

MATANUSKA-SUSITNA BOROUGH COMMUNITY DEVELOPMENT DEPARTMENT

PERIODIC TIMBER HARVEST IMPLEMENTATION SCHEDULE



Prepared by

Community Development Department

Land and Resource Management Division

Amended June 23, 2014

PERIODIC TIMBER HARVEST IMPLEMENTATION SCHEDULE

This Periodic Timber Harvest Implementation Schedule (Schedule) for the Matanuska-Susitna Borough (MSB) consists of all MSB commercial timber harvests scheduled for 2014 and 2015. This Schedule is required of and is in compliance with MSB Code at 23.20.110; and is subsequent to the Five-Year Timber Harvest Schedule (FYTHS), adopted June 18, 2013.

This Schedule identifies specific criteria associated with Best Management Practices (BMPs) and establishes additional quantifiable data for specific size, type, amount, and minimum current market value of timber available within the units being harvested. Each harvest unit reported in the Schedule was reviewed for compliance with the MSB Asset Management Plan adopted September 21, 2010 and accomplished utilizing the MSB: Operable Forest Land Analysis Report dated February 2007 and amended June 2009, prepared by Sanders Forestry Consulting (Inventory). The most recent available aerial imagery was thoroughly reviewed prior to site visits.

Site evaluations were performed by the Land & Resource Management Division (LMD) staff during the summer, fall, and early winter of 2013. All data collected from the site evaluations is available for review in the LMD office, and includes: unit location and access considerations, seasonal operation requirements, buffer zone analyses, adjacent private land use, a timber resource inventory based on sample plots within the harvest units, and unit specific requirements for forest regeneration. An overview of the Schedule is provided in this document, including Tables 1 and 2, which provide certain criteria pertaining to each harvest unit. Additional field data not provided in the Schedule, relating to the 2014/2015 timber harvest units is available for review upon request.

Unit Location and Access Considerations: A unit map, with each harvest unit shaded and labeled accordingly is provided in the Schedule. Additional information regarding access considerations, photographs and related GPS waypoints are available upon request for each of the timber harvest units.

Seasonal Operation Requirements: Certain harvest units are specified as winter access only (OWA), while other units are designated as harvestable year-round (OA). Any seasonal operation requirements are reported in the Schedule and have been appropriately applied during each harvest unit's specific site evaluation.

Buffer Zones: Several different buffer zone requirements were considered within the 2014 and 2015 timber harvest units, and include 100' buffers for riparian zones, lakes, wetlands, adjacent private lands, roads and trails; and 200' buffers for scenic byways, 300' buffers for historical sites and 300' buffers for peregrine falcons and 330' for eagle nests. Appropriate buffers were

established via the most current, available GIS data and aerial imagery, while others were evaluated and established during each unit's site evaluation. All unit specific buffer zone requirements are provided in the Schedule and will also be noted in the appropriate timber harvest unit contract.

Adjacent Private Land Use: Private land use adjacent to 2014 and 2015 timber harvest units was evaluated originally via the most current, available aerial imagery and more thoroughly examined during each unit's site evaluation. All adjacent residences discovered during site reconnaissance were evaluated for potential impact(s) from the 2014 or 2015 timber harvest activities. Any potential impact(s) to adjacent private land users can be found in the Schedule, including but not limited to: noise, lighting, buffers, truck traffic, scarification, and road maintenance specifically resulting from harvest activities.

Timber Resource Inventory: The Schedule specifies size and type, quantifies the volume, and estimates a minimum bid price (based on current market values, size of the parcel, location, access, and timber type/size being offered) appropriate to the timber resources available for harvest within each unit. All timber resources reported in the Schedule are in conjunction with the Inventory previously performed by Sanders Forestry Consulting 2007 and updated 2009.

Each timber harvest unit was originally evaluated using the most recent timber inventory and utilizing the most recent available aerial imagery. Following this preliminary evaluation the unit was accessed and a site evaluation was performed by LMD staff. During the survey an appropriate location was identified for evaluation of a sample timber plot that most accurately represented an overall average of the timber harvest unit, forest type/size, and density. Coordinates were recorded, pictures were taken and data from a sample plot was collected. Only trees specific to each unit's harvest criteria (i.e. saw timber being only spruce > 9" diameter at breast height (DBH) and birch > 11" DBH) were considered in this calculation. Cords of hardwoods were then converted to cubic feet. Spruce sawtimber was converted to MBF (one million board feet).

Minimum Bid: Minimum bids for each unit were based on State timber harvest offerings. Those ranged from \$7.65 to \$15.00 per cord for hardwood and as high as \$86 per MBF for spruce. The most recent State offering for commercial timber harvest (December 2013) within the Borough established minimum bids of \$10.00 per 100 cubic feet (CCF) for Birch and \$65.00/MBF for Spruce. The current minimum bids for the Schedule are established with consideration to the most recent State offerings, species, type, size, accessibility and location of harvest. Commercial value of units being harvested for saw timber were summations of CCF of hardwoods and MBF of softwoods multiplied by their respective proposed minimum bid.

Regeneration: Alaska Forest Resources & Practices Act (FRPA) requirements state that within 7 years harvested areas must contain a specific minimum number (450) of seedlings per acre or a

combination of residual trees and seedlings approved by the Division of Forestry. These post-harvest regeneration requirements outlined in 11 AAC 95.375 of the Division of Forestry, Department of Natural Resources (DNR), Alaska Forest Resources & Practices Regulations October 2013, are the responsibility of the MSB. However, contractual agreements for the removal of forest timber, based on the Schedule, may require the contract holder to follow certain criteria and/or BMPs to aid in harvest unit regeneration. All units reported in the Schedule are being selectively cut for specific size and type timber. Select cutting leaves a variety of seed trees as well as all trees less than 5" DBH. In turn, natural regeneration will suffice in meeting FRPA requirements for reforestation within certain units. Within all units, a combination of scarification and natural regeneration following select cutting will allow for sustainable forest regeneration. Those units where scarification is deemed necessary will be outlined in the specific unit contract and noted in the Schedule. Any additional unit specific requirements pertaining to the Schedule are available upon request.

