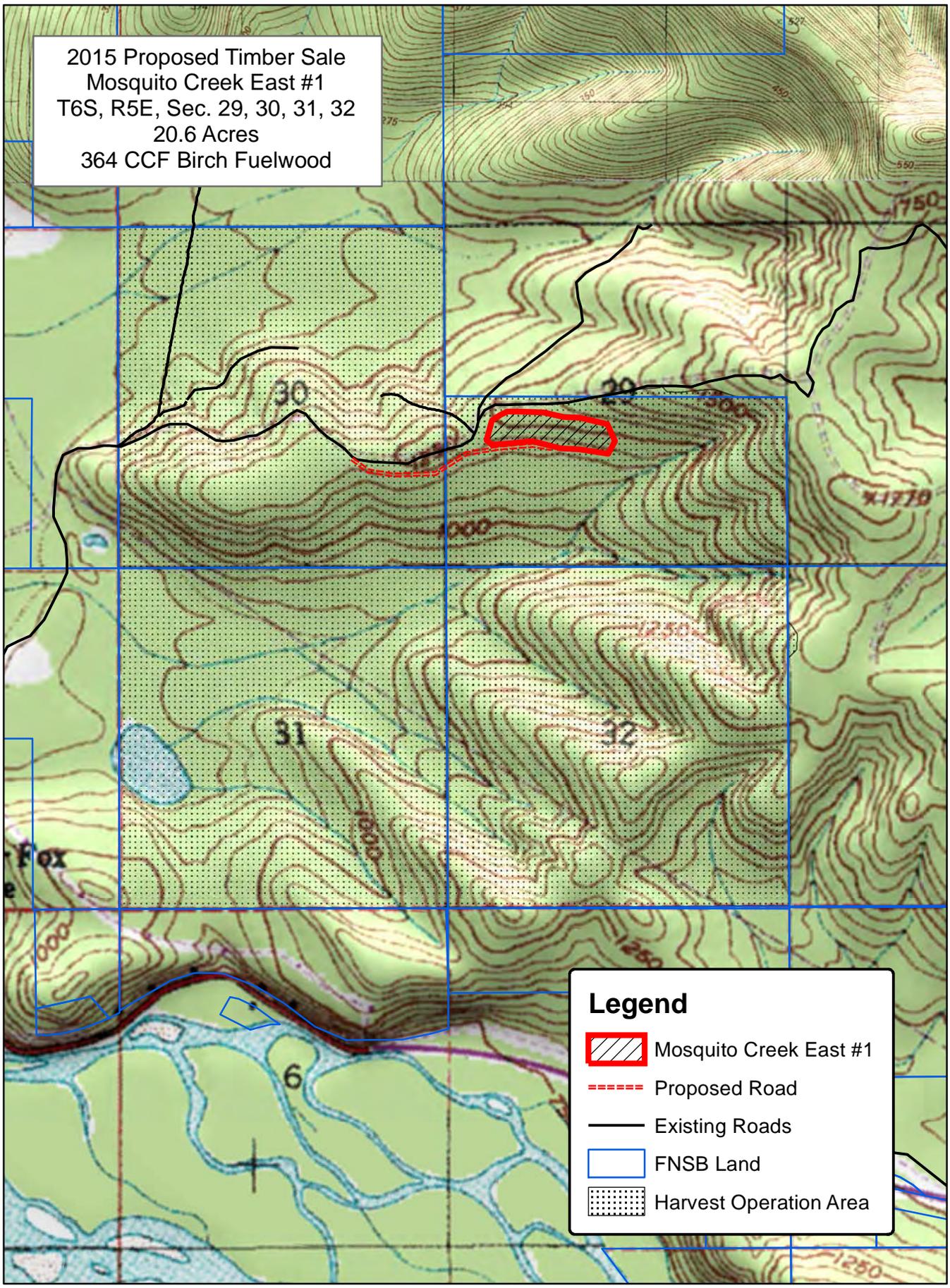
2015 Proposed Timber Sale
Whales Head Aspen #1
T1N, R2E, Sec. 5
9.1 Acres
203 CCF Aspen Fuelwood



Legend

-  Whales Head Aspen #1
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2015 Proposed Timber Sale
Mosquito Creek East #1
T6S, R5E, Sec. 29, 30, 31, 32
20.6 Acres
364 CCF Birch Fuelwood

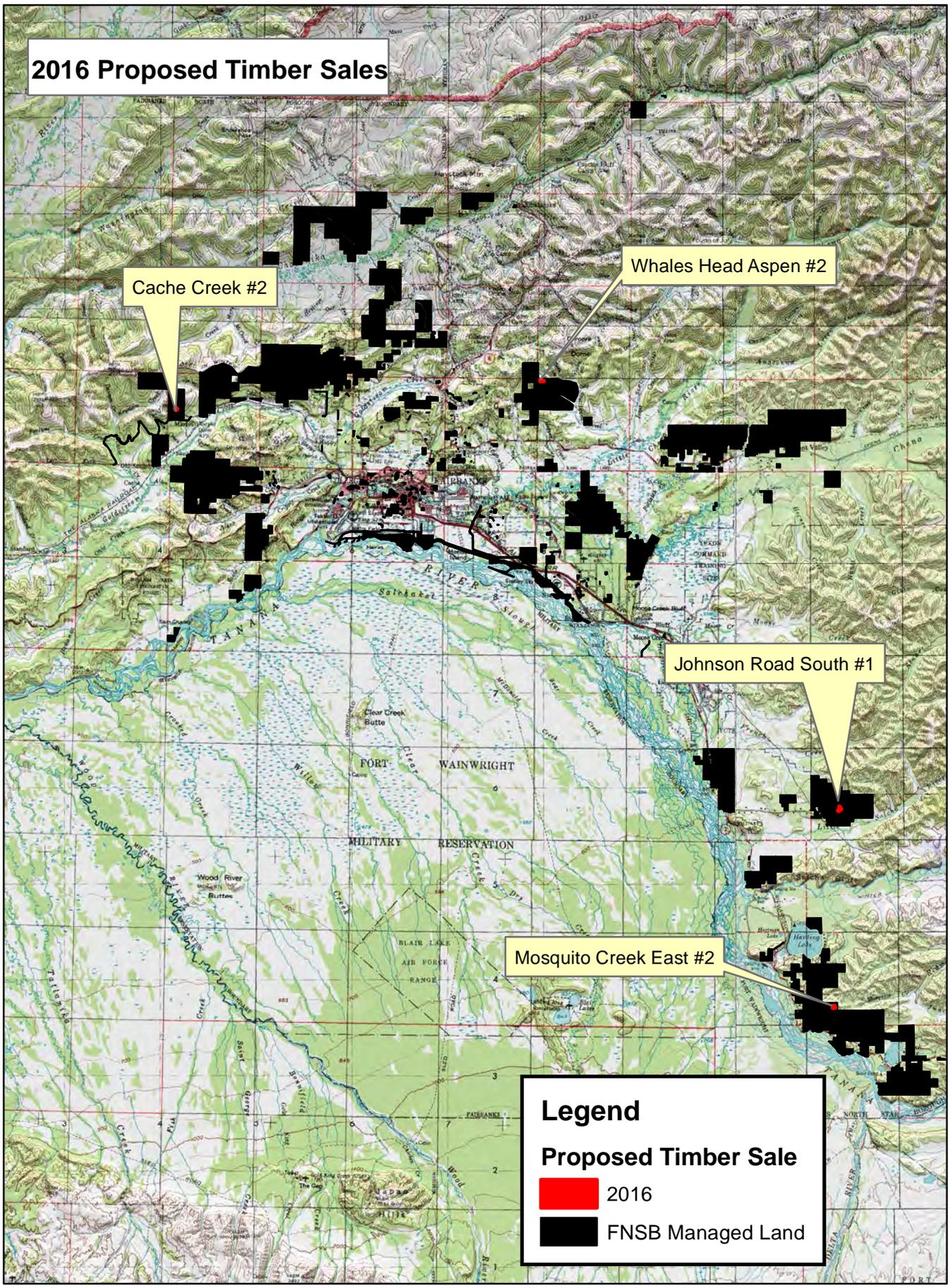


Legend

-  Mosquito Creek East #1
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2016 proposed timber sale maps

