

Environmental Assessment Checklist

Project Name: SE Flower 16_Vincent Timber Permit
Proposed Implementation Date: Spring, 2020
Proponent: Libby Unit, Northwest Land Office, Montana DNRC
County: Lincoln

Type and Purpose of Action

Description of Proposed Action:

The Libby Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the SE Flower 16_Vincent Timber Permit. The project is located approximately 2.5 Miles South of Libby, MT (refer to Attachments vicinity map A-1 and project map A-2) and includes the following sections: Section 16, T30N, R31W.

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	Section 16, T30N, R31W	640	75
Public Buildings			
MSU 2 nd Grant			
MSU Morrill			
Eastern College-MSU/Western College-U of M			
Montana Tech			
University of Montana			
School for the Deaf and Blind			
Pine Hills School			
Veterans Home			
Public Land Trust			
Acquired Land			

Objectives of the project include:

- Reduce forest fuels.
- Treat stands to encourage a healthier, more vigorous condition.
- Maintain stands in the desired future condition.
- Salvage the value of timber severely damaged from a recent wind event.
- Generate an estimated \$44,860.00 for the Common Schools Trust.

Proposed activities include:

Harvest approximately 2,000 tons of sawlogs, and burn associated slash following harvest.

Burn Slash following harvest.

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	21 Acres
Selection	
Commercial Thinning	
Salvage	54
Total Treatment Acres	
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Planting	
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	
Road maintenance	
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	1 year
Implementation Period:	Spring / Summer, 2020

The lands involved in this proposed project are held in trust by the State of Montana. (Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X, Section 11). The Board of Land Commissioners and the DNRC are required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for the beneficiary institutions (Section 77-1-202, MCA).

The DNRC would manage lands involved in this project in accordance with:

- The State Forest Land Management Plan (DNRC 1996),
- Administrative Rules for Forest Management (ARM 36.11.401 through 471),
- and all other applicable state and federal laws.

Project Development

SCOPING:

- N/A

- No scoping was completed with this project due to the relative size of the project, as well as the need to act quickly to capture the value of severely wind damaged timber, before it begins to decay.
- PUBLIC SCOPED:
 - N/A
 - N/A
- AGENCIES SCOPED:
 - N/A
- COMMENTS RECEIVED:
 - How many: 0
 - Concerns: 0
 - Results (how were concerns addressed): N/A

DNRC specialists were consulted, including: Hydrologist (Tony Nelson, and Wildlife Biologist (Leah Breidinger.

Internal and external issues and concerns were incorporated into project planning and design and will be implemented in associated contracts.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

(Conservation Easements, Army Corps of Engineers, road use permits, etc.)

- **United States Fish & Wildlife Service-** DNRC is managing the habitats of threatened and endangered species on this project by implementing the Montana DNRC Forested Trust Lands HCP and the associated Incidental Take Permit that was issued by the United States Fish & Wildlife Service (USFWS) in February of 2012 under Section 10 of the Endangered Species Act. The HCP identifies specific conservation strategies for managing the habitats of grizzly bear, Canada lynx, and three fish species: bull trout, westslope cutthroat trout, and Columbia redband trout. This project complies with the HCP. The HCP can be found at <http://dnrc.mt.gov/divisions/trust/forest-management/hcp>.
- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.
- **Montana/Idaho Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.

ALTERNATIVES CONSIDERED:

No-Action Alternative: No timber would be salvaged, or otherwise harvested, with no revenue return to the Common Schools Trust at this time.

Action Alternative : Approximately 500 tons wind damaged of sawlogs would be salvaged, and an additional 1,500 tons of standing green timber would be harvested at this time, returning an estimated \$44,860.00 to the Common Schools Trust.

Impacts on the Physical Environment

Evaluation of the impacts on the No-Action and Action Alternatives including **direct, secondary, and cumulative** impacts on the Physical Environment.

VEGETATION:

Vegetation Existing Conditions:

V-1 Implement
 shelterwood harvest on approximately 21 Acres (leave approximately 27 overstory leave trees per acre), which would maintain the stands in their desired cover type condition.

Details of treatment:

Timber Harvest - Protect existing regeneration. Provide daylight condition around patches of desirable, advanced regeneration. Overstory leave tree selection would favor retention of healthy, vigorous, dominant trees, most often, the tallest trees from the largest diameter class available. Leave tree species selection would be in the following order of preference: Ponderosa pine (PP), Western Larch (WL), Douglas-fir (DF), and Engelman spruce (ES). Leave tree spacing would vary depending on over-all tree condition and species. Spacing would range between approximately 35 - 45 feet between overstory leave trees.