TABLE 1: Specific per Unit Criteria for 2014 & 2015 Timber Harvest Units

UNIT ID	Year	MSB Sale #	Acres	Size & Type	Access Requirements	Buffers	Adjacent Land Use	Regen Requirements
Kashwitna A	2014	006566 A	30	BRP,ASP,CP 5"-11", WSS 5"-9" DBH	OA ¹	Stream (100')	House near WP3 - Noise	S/N ²
Kashwitna B	2014	006566 B	64	BRP,ASP,CP 5"-11", WSS 5"-9" DBH	OA	N/A	House near WP12 - Noise	S/N
Kashwitna C	2014	006566 C	39	BRP,ASP,CP 5"-11", WSS 5"-9" DBH	OWA ³	Stream (100')	None	N ⁴
Moose Creek A ⁵	2014	006567 A	10	ALL	OA	Wetland (100')	None	S/N
Moose Creek A2	2014	006567 A	29	BRS,ASS,CS > 11", WSS > 9" DBH	OA	Wetland (100')	None	S/N
Rogers Creek A	2014	006571 A	39	BRP,ASP,CP 5"-11", WSS 5"-9" DBH	OWA	Stream (100'), Wetland (100')	House - Noise & traffic through landowner's gate	N
Sheep Creek A	2014	006572 A	77	BRS,ASS,CS > 11", WSS > 9" DBH	OWA	Streams (100')	None	N
Sheep Creek H	2014	006790 H	30	BRS,ASS,CS > 11", WSS > 9" DBH	OWA	Stream (100')	None	N
Sheep Creek I	2014	006791 I	30	BRS,ASS,CS > 11", WSS > 9" DBH	OWA	N/A	None	N
Susitna River Corridor A	2014	006573 A	320	BRS,ASS,CS > 11", WSS > 9" DBH	OA, OWA	Streams (100'), Trail (100')	None	S/N
Kashwitna D	2015	006566 D	80	BRP,ASP,CP 5"-11", WSS 5"-9" DBH	OA	N/A	House near WP11 - Noise & truck traffic	S/N
Rogers Creek B	2015	006793 B	470	BRP,ASP,CP 5"-11", WSS 5"-9" DBH	OWA	Stream (100')	Houses near WP23 and WP27 - Noise & truck traffic	N
Rabideaux Creek	2015	6743	39	BRS,ASS,CS > 11", WSS > 9" DBH	OWA	N/A	None	N
Sheep Creek J	2015	006794 J	35	BRS,ASS,CS > 11", WSS > 9" DBH	OWA	N/A	None	N
Sheep Creek K	2015	006795 K	35	BRS,ASS,CS > 11", WSS > 9" DBH	OWA	N/A	None	N

¹OA - Operable Year-Round

²S/N - Scarification & Natural

³OWA - Operable Winter Only

⁴N - Natural Only

⁵10 acres requires clear cut

TABLE 2: Specific per Unit Timber Volume and Minimum Bids

UNIT ID	Hardwood Saw Timber Volume (CCF)	Hardwood Saw Timber price per CCF	Spruce Saw Timber Volume (MBF)	Spruce Saw Timber price per MBF	Total Pole Timber Volume (CCF)	Pole Timber price per CCF	Minimum Bid*
Kashwitna A	N/A	N/A	N/A	N/A	544	\$10	\$5,440
Kashwitna B	N/A	N/A	N/A	N/A	854	\$10	\$8,540
Kashwitna C	N/A	N/A	N/A	N/A	639	\$10	\$6,390
Moose Creek A	TBD	\$13	TBD	\$75	N/A	N/A	TBD
Rogers Creek A	N/A	N/A	N/A	N/A	TBD	\$10	TBD
Sheep Creek A	779	\$11	115	\$65	N/A	N/A	\$16,044
Sheep Creek H	495	\$11	52	\$65	N/A	N/A	\$8,825
Sheep Creek I	579	\$11	21	\$65	N/A	N/A	\$7,734
Susitna River Corridor A	TBD	\$11	TBD	\$65	N/A	N/A	TBD
Kashwitna D	N/A	N/A	N/A	N/A	TBD	\$10	TBD
Rogers Creek B	N/A	N/A	N/A	N/A	TBD	\$10	TBD
Rabideaux Creek	TBD	\$11	TBD	\$65	N/A	N/A	TBD
Sheep Creek J	TBD	\$11	TBD	\$65	N/A	N/A	TBD
Sheep Creek K	TBD	\$11	TBD	\$65	N/A	N/A	TBD

*Minimum bids were calculated using the specific size & type of timber being harvested per each unit, and based on current market values, size of the parcel, location, access, and timber type/size being offered

**PERIODIC TIMBER HARVEST IMPLEMENTATION SCHEDULE
UNIT DESCRIPTION
Kashwitna River NRMU**

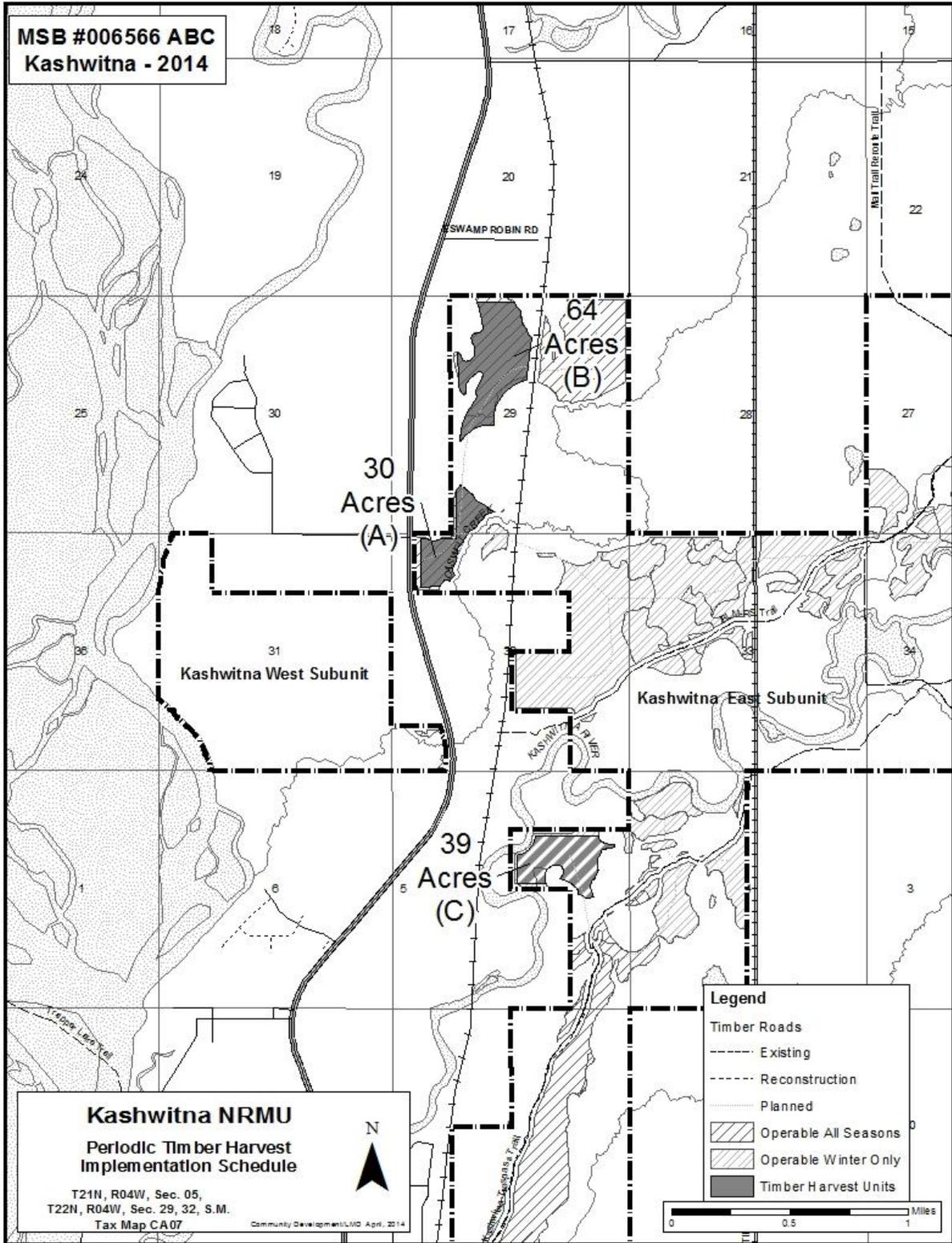
The Kashwitna River Natural Resource Management Unit (NRMU) is located within Sections 29, 32, & 33 Township 22 North, Range 04 West, SM Alaska, and lying east of the Parks Highway at approximately milepost 86. The harvest units are within the Susitna Community Council and Willow Area Community Organization areas. Kashwitna River Unit A is comprised of 30 acres; Unit B is 64 acres; Unit C is 39 acres, and Unit D is 80 acres. All units within the Kashwitna River NRMU are being harvested for mixed pole timber (birch 5"-11", spruce 5"-9" DBH). Access to the timber harvest units would be from the Parks Highway for Units A and B, from the Kashwitna Trespass Trail for Unit C, and from a side street of Hidden Hills Road for Unit D. Kashwitna River Unit C is operable during winter months only, while Units A, B, and D are operable year-round.