2016 Proposed Timber Sales



Cache Creek #2

Whales Head Aspen #2

Johnson Road South #1

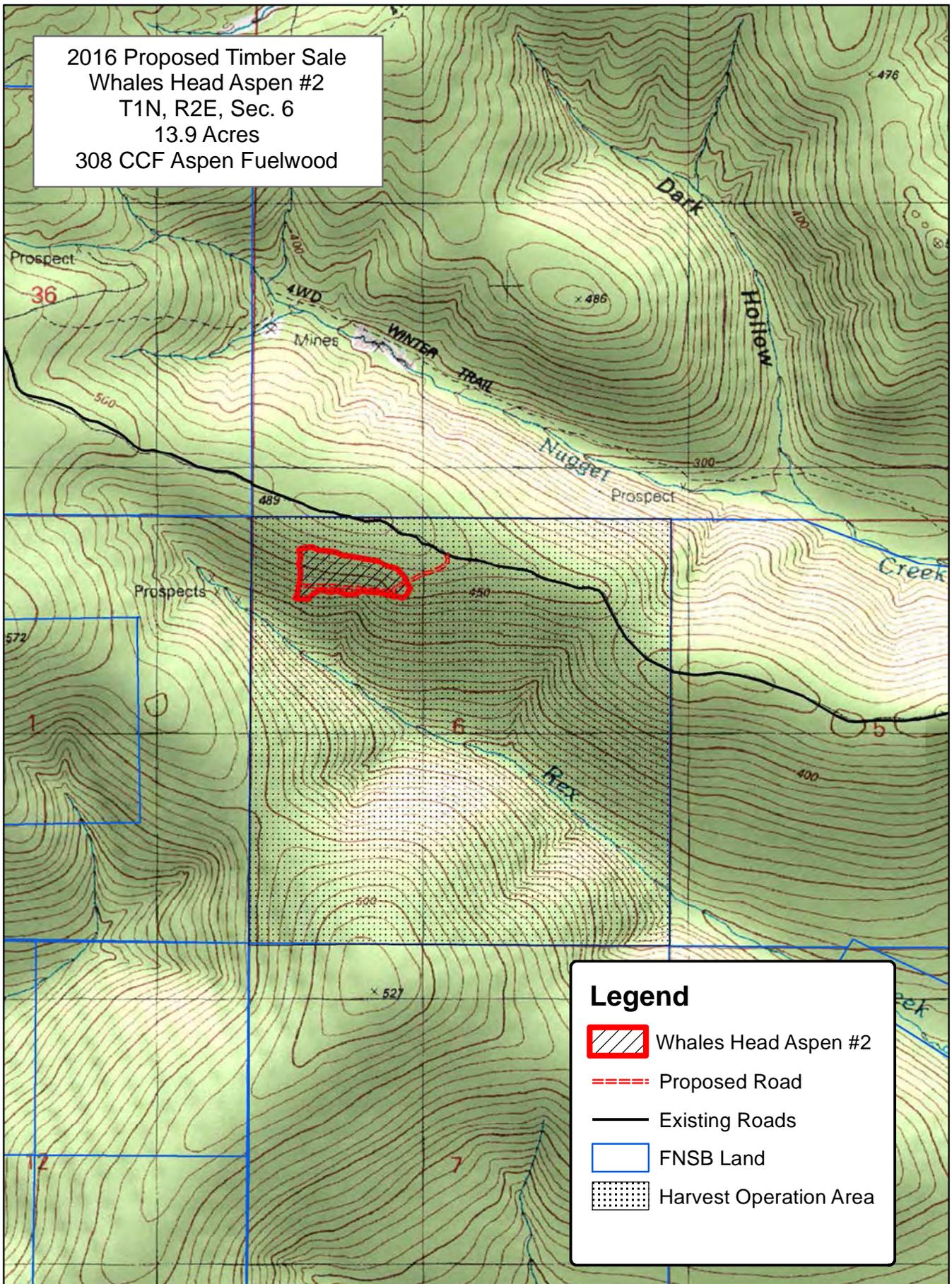
Mosquito Creek East #2

Legend

Proposed Timber Sale

- 2016
- FNSB Managed Land

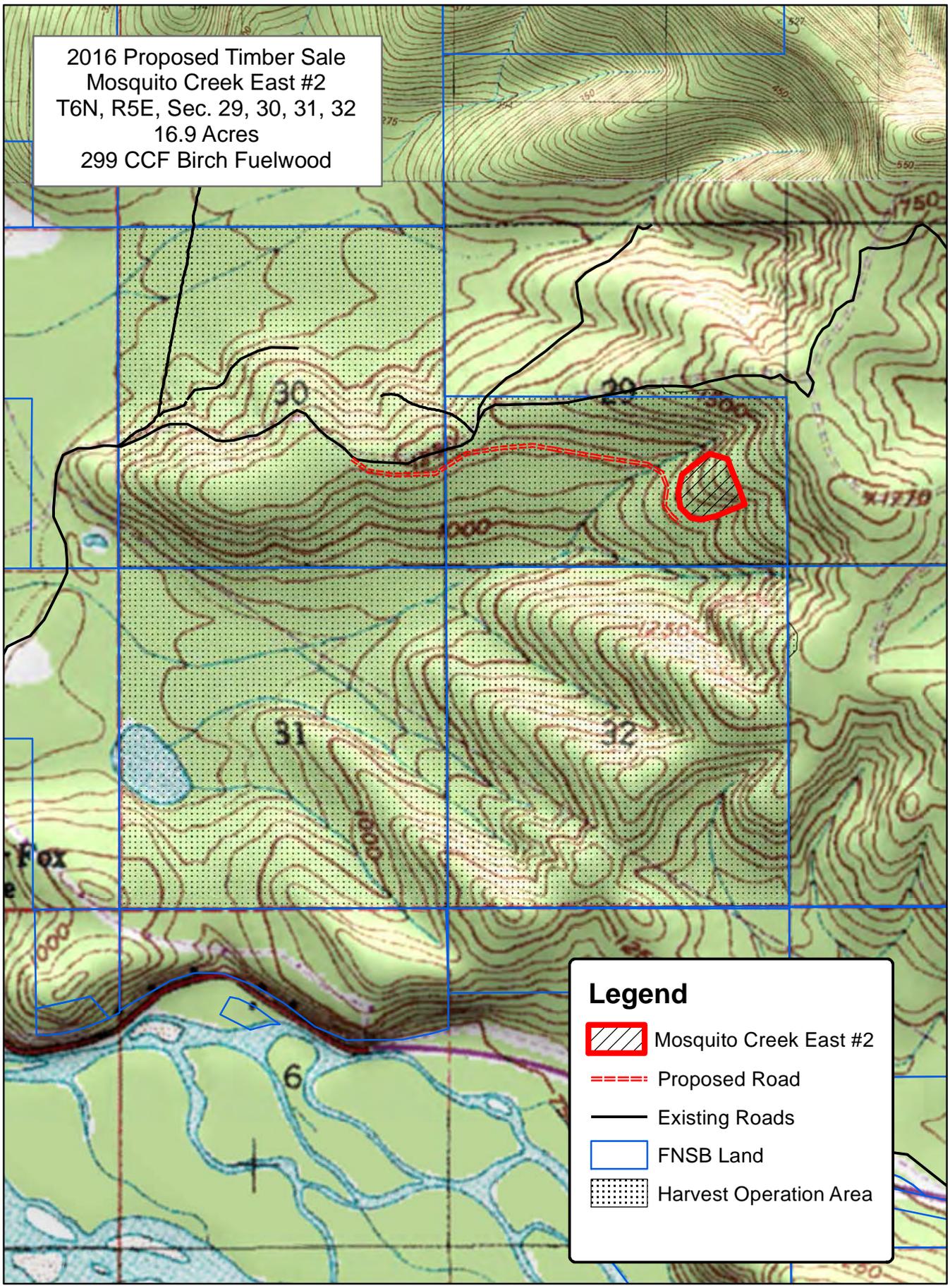
2016 Proposed Timber Sale
Whales Head Aspen #2
T1N, R2E, Sec. 6
13.9 Acres
308 CCF Aspen Fuelwood