Additionally, approximately 54 Acres would be salvaged of severely wind damaged timber (Leave trees from the recent Upper Flower re-bid Timber Sale). A considerable amount of Leave trees are still standing healthy, and will remain following salvage harvest.

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Noxious Weeds	X				X				X					
Rare Plants	X				X				X					
Vegetative community	X				X				X					
Old Growth	X				X				X					
Action														
Noxious Weeds		X				X				X			Y	
Rare Plants		X				X				X			Y	V-2
Vegetative community		X				X				X			Y	V-1

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Old Growth	X				X				X					

Comments:

V-1 Implement shelterwood harvest on approximately 21 Acres (leave approximately 27 overstory leave trees per acre), which would maintain the stands in their desired cover type condition.

Details of treatment:

Timber Harvest - Protect existing regeneration. Provide daylight condition around patches of desirable, advanced regeneration. Overstory leave tree selection would favor retention of healthy, vigorous, dominant trees, most often, the tallest trees from the largest diameter class available. Leave tree species selection would be in the following order of preference: Ponderosa pine (PP), Western Larch (WL), Douglas-fir (DF), and Engelman spruce (ES). Leave tree spacing would vary depending on over-all tree condition and species. Spacing would range between approximately 35 - 45 feet between overstory leave trees.

Additionally, approximately 54 Acres would be salvaged of severely wind damaged timber (Leave trees from the recent Upper Flower Re-bid Timber Sale). A considerable amount of Leave trees are still standing healthy, and will remain following salvage harvest.

V-2 Washing off-road equipment prior to on-site operations and seeding disturbed areas with grass.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions: The proposed project area has a combination of moderate standard road and county road that are used to access the Libby water supply facility. The area proposed for ground-based harvesting in this proposal was managed as a commercial thin in the Upper Flower Re-bid timber sale which was completed in 2018. Trails in this area are still readily apparent, but are spaced well and not actively eroding. The proposal in this area would involve salvaging wind thrown and root-pulled trees damaged by a wind event. The area below the road near Flower Creek has not been managed for timber since the 1920s. Effects from past timber management on areas below the road have healed to the point that skid trails and other signs of management have ameliorated and are no longer apparent.

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														

SE Flower 16_Vincent Timber Permit EA Checklist
Montana Department of Natural Resources and Conservation

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number	
	Direct				Secondary				Cumulative						
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High			
Physical Disturbance (Compaction and Displacement)	X				X				X						
Erosion	X				X				X						
Nutrient Cycling	X				X				X						
Slope Stability	X				X				X						
Soil Productivity	X				X				X						
Action															
Physical Disturbance (Compaction and Displacement)		X				X				X				Y	S-1
Erosion		X				X				X				Y	S-2
Nutrient Cycling		X				X				X				Y	S-3
Slope Stability	X				X				X						
Soil Productivity		X				X				X				Y	S-4

Comments:

S-1: Based on DNRC soil monitoring on similar soils with a similar harvest intensity, approximately 13.4% of area may be in an impacted condition for ground-based operations, and 5.7% for cable harvest operations (DNRC, 2011). This level is below the range analyzed for in the *EXPECTED FUTURE CONDITIONS* section of the *SFLMP*, and well within the 20-percent impacted area established as a level of concern in the *SFLMP (DNRC 1996)*. This level translates to a low risk of low direct, secondary and cumulative impacts to soil physical disturbance.

S-2: Low impacts to soil erosion are possible due to exposure of bare soil during yarding operations. Risk of erosion would be mitigated by implementing all applicable BMPs to harvesting activities.

S-3: Based on research by Graham, et. al. (1994), habitat types found in the project area should have 12-24 tons/acre of coarse woody debris for nutrient cycling. Logging residue left on the ground as mitigation would ensure 12-24 tons of material 3" or greater would be left for nutrient cycling.

S-4: Soil productivity would be impacted by the use of ground-based machinery to yard timber. As stated in comment **S-1**, levels of ground disturbance are expected to be less than 13.4% with roads included, which is well below the range analyzed for in the *EXPECTED FUTURE CONDITIONS* section of the *SFLMP*, and well within the 20-percent impacted area established as a level of concern in the *SFLMP (DNRC 1996)*. This level translates to a low risk of low direct, secondary and cumulative impacts to soil productivity.