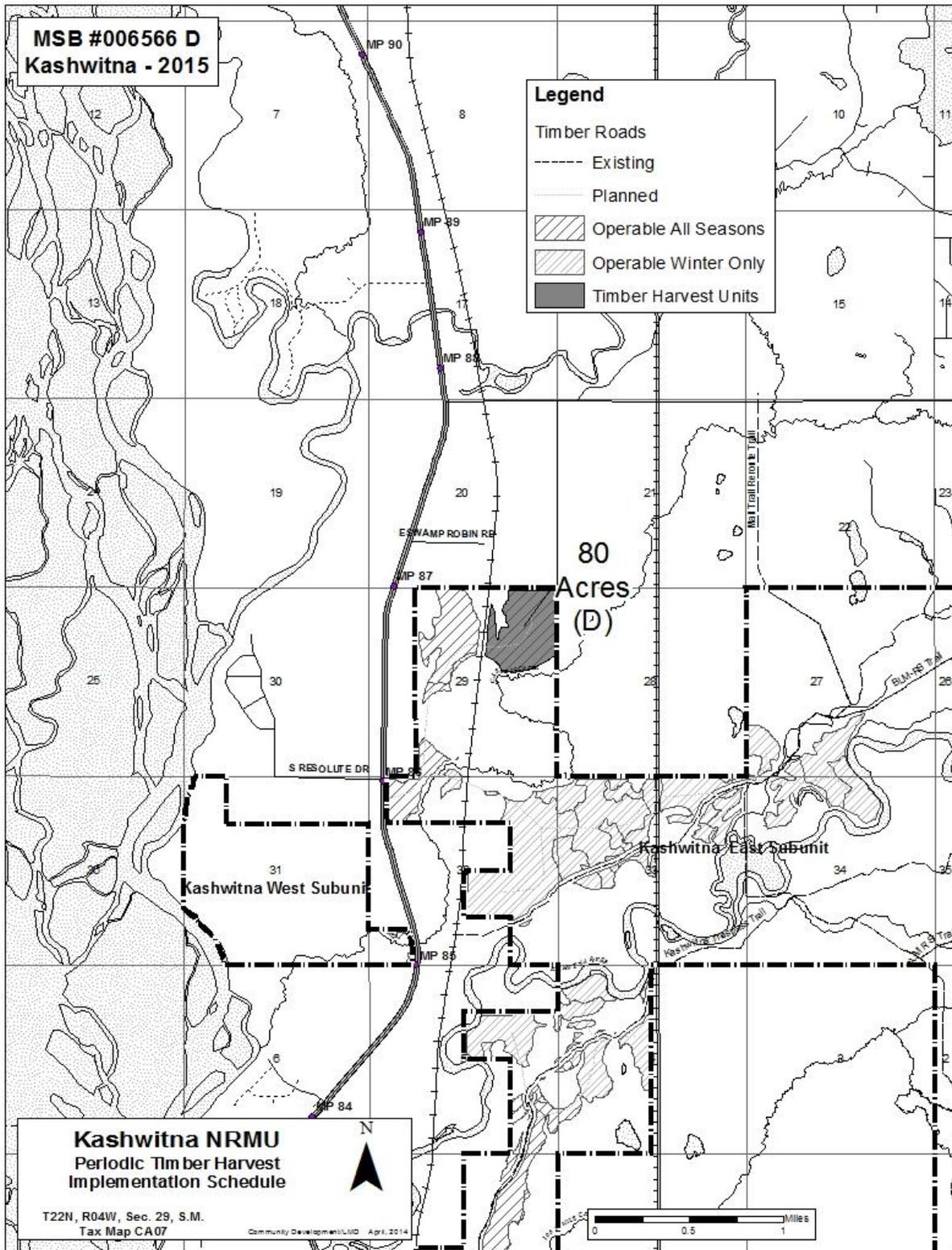
During the site evaluations for the Kashwitna River harvest units, a single stream was found to be located in Unit A and another stream located in Unit C. A buffer zone of 100 feet will be left undisturbed during the harvest in order to maintain an adequate riparian buffer zone around these two streams. No other buffer zone requirements for the Kashwitna River 2014/2015 harvest units were discovered during the site evaluations. All other buffer zones for Kashwitna River harvest units were avoided during the preliminary analysis of the aerial imagery. Following harvest activities, successful regeneration of Unit C is expected to occur naturally without the need for scarification. Units A, B, and D on the other hand, are lacking in adequate seed tree diversity and density to meet the minimum requirements for natural regeneration. These three units will require that the contractor follow specific scarification techniques in order to assist in the adequate regeneration of the harvest units. Approximately 50% of the total acreage for harvest units A, B, and D will require scarification to expose mineral-rich soils necessary for optimum seed germination.

Site evaluations for adjacent private land use around Kashwitna River harvest units revealed three (3) houses in the vicinity that could be impacted by harvest activities. One house located directly off of the Parks Highway was found to be within noise range of Unit A. Another house located off of Swamp Robin Road was found to be within noise range of Unit B. And, one house located at the end of the side street off of Hidden Hills Road was found to be within noise range of Unit D. The house located near Unit D could also potentially be affected by truck traffic during the harvest. All adjacent private land was buffered 100 feet away from any harvest unit boundary.