Legend

-  Whales Head Aspen #2
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

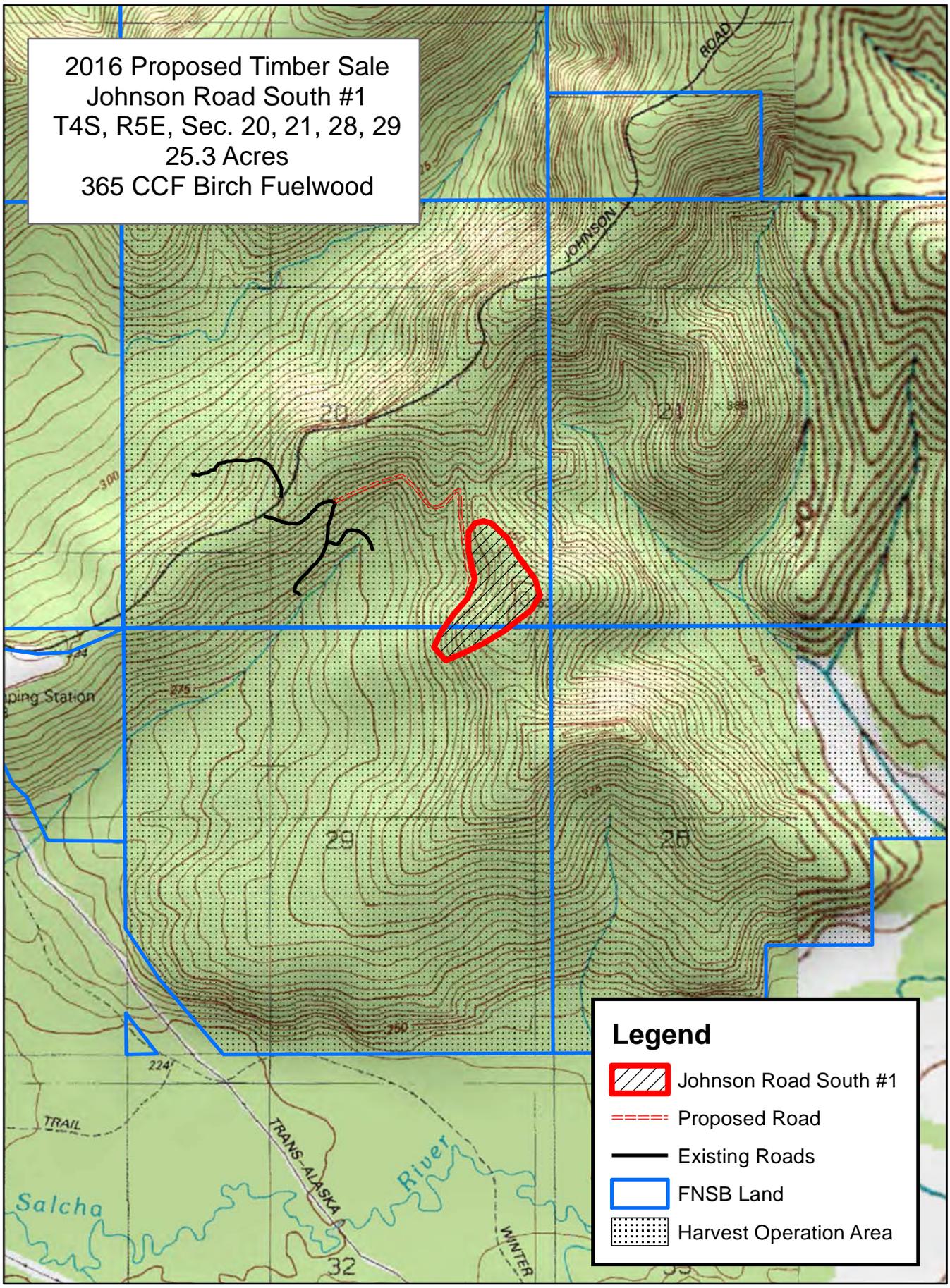
2016 Proposed Timber Sale
Mosquito Creek East #2
T6N, R5E, Sec. 29, 30, 31, 32
16.9 Acres
299 CCF Birch Fuelwood



Legend

-  Mosquito Creek East #2
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

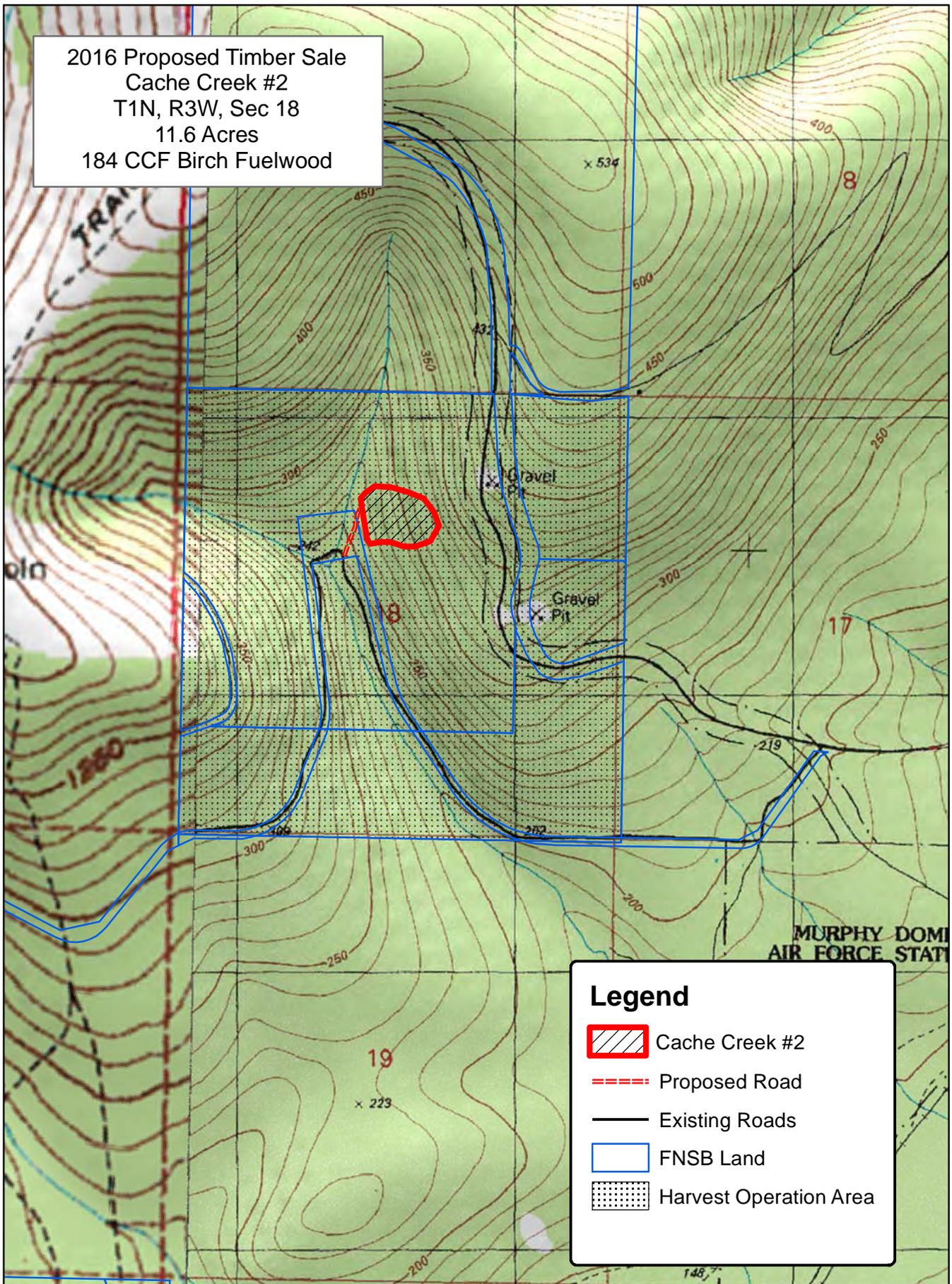
2016 Proposed Timber Sale
Johnson Road South #1
T4S, R5E, Sec. 20, 21, 28, 29
25.3 Acres
365 CCF Birch Fuelwood



Legend

-  Johnson Road South #1
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2016 Proposed Timber Sale
Cache Creek #2
T1N, R3W, Sec 18
11.6 Acres
184 CCF Birch Fuelwood