Soil Mitigations:

- Operate ground-based equipment only during periods of dry, frozen or snow-covered conditions
- Space skid trails a minimum of 60 feet apart to minimize areas impacted by ground-based equipment
- Space cable yarding corridors a minimum of 75 feet apart to minimize areas impacted by cable yarding
- Use existing skid trails if they are in suitable locations to minimize potential for cumulative impacts to soil physical disturbance
- Leave approximately 12-24 tons of woody material 3-inches in diameter or greater on the ground for nutrient cycling

WATER QUALITY AND QUANTITY:

Water quality was assessed based on Flower Creek, a class 1 tributary to the Kootenai River. Flower Creek flows are regulated by two dams that form the reservoir system that serves as the municipal water supply for the town of Libby, MT. As a result, flows in this portion of Flower Creek are stable and do not fluctuate much month to month.

Water Quality and Quantity Existing Conditions: All reviewed stream channel reaches in the proposed project area were found to be stable and well-vegetated during field reconnaissance. Portions of the banks of Flower Creek were found to be recently eroded. This was caused by a flood event that occurred in 2016 when an extreme weather event partially breached the Flower Creek Dam during its reconstruction. These raw banks are not the result of inherent instability, but due to this event.

Water Quality & Quantity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
<i>No-Action</i>														
Water Quality	X				X				X					
Water Quantity	X				X				X					
<i>Action</i>														
Water Quality		X				X				X			Y	WQ-1
Water Quantity		X				X				X			Y	WQ-2

Comments:

WQ-1: All requirements found in ARM 36.11.301-313, and ARM 36.11.421-427 would be implemented, where applicable. In addition, all applicable forest management BMPs would be implemented. These measures would minimize any potential risk of sediment delivery to a stream or draw and leave a low risk of direct, secondary or cumulative impacts to water quality.

WQ-2: The low intensity of proposed harvesting and the limited acres of proposed harvest would lead to a low risk of direct, secondary or cumulative impacts to water quantity as a result of the proposed project. The level and extent of proposed timber harvest are low, and the impacts of this activity on water quantity would likely not be detectable or measurable.

Water Quality & Quantity Mitigations:

- Avoid use of ground-based equipment in the bottoms of draws to reduce risk of scour, compaction or routing of surface runoff in draws
- Implement all applicable BMPs and SMZ Law rules to ensure protection of project area streams

FISHERIES:

Fisheries Existing Conditions: Flower Creek, a perennial fish-bearing tributary to the Kootenai River, forms the western boundary of the proposed project. Flower Creek contains a population of eastern brook trout, bull trout, rainbow trout, slimy sculpin, torrent sculpin and westslope cutthroat trout.

No-Action: No direct or indirect impacts would occur to affected fish species or affected fisheries resources beyond those described in Fisheries Existing Conditions. Cumulative effects (other related past and present factors; other future, related actions; and any impacts described in Fisheries Existing Conditions) would continue to occur.

Action Alternative (see Fisheries table below):

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Sediment	X				X				X					
Flow Regimes	X				X				X					
Woody Debris	X				X				X					
Stream Shading	X				X				X					
Stream Temperature	X				X				X					
Connectivity	X				X				X					
Populations	X				X				X					
Action														
Sediment		X				X				X			Y	F-1
Flow Regimes		X				X				X			Y	F-2
Woody Debris		X				X				X			Y	F-3
Stream Shading		X				X				X			Y	F-3
Stream Temperature		X				X				X			Y	F-3
Connectivity	X				X				X					

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Populations		X				X				X			Y	F-4

Comments:

F-1: All requirements found in ARM 36.11.301-313, and ARM 36.11.421-427 would be implemented, where applicable. In addition, all applicable forest management BMPs would be implemented. These measures would minimize any potential risk of sediment delivery to a fish-bearing stream and leave a low risk of direct, secondary or cumulative impacts to water quality and fish habitat.

F-2: The low intensity of proposed harvesting and the limited acres of proposed harvest would lead to a low risk of direct, secondary or cumulative impacts to flow regime as a result of the proposed project. The level and extent of proposed timber harvest are low, and the impacts of this activity on flow regime would likely not be detectable or measurable.

F-3: All proposed harvesting of trees within the RMZ of Flower Creek would follow all requirements of ARM 36.11.425. This would leave a very low risk of the proposed project affecting existing or potential downed woody debris, stream shading or stream temperature in Flower Creek.

F-4: Provided the measures listed in F-1, F-2, F-3 and the mitigation measures listed in the water quality portion of this analysis are followed, there is a very low risk of adverse direct, secondary or cumulative impacts to fish populations as a result of the proposed project.