Utilizing \$10 per CCF for all mixed pole timber within the harvest units equates to the following:

<u>Sale Number</u>	<u>Acres</u>	<u>CCF</u>	<u>YEAR</u>	<u>Min Bid</u>
MSB 006566 A	30	544	2014	\$5,440
MSB 006566 B	64	854	2014	\$8,540
MSB 006566 C	39	639	2014	\$6,390
MSB 006566 D	80	TBD	2015	TBD





Moose Creek NRMU

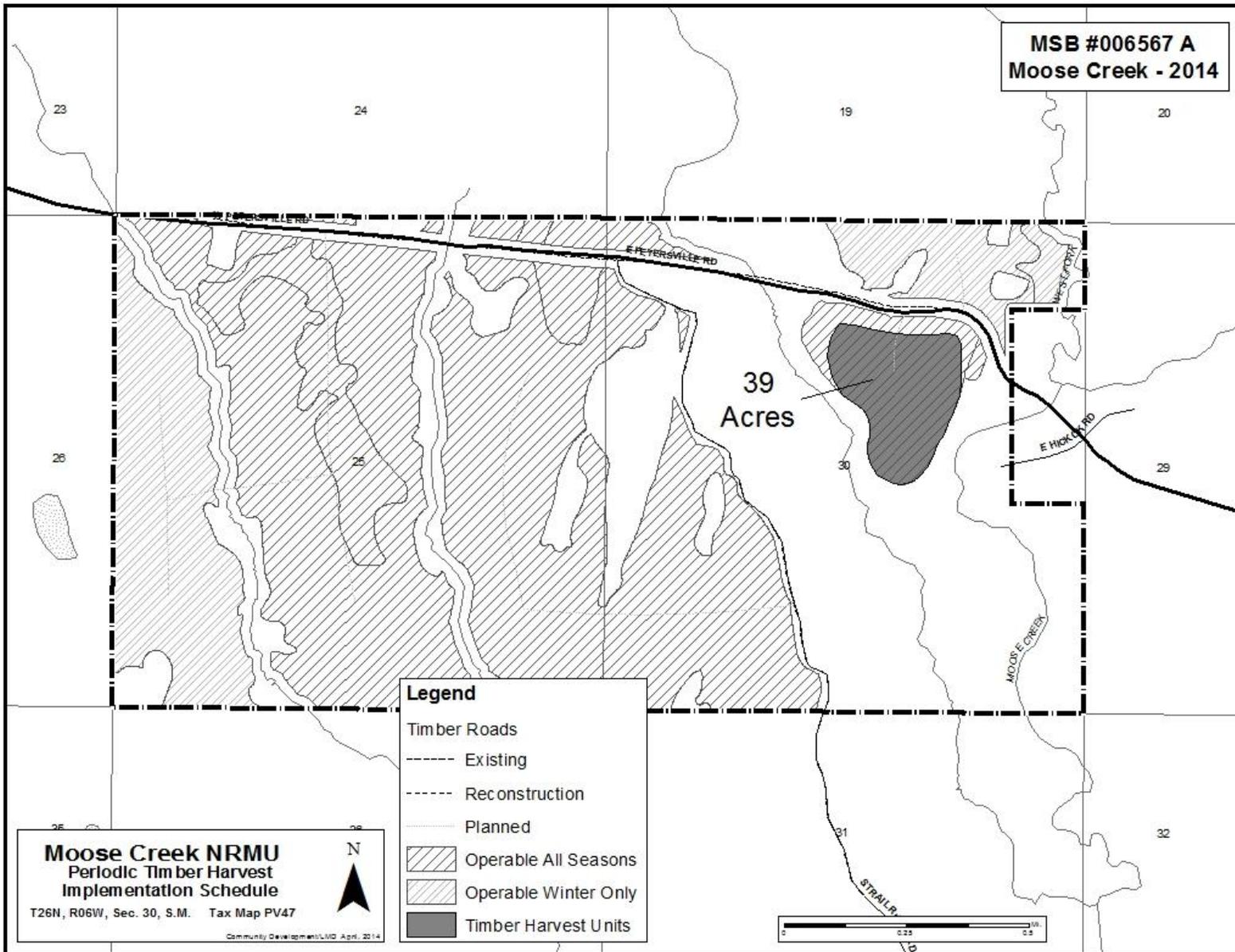
The Moose Creek NRMU is located in Section 30, Township 26 N, Range 06W, SM Alaska, located just south of Petersville Road at approximately milepost 7. Moose Creek Unit A is comprised of a total of 39 acres, which will be broken down into a 29 acre section and a 10 acre section. The 29 acre section is being harvested for mixed saw timber (birch > 11", spruce > 9" DBH), while the 10 acre section will be completely cleared for the future site of a gravel extraction pit. Access to the timber harvest unit will be directly from Petersville Road and is operable year-round.

During the site evaluation for the Moose Creek harvest unit, a small wetland was identified near the southern border of the unit. A buffer zone of 100 feet will be left undisturbed by harvest activities in order to maintain an adequate riparian buffer zone around this wetland. No other buffer zone requirements for the Moose Creek 2014 harvest unit were discovered during the site evaluation. All other buffer zones for the Moose Creek harvest unit were avoided during the preliminary analysis of the aerial imagery.

Site evaluations for adjacent private land use around the Moose Creek harvest unit revealed no impact(s) from proposed harvest activities. All adjacent private land was buffered 100 feet away from any harvest unit boundary. The Moose Creek harvest unit will not require scarification, as it will be converted to a gravel extraction site. Additionally the acreage cleared of timber resource will not count against the Annual Allowable Cut (AAC) of operable timber on borough land.

After 29 acres are harvested for saw timber and 10 acres are harvested for both saw and pole timber, utilizing \$13 per CCF for hardwood timber and \$75 per MBF for spruce timber equates to the following:

<u>Sale Number</u>	<u>Acres</u>	<u>Hardwood CCF</u>	<u>Spruce MBF</u>	<u>YEAR</u>	<u>Min Bid</u>
MSB 006567 A	39	TBD	TBD	2014	TBD