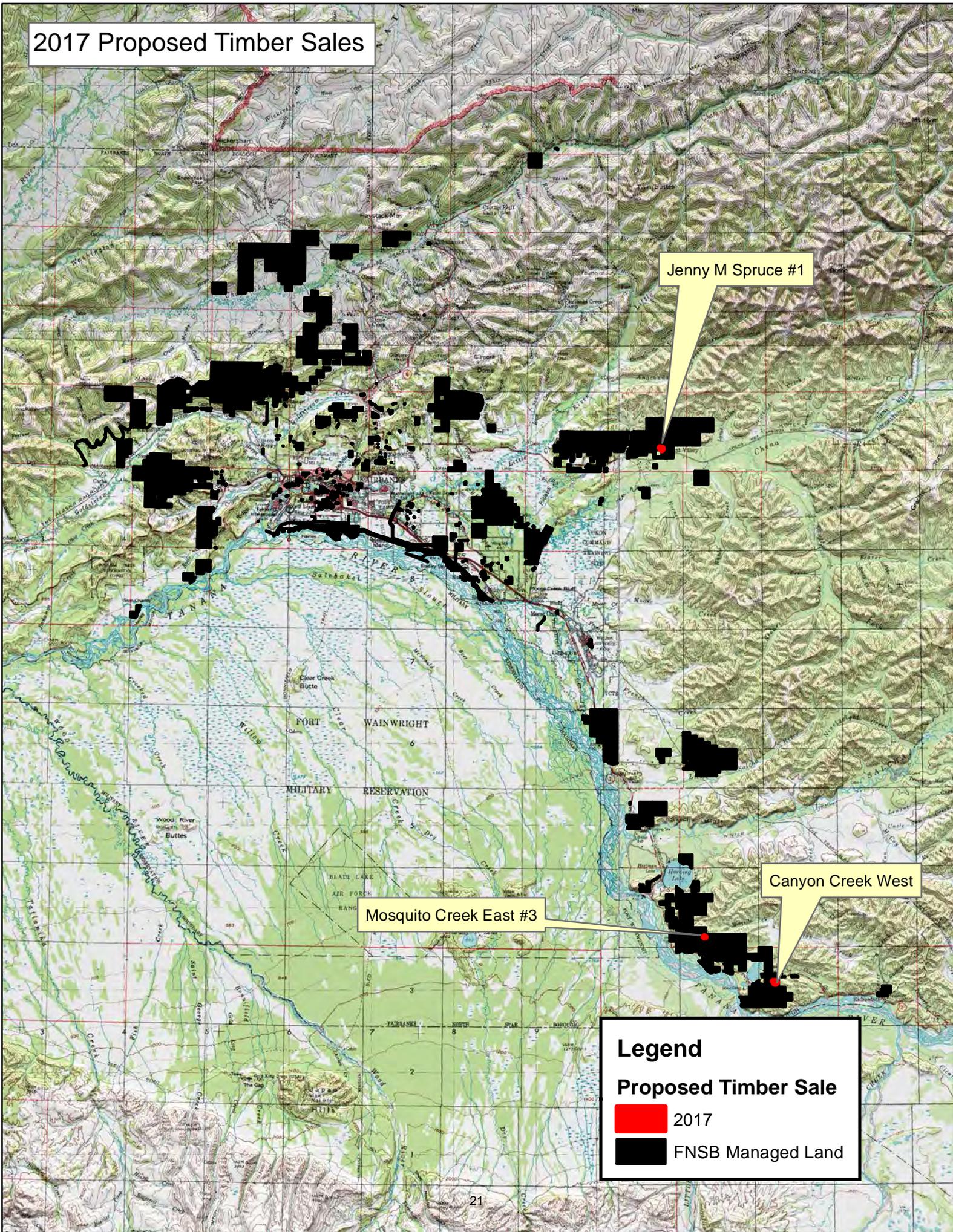


Legend

-  Cache Creek #2
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2017 proposed timber sale maps

2017 Proposed Timber Sales



Jenny M Spruce #1

Mosquito Creek East #3

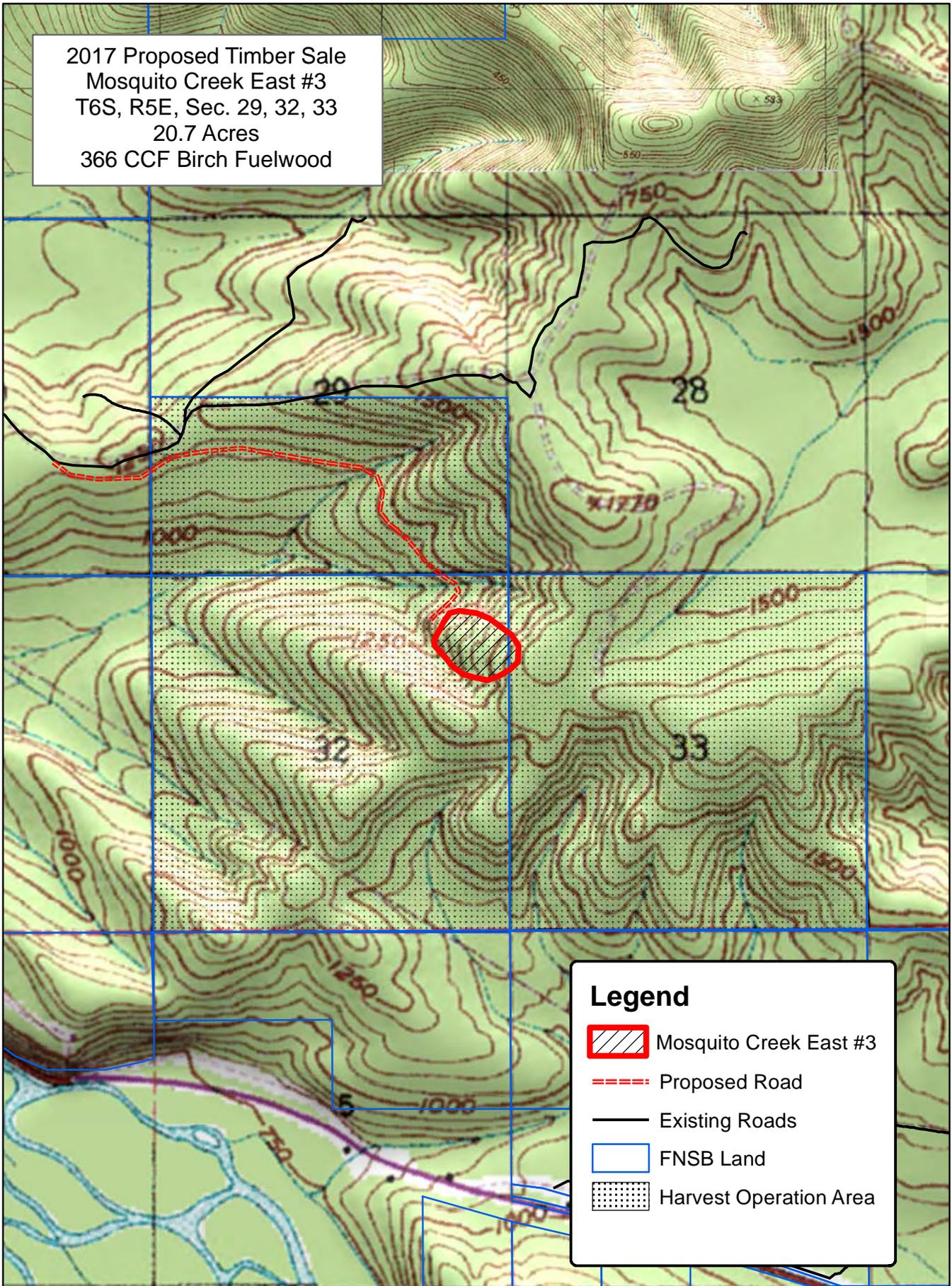
Canyon Creek West

Legend

Proposed Timber Sale

- 2017
- FNSB Managed Land

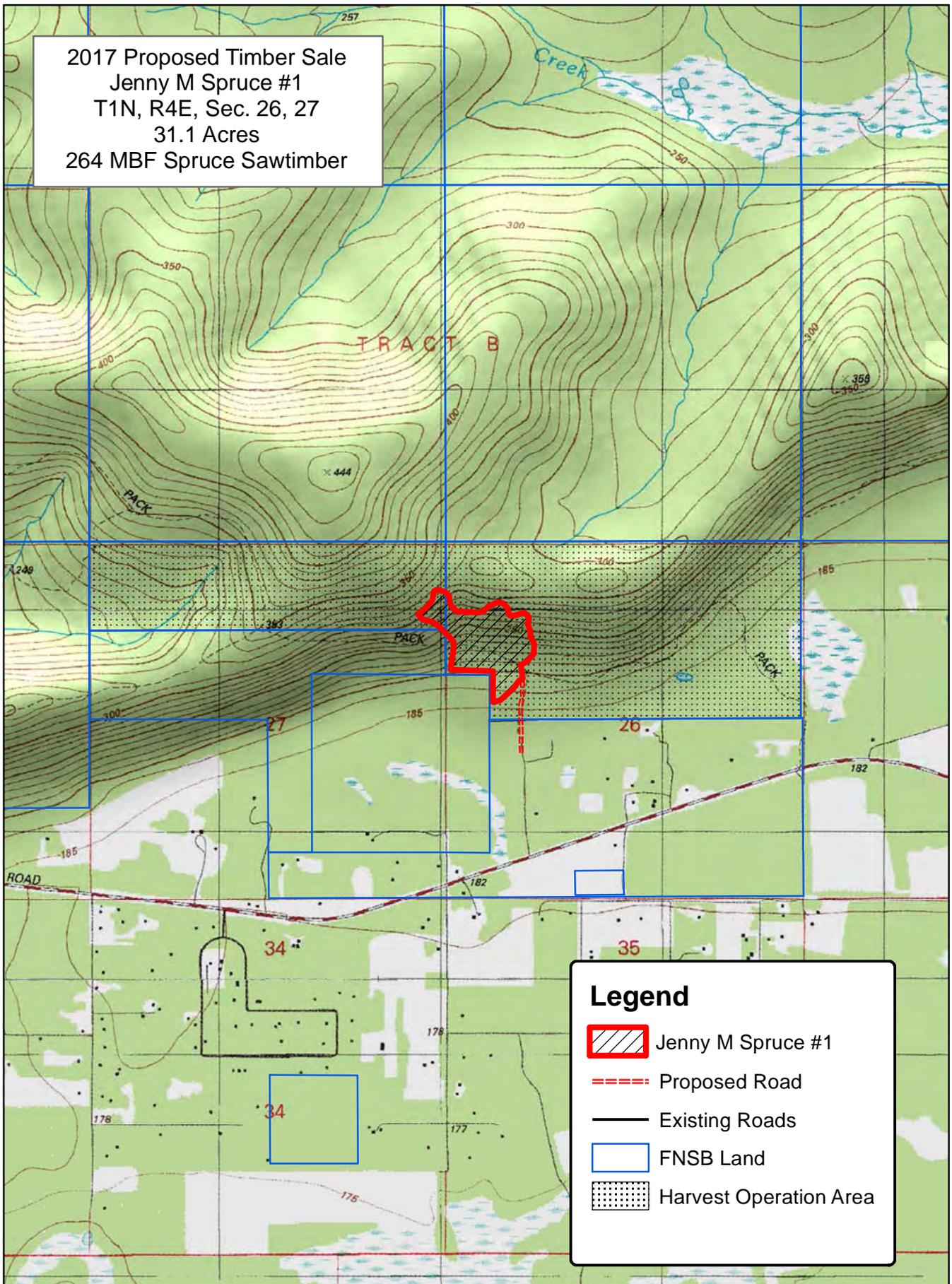
2017 Proposed Timber Sale
Mosquito Creek East #3
T6S, R5E, Sec. 29, 32, 33
20.7 Acres
366 CCF Birch Fuelwood



Legend

-  Mosquito Creek East #3
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

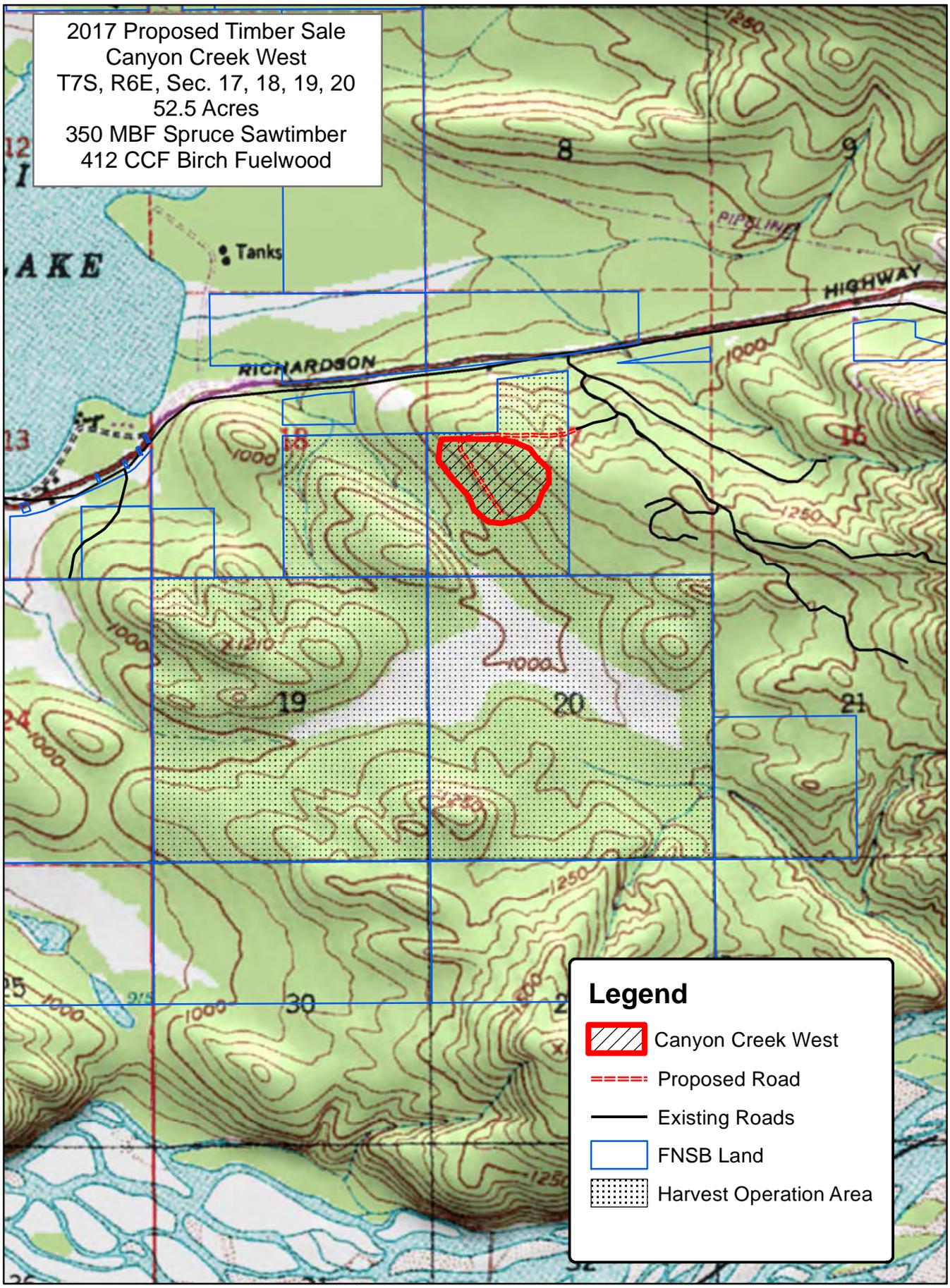
2017 Proposed Timber Sale
 Jenny M Spruce #1
 T1N, R4E, Sec. 26, 27
 31.1 Acres
 264 MBF Spruce Sawtimber



Legend

-  Jenny M Spruce #1
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2017 Proposed Timber Sale
 Canyon Creek West
 T7S, R6E, Sec. 17, 18, 19, 20
 52.5 Acres
 350 MBF Spruce Sawtimber
 412 CCF Birch Fuelwood