Rogers Creek NRMU

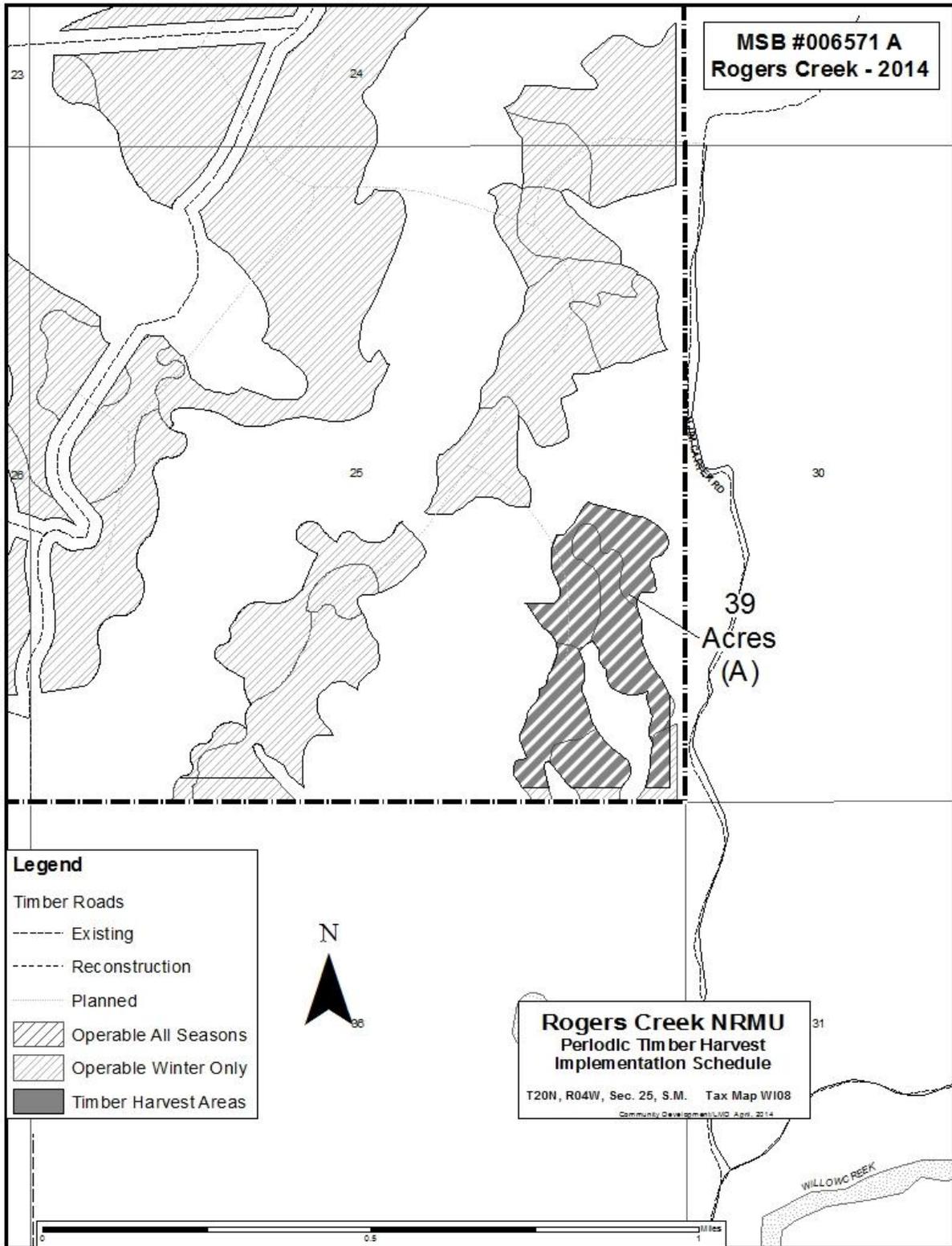
The Rogers Creek NRMU is located within Sections 24 & 25, Township 20 North, Range 04 West, SM Alaska, lying north of the Willow/Fishhook Road at approximately milepost 43 of the Parks Highway. The harvest units are within the Willow Area Community Organization boundaries. Two separate units will be harvested in conjunction with the Schedule. Access to Unit A and the eastern portion of Unit B would be from the Willow-Fishhook Road, Deneki Drive, Michelle Drive, Kelley Circle, Shadoe Lane, W. Kenny Boulevard, Willer-Kash Road and Jim Carter Road. The western portion of Unit B is more easily accessible via a winter trail from W. Kenny Boulevard. Rogers Creek Unit A is scheduled to be harvested in 2014 and contains 39 acres. Rogers Creek Unit B is scheduled to be harvested in 2014 and contains 470 acres. Both units are being harvested for mixed pole timber and are limited to winter access only.

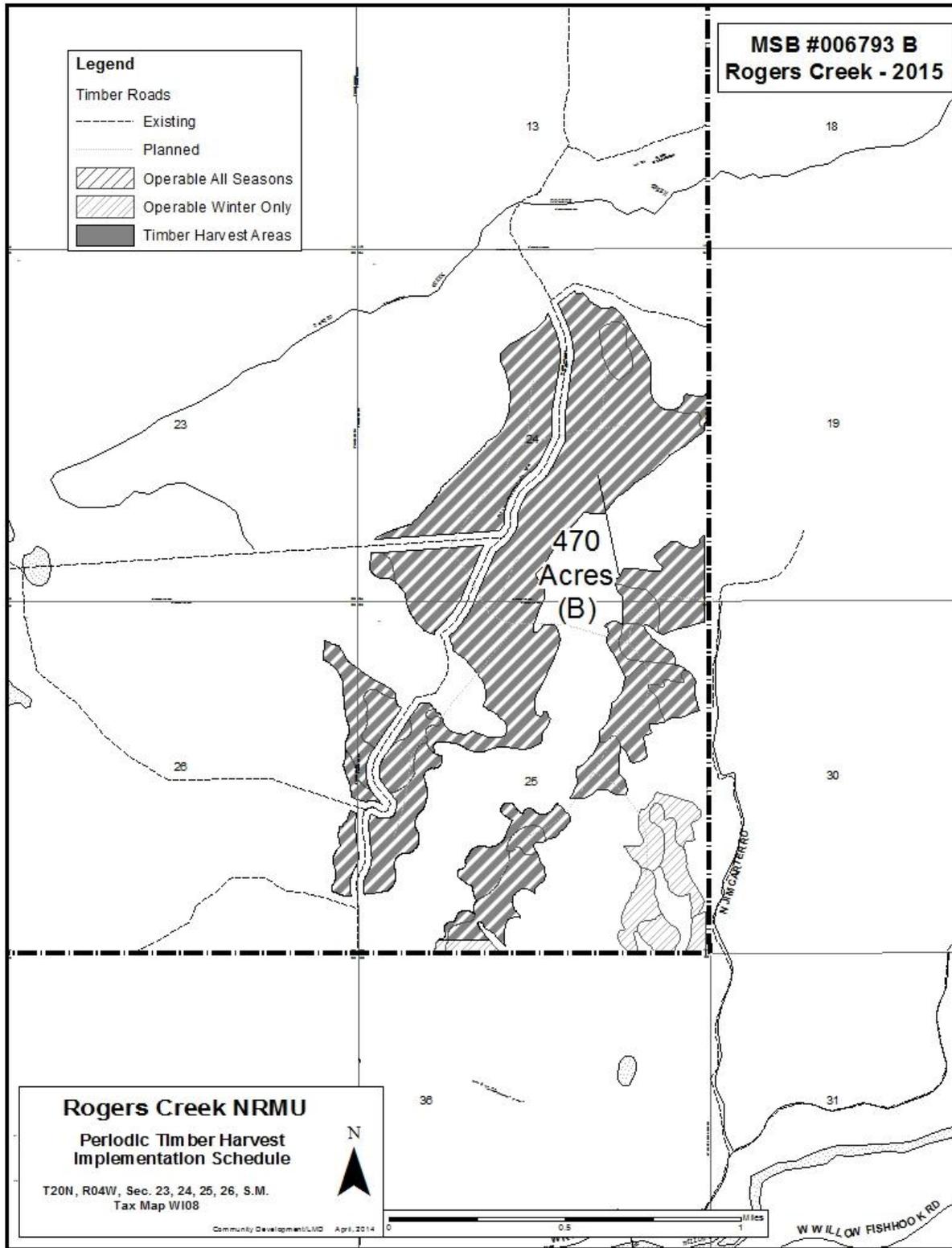
During the site evaluation for the Rogers Creek Unit A, a single stream and a potential wetland were found to be located within the harvest unit. The site evaluation for Rogers Creek Unit B also revealed a single stream located within the unit. A buffer zone of 100 feet will be left undisturbed during the harvest in order to maintain an adequate riparian buffer zone around the stream and wetland areas. No other buffer zone requirements for the Rogers Creek 2014/2015 harvest units were discovered during the site evaluations. All other buffer zones for Rogers Creek harvest units were avoided during the preliminary analysis of the aerial imagery. Following harvest activities both Units A and B are expected to regenerate naturally due to the presence of adequate seed tree numbers and diversity. No scarification will be required within these two units.