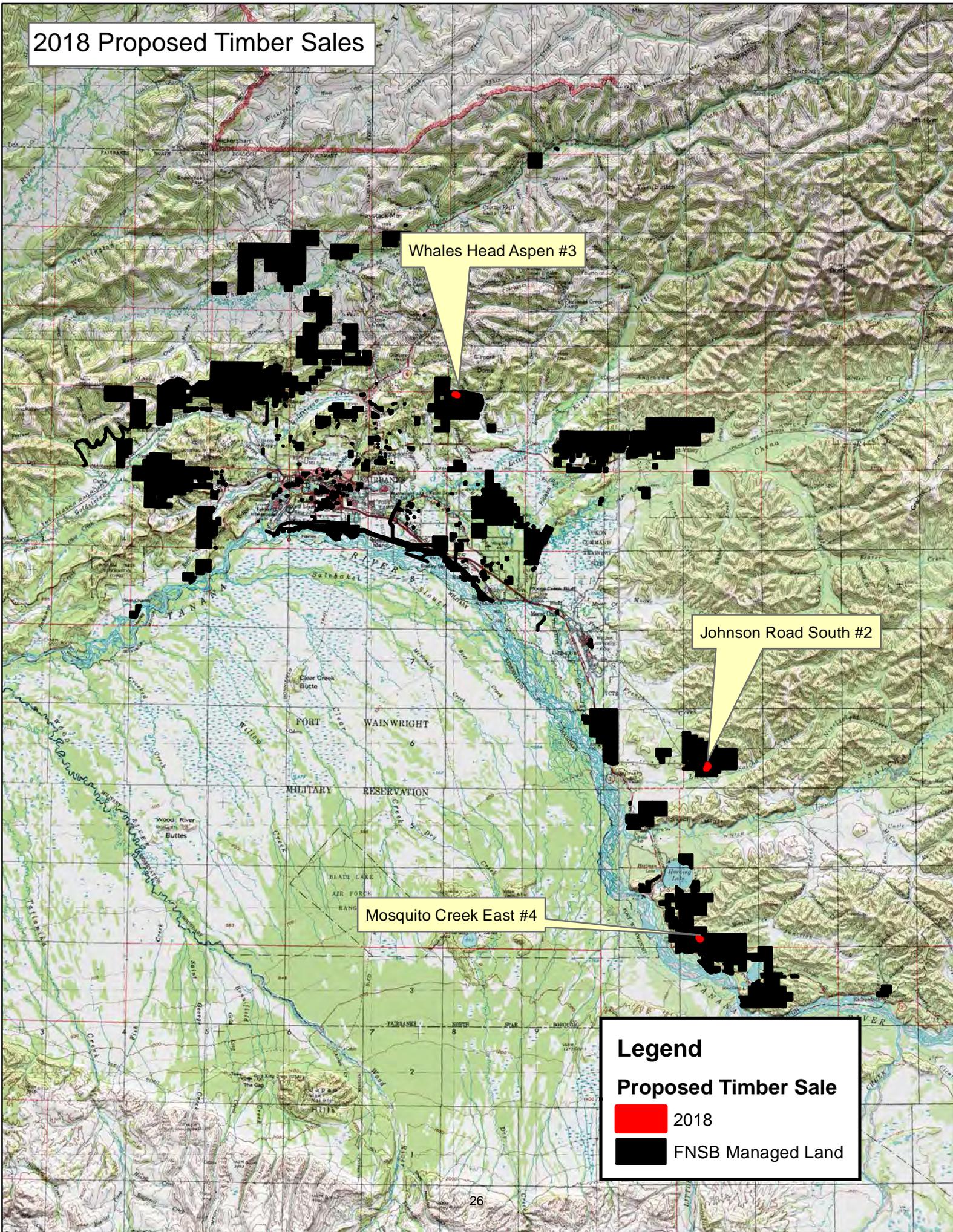


Legend

-  Canyon Creek West
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2018 proposed timber sale maps

2018 Proposed Timber Sales

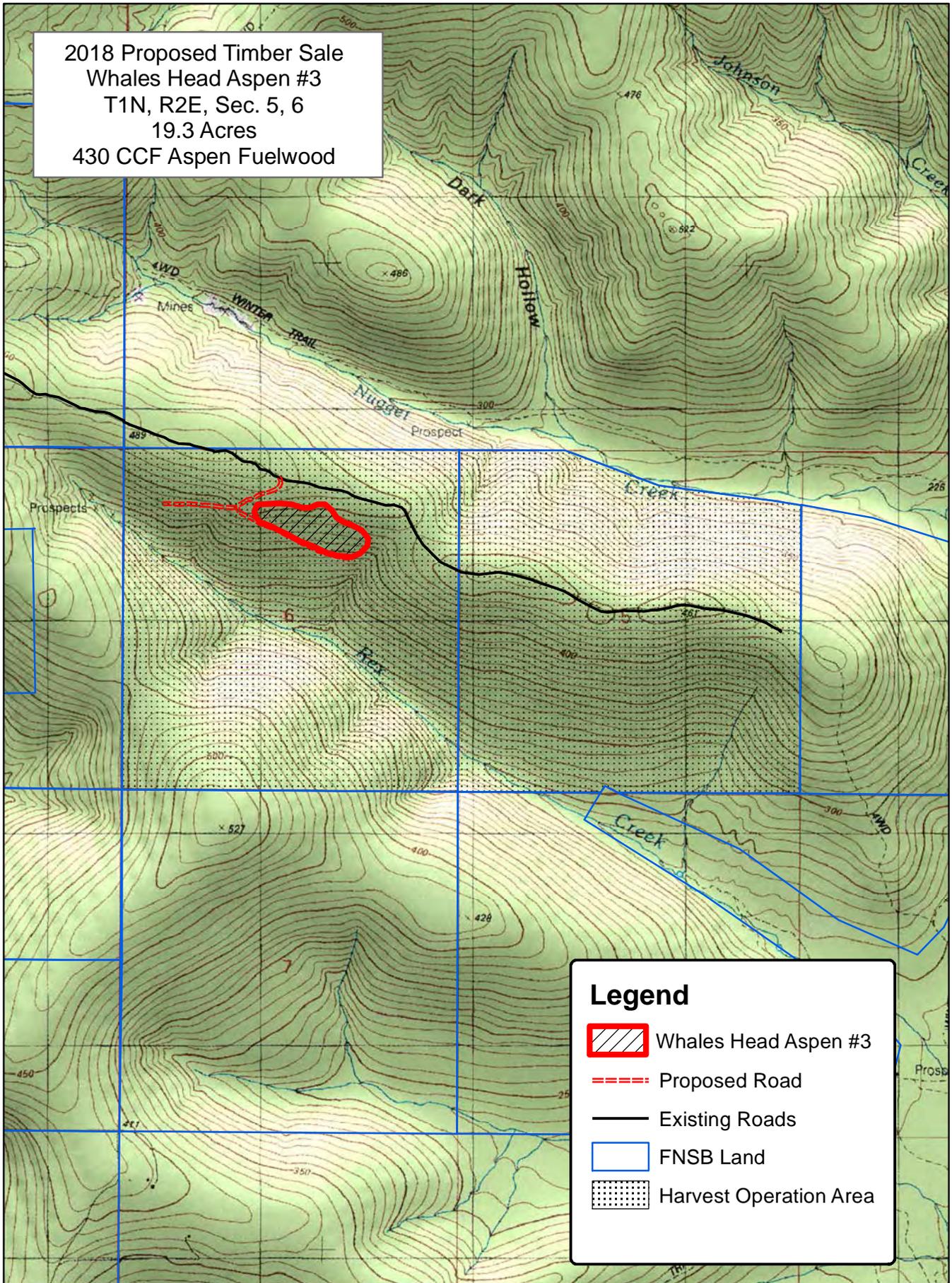


Legend

Proposed Timber Sale

- 2018
- FNSB Managed Land

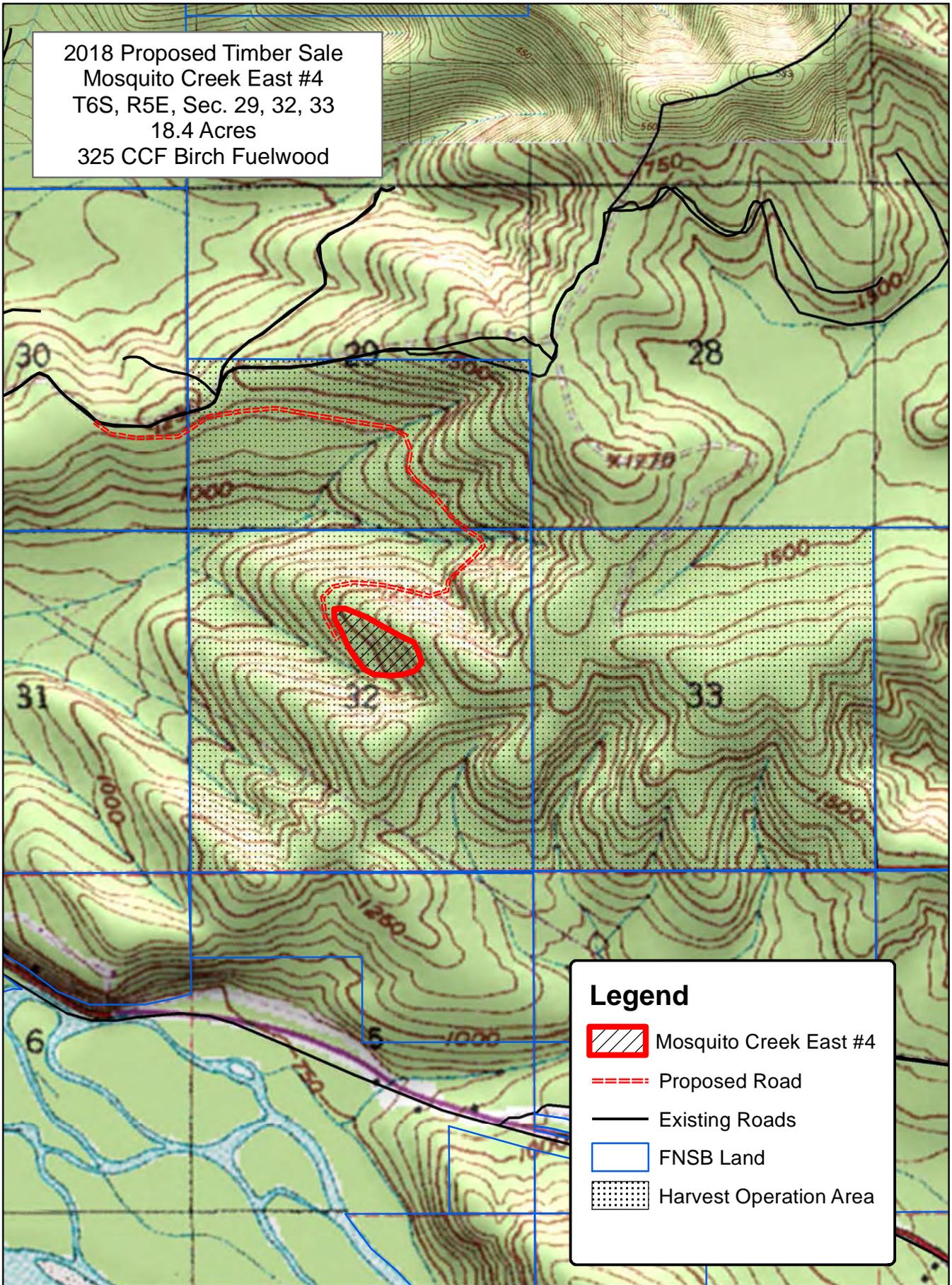
2018 Proposed Timber Sale
Whales Head Aspen #3
T1N, R2E, Sec. 5, 6
19.3 Acres
430 CCF Aspen Fuelwood