Site evaluations for adjacent private land use around Rogers Creek harvest units revealed three (3) houses in the vicinity that could be impacted by harvest activities. A gate located on Jim Carter Road has been constructed by the landowners nearest to the harvest units. The first two houses, located beyond this gate, have the potential to receive some noise from the harvest of Unit A. The third house, located at the end of Jim Carter Road, appeared to be abandoned and in-turn is not being considered for impact(s) from the harvest activities. The two occupied houses could also potentially be affected by truck traffic through the gate that crosses Jim Carter Road during the harvest of both Rogers Creek units. All adjacent private land was buffered 100 feet away from any harvest unit boundary.

Utilizing \$10 per CCF for all mixed pole timber within the harvest units equates to the following:

<u>Sale Number</u>	<u>Acres</u>	<u>CCF</u>	<u>YEAR</u>	<u>Min Bid</u>
MSB 006571 A	39	TBD	2014	TBD
MSB 006793 B	470	TBD	2015	TBD





Sheep Creek NRMU

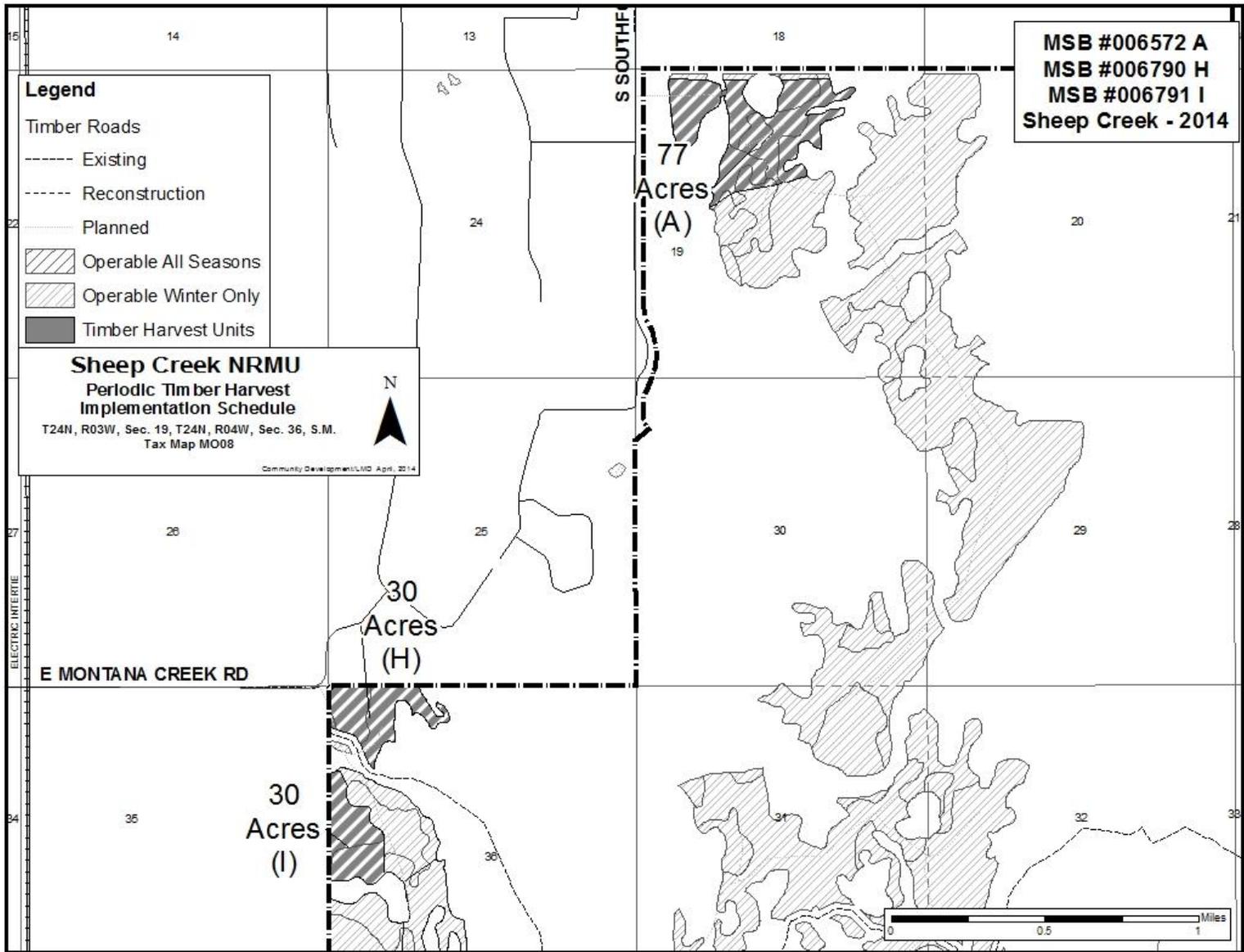
The Sheep Creek NRMU is located within Sections 19, 20, 29, 30 & 31, Township 24 North, Range 03 West, SM Alaska, lying east of the Talkeetna Spur Road at approximately milepost 3. The harvest areas are within the Susitna Community Council Area. Access to the timber harvest area would be from Yoder Road, Southfork Road for Unit A. Units H, I, J, and K are most easily accessed via Montana Creek Road. Unit A is comprised of 77 acres. Units H and I are both 30 acres, and Units J and K are both 35 acres in size. All 2014/2015 Sheep Creek units are being harvested for mixed saw timber and are limited to winter access only.