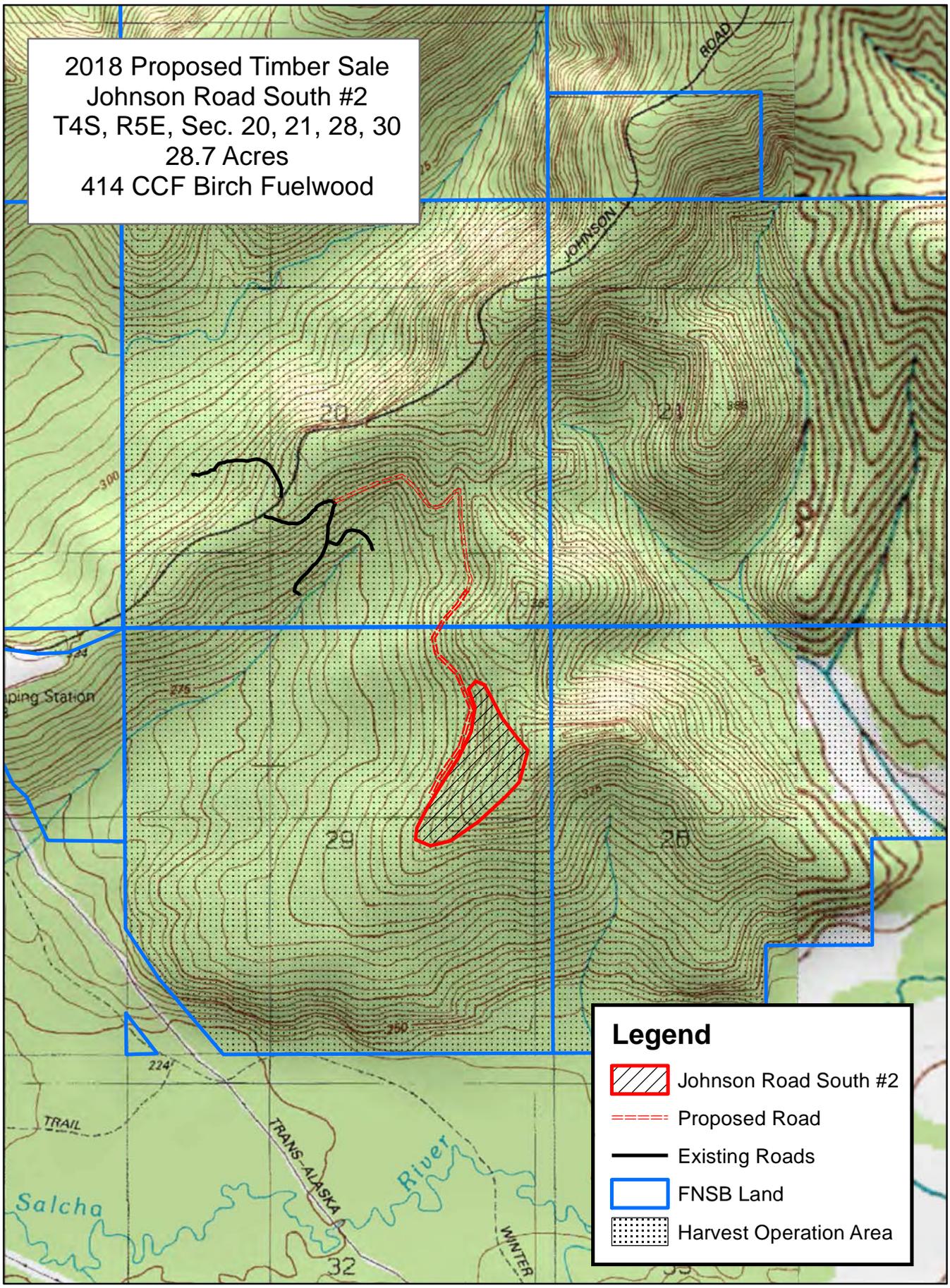
Legend

-  Whales Head Aspen #3
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2018 Proposed Timber Sale
Mosquito Creek East #4
T6S, R5E, Sec. 29, 32, 33
18.4 Acres
325 CCF Birch Fuelwood



2018 Proposed Timber Sale
Johnson Road South #2
T4S, R5E, Sec. 20, 21, 28, 30
28.7 Acres
414 CCF Birch Fuelwood

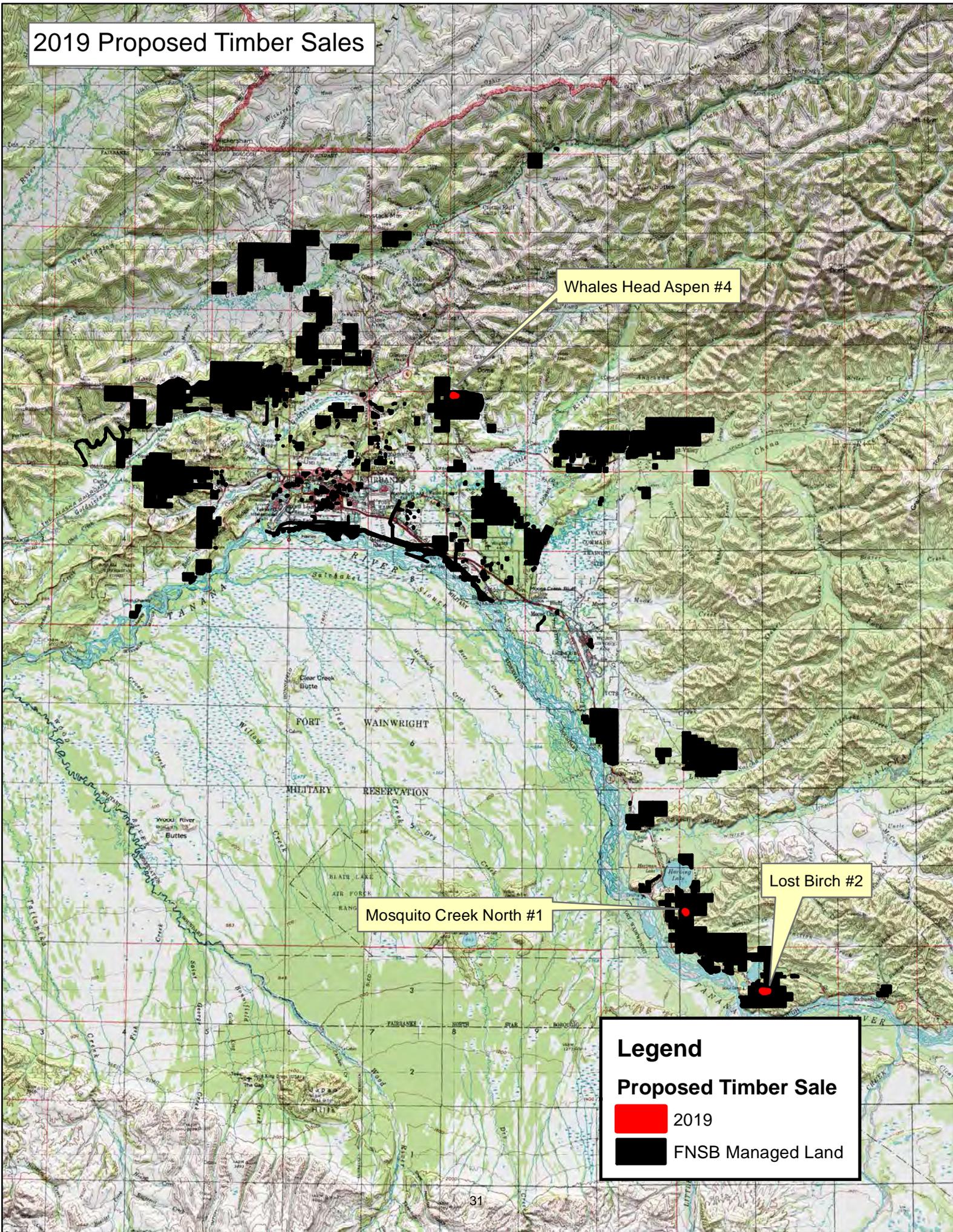


Legend

-  Johnson Road South #2
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2019 proposed timber sale maps

2019 Proposed Timber Sales



Whales Head Aspen #4

Mosquito Creek North #1

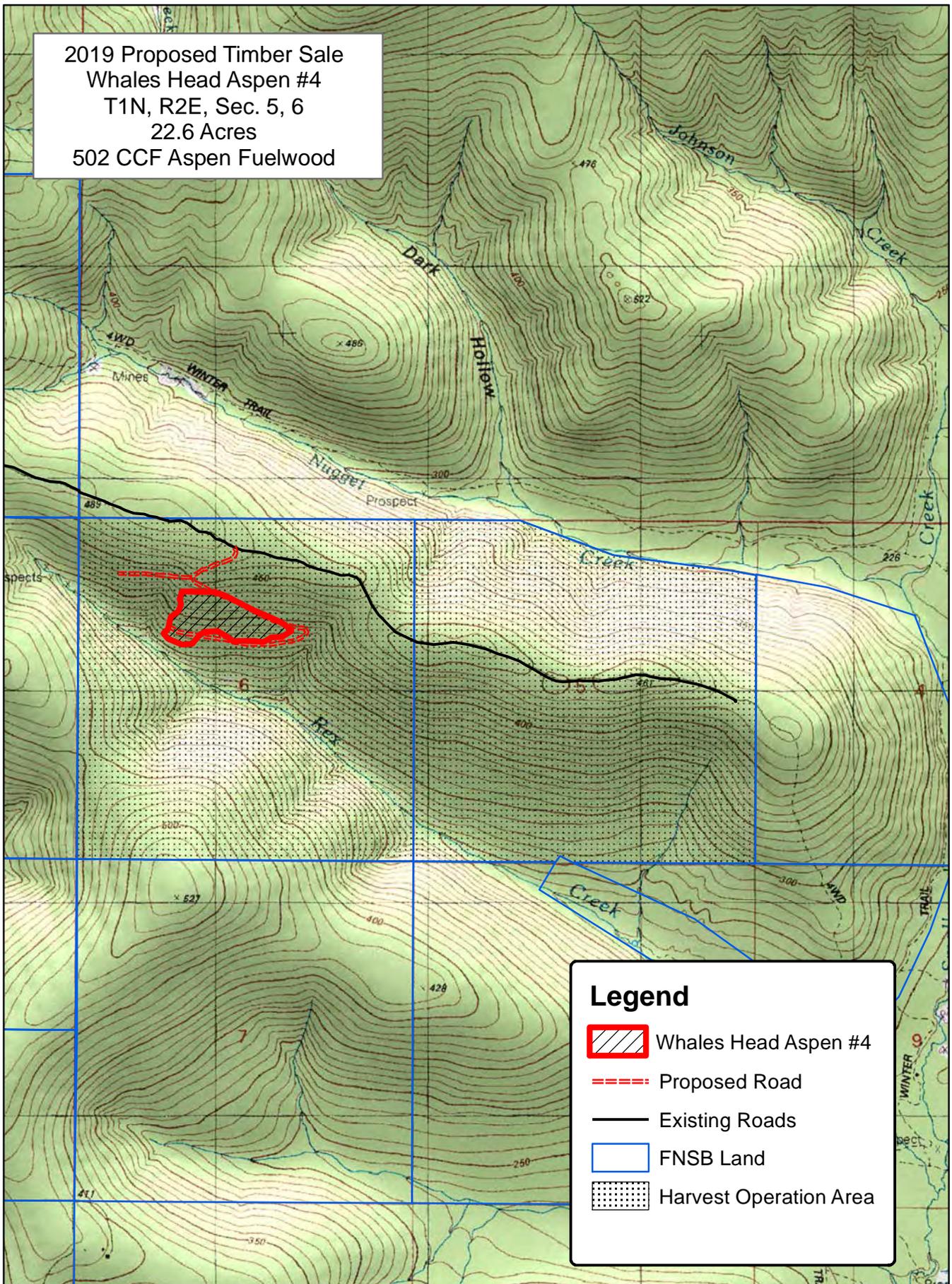
Lost Birch #2

Legend

Proposed Timber Sale

- 2019
- FNSB Managed Land

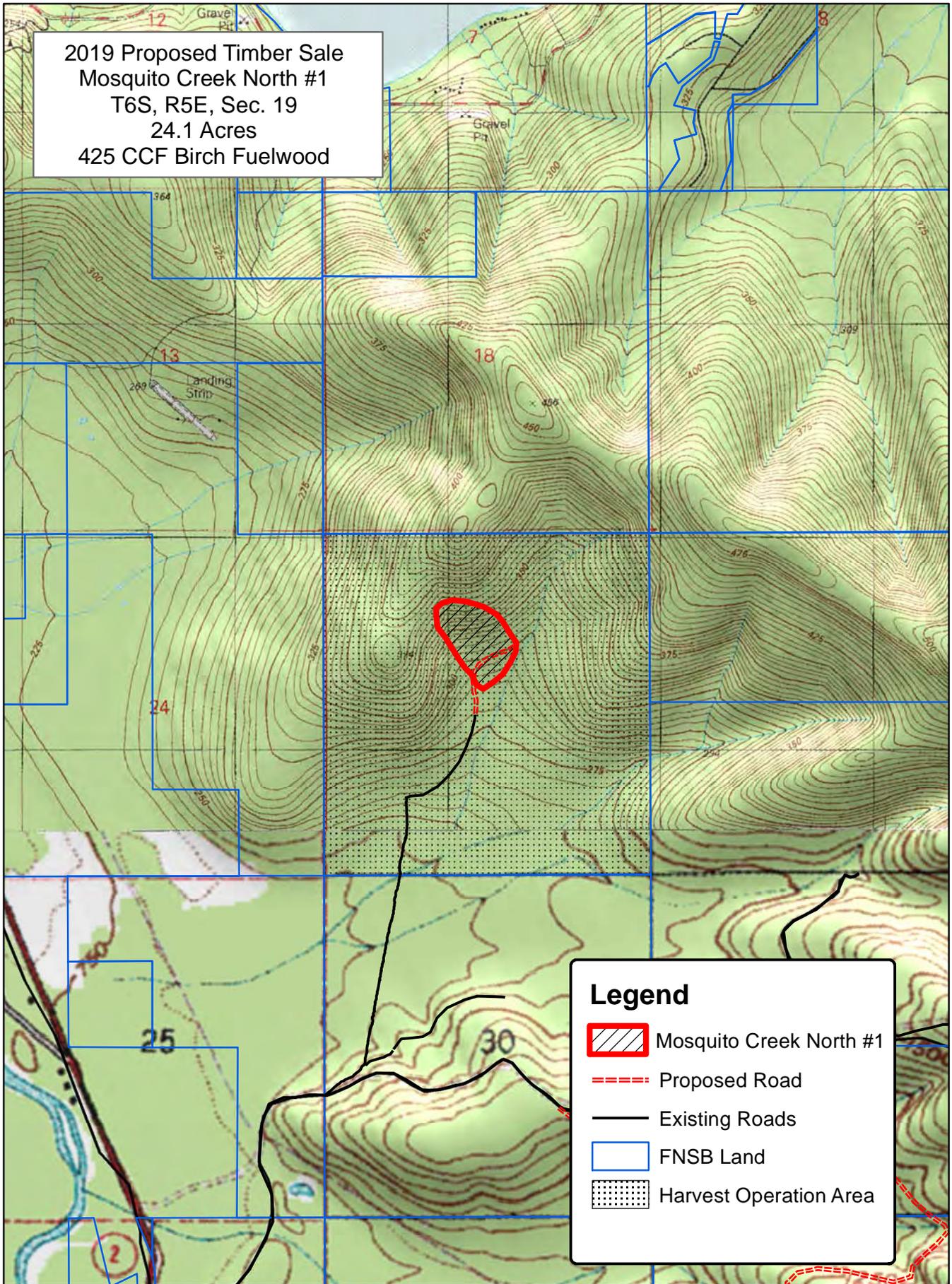
2019 Proposed Timber Sale
Whales Head Aspen #4
T1N, R2E, Sec. 5, 6
22.6 Acres
502 CCF Aspen Fuelwood



Legend

-  Whales Head Aspen #4
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2019 Proposed Timber Sale
Mosquito Creek North #1
T6S, R5E, Sec. 19
24.1 Acres
425 CCF Birch Fuelwood



Legend

-  Mosquito Creek North #1
-  Proposed Road
-  Existing Roads
-  FNSB Land
-  Harvest Operation Area

2019 Proposed Timber Sale
Lost Birch #2
T7S, R6E, Sec. 19, R5E, Sec. 24
59.4 Acres
505 MBF Spruce Sawtimber