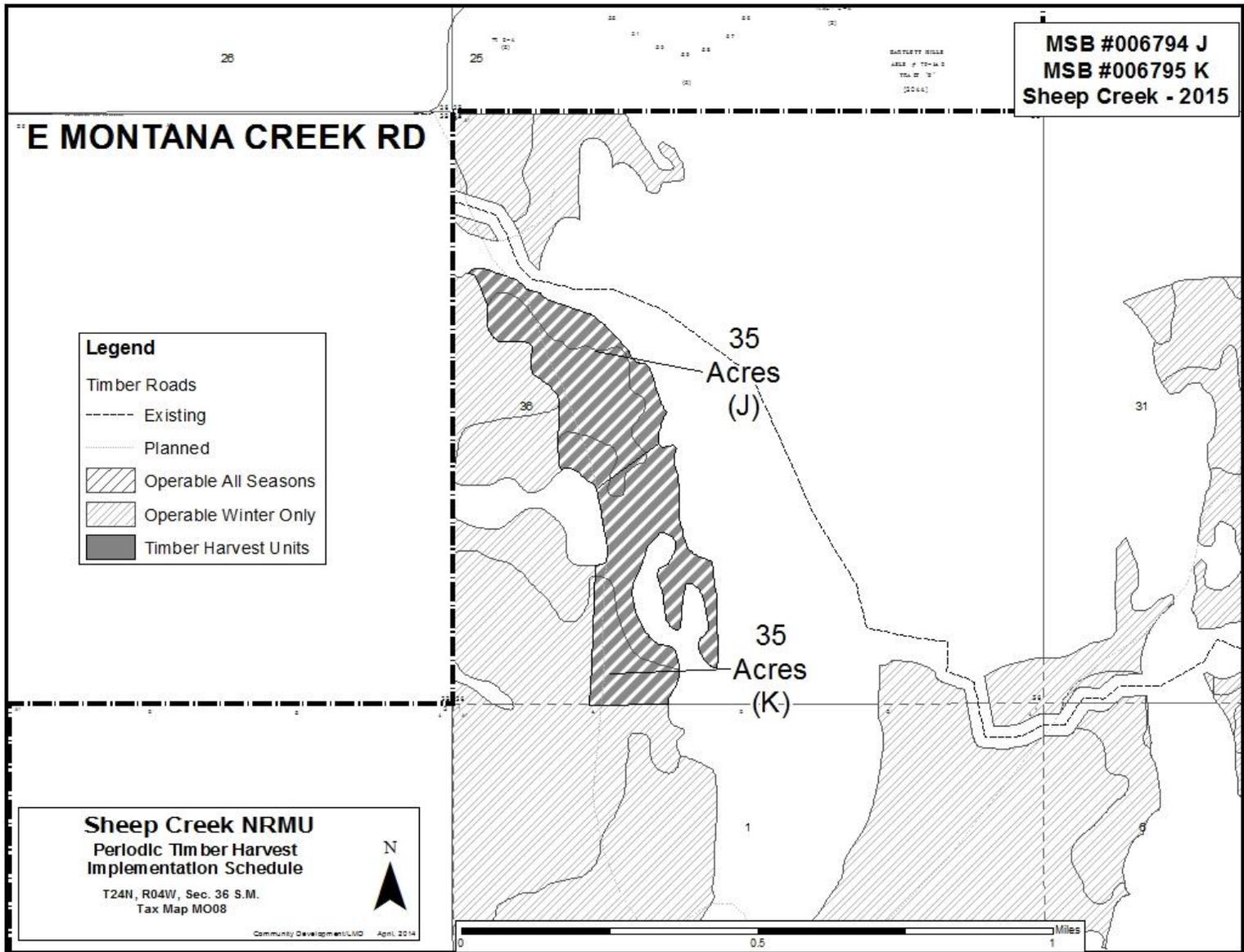
During the site evaluations for the Sheep Creek harvest units, five (5) streams were found to be located within Unit A. Unit H also contained a single stream within its operable acres. A buffer zone of 100 feet will be left undisturbed during the harvest in order to maintain an adequate riparian buffer zone around these streams. No other buffer zone requirements for the Sheep Creek 2014/2015 harvest units were discovered during the site evaluations. All other buffer zones for Sheep Creek harvest units were avoided during the preliminary analysis of the aerial imagery. Following harvest activities, all Sheep Creek harvest units are expected to regenerate naturally due to adequate seed tree numbers and diversity. No scarification will be required within any of the Sheep Creek harvest units.

Site evaluations for adjacent private land use around Sheep Creek harvest units revealed no potential for impact(s) related to harvest activities. All adjacent private land was buffered 100 feet away from any harvest unit boundary.

Utilizing \$11 per CCF for hardwood saw timber and \$65 per MBF for spruce saw timber within the harvest units equates to the following:

<u>Sale Number</u>	<u>Acres</u>	<u>Hardwood CCF</u>	<u>Spruce MBF</u>	<u>YEAR</u>	<u>Min Bid</u>
MSB 006572 A	77	779	115	2014	\$16,044
MSB 006790 H	30	495	52	2014	\$8,825
MSB 006791 I	30	579	21	2014	\$7,734
MSB 006794 J	35	TBD	TBD	2015	TBD
MSB 006795 K	35	TBD	TBD	2015	TBD





Susitna River Corridor NRMU

The Susitna River Corridor NRMU is located within Sections 9, 10 & 20 Township 26 North, Range 05 West, SM Alaska, lying east of the Parks Highway approximately between mileposts 115 and 119. The harvest area is within the Trapper Creek Community Council Area. Access to this timber harvest unit would be from the Parks Highway via an abandoned gravel pit located at the very northern part of the harvest unit. Susitna River Corridor Unit A is 320 acres in size and scheduled for harvest in 2014 for mixed saw timber. This unit contains sections available for harvest year-round, as well as sections that are limited to winter access only.

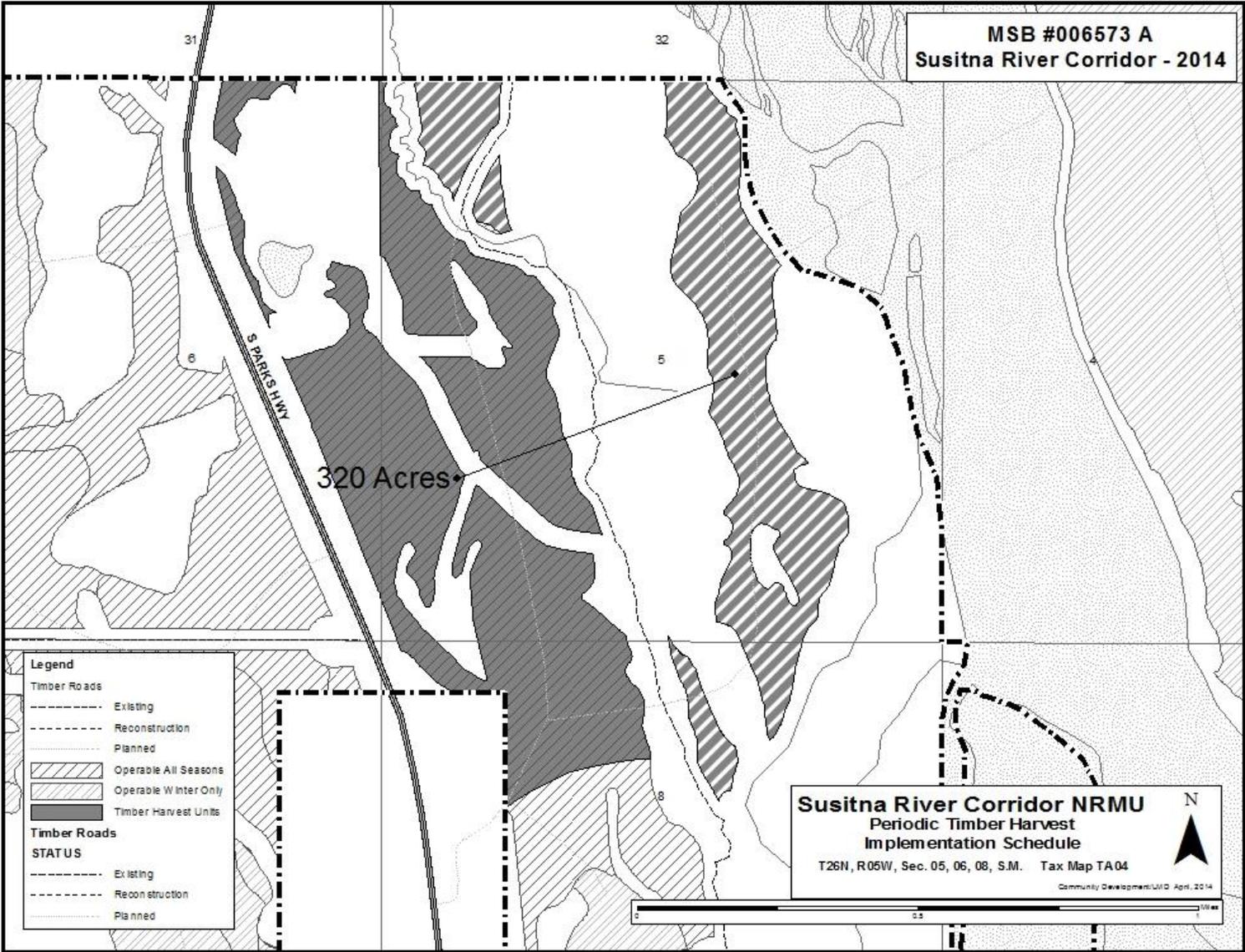
During the site evaluation for the Susitna River Corridor harvest unit, two (2) streams were found to be located within the unit. A buffer zone of 100 feet will be left undisturbed by harvest activities in order to maintain an adequate riparian buffer zone around these streams. The East-West Connector Trail also runs through a few portions of this harvest unit, and will require the contractor to avoid harvest activities within 100 feet on both sides of the trail. All other buffer zones for the Susitna River Corridor harvest unit were avoided during the preliminary analysis of the aerial imagery. Following harvest activities, operable year round sections of the Susitna River Corridor unit will require that the contractor follow specific scarification techniques in order to assist in the adequate regeneration of the harvest unit. Approximately 50% of the total acreage for the operable year round sections of the harvest unit will require scarification. Sections of the Susitna River Corridor harvest unit that are operable during the winter only will not require scarification and are expected to regenerate naturally due to adequate seed trees numbers and diversity.

The site evaluation for adjacent private land use around the Susitna River Corridor harvest unit revealed no potential for impact(s) related to harvest activities. All adjacent private land was buffered 100 feet away from any harvest unit boundary.

Utilizing \$11 per CCF for hardwood saw timber and \$65 per MBF for spruce saw timber within the harvest units equates to the following:

<u>Sale Number</u>	<u>Acres</u>	<u>Hardwood CCF</u>	<u>Spruce MBF</u>	<u>YEAR</u>	<u>Min Bid</u>
MSB 006573 A	320	TBD	TBD	2014	TBD

MSB #006573 A
Susitna River Corridor - 2014



Legend

Timber Roads

- Existing (solid line)
- Reconstruction (dashed line)
- Planned (dotted line)
- Operable All Seasons (diagonal hatching)
- Operable W Inter Only (cross-hatching)
- Timber Harvest Units (solid dark grey)

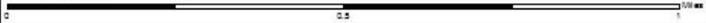
Timber Roads STATUS

- Existing (solid line)
- Recon struction (dashed line)
- Planned (dotted line)

Susitna River Corridor NRMU
Periodic Timber Harvest
Implementation Schedule

T26N, R05W, Sec. 05, 06, 08, S.M. Tax Map TA04

Community Development/UMD April 2014



Rabideux Creek NRMU

The Rabideux Creek NRMU is located within Section 1, Township 23 North, Range 05 West; Sections 9, 10, 16, 21-23, 25-26, 35-36 Township 24 North, Range 05 West; Sections 23, 26, 35-36 Township 25 North, Range 05 West; all lying within the Seward Meridian. Access is via the Parks Highway, just beyond the bridge spanning the Susitna River, for the smaller section of the Rabideux Creek harvest unit. The larger section of this unit is accessible via a winter trail from Talkeetna Trail, located to the north of the harvest unit. The Rabideux Creek harvest unit is 39 acres in size and scheduled for harvest of mixed saw timber in 2015. This unit is limited to winter access only.

No buffer zone requirements were discovered during the site evaluation for the Rabideux Creek harvest unit. All necessary buffer zones for this harvest unit were avoided during the preliminary analysis of the aerial imagery. Following harvest activities, the Rabideux Creek unit is expected to regenerate naturally due to adequate seed tree numbers and diversity. No scarification will be required for this harvest unit.

The site evaluation for adjacent private land use around the Rabideux Creek harvest unit revealed no potential for impact(s) related to harvest activities. All adjacent private land was buffered 100 feet away from any harvest unit boundary.

Utilizing \$11 per CCF for hardwood saw timber and \$65 per MBF for spruce saw timber within the harvest units equates to the following:

<u>Sale Number</u>	<u>Acres</u>	<u>Hardwood CCF</u>	<u>Spruce MBF</u>	<u>YEAR</u>	<u>Min Bid</u>
MSB 006743	39	TBD	TBD	2015	TBD