WILDLIFE:

No-Action: None of the proposed activities would occur. In the short-term, no changes to the amounts, quality, or spatial arrangement of mature forested habitat or blowdown would occur. In the long-term and in the absence of natural disturbance, habitat availability would increase for species preferring mature connected forests while habitat availability would decrease for species preferring young, open stand types.

Action Alternative (see Wildlife table below):

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Threatened and Endangered Species														
Grizzly bear (<i>Ursus arctos</i>)	X				X				X					

SE Flower 16_Vincent Timber Permit EA Checklist
 Montana Department of Natural Resources and Conservation

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Habitat: Recovery areas, security from human activity														
Canada lynx (<i>Felix lynx</i>) Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone		X				X				X			Y	WI-1
Sensitive Species														
Bald eagle (<i>Haliaeetus leucocephalus</i>) Habitat: Late-successional forest within 1 mile of open water	X				X				X					
Black-backed woodpecker (<i>Picoides arcticus</i>) Habitat: Mature to old burned or beetle-infested forest	X				X				X					
Coeur d'Alene salamander (<i>Plethodon idahoensis</i>) Habitat: Waterfall spray zones, talus near cascading streams	X				X				X					
Columbian sharp-tailed grouse (<i>Tympanuchus Phasianellus columbianus</i>) Habitat: Grassland, shrubland, riparian, agriculture	X				X				X					
Common loon (<i>Gavia immer</i>) Habitat: Cold mountain lakes, nest in emergent vegetation	X				X				X					
Fisher (<i>Martes pennanti</i>) Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian		X				X				X			Y	WI-2
Flammulated owl (<i>Otus flammeolus</i>) Habitat: Late-successional	X				X				X					

SE Flower 16_Vincent Timber Permit EA Checklist
 Montana Department of Natural Resources and Conservation

Wildlife	Impact												Can Impact be Mitigated?	Comment Number	
	Direct				Secondary				Cumulative						
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High			
ponderosa pine and Douglas-fir forest															
Gray Wolf (<i>Canis lupus</i>) Habitat: Ample big game populations, security from human activities	X				X				X					Y	WI-3
Harlequin duck (<i>Histrionicus histrionicus</i>) Habitat: White-water streams, boulder and cobble substrates	X				X				X						
Northern bog lemming (<i>Synaptomys borealis</i>) Habitat: Sphagnum meadows, bogs, fens with thick moss mats	X				X				X						
Peregrine falcon (<i>Falco peregrinus</i>) Habitat: Cliff features near open foraging areas and/or wetlands	X				X				X						
Pileated woodpecker (<i>Dryocopus pileatus</i>) Habitat: Late-successional ponderosa pine and larch-fir forest		X				X				X				Y	WI-4
Townsend's big-eared bat (<i>Plecotus townsendii</i>) Habitat: Caves, caverns, old mines	X				X				X						
Wolverine (<i>Gulo gulo</i>) Habitat: Alpine tundra and high-elevation boreal forests that maintain deep persistent snow into late spring	X				X				X						
Big Game Species															
Elk		X				X				X				Y	WI-5
Whitetail		X				X				X				Y	WI-5
Mule Deer		X				X				X				Y	WI-5

Comments:

WI-1 Canada lynx – The proposed activities would occur in 18 acres of suitable lynx habitat. These acres would be treated with shelterwood treatment and would retain too few trees post-harvest to continue providing suitable habitat. However, portions of this stand within 120 feet of Flower Creek would be treated with a reduced cut and may continue providing suitable habitat. Additionally, a corridor >500-foot wide would be retained along Flower Creek facilitating travel. Coarse wood debris including large tops would be retained and at least one 20-foot-long piece of wood ≥ 15 inches dbh would be retained per acre to provide habitat for snowshoe hares, which are the primary prey of lynx. Young submerchantable trees would also be protected to the extent possible, increasing visual screening and habitat quality.

WI-2 Fisher - Approximately 18 acres of suitable fisher habitat would be affected by the proposed activities. These acres would be treated with a shelterwood treatment and would not be suitable for fisher use post-harvest due to low amounts of mature conifer cover. Approximately 5 acres of riparian fisher habitat would be harvested, and portions of this harvested area may not be suitable for fishers post-harvest. However, overall connectivity would remain intact across the Project Area due to the retention of a wide corridor along Flower Creek. To reduce potential adverse effects on fishers, at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh) would be retained (*ARM 36.11.411*). These snags are important habitat features that provide resting and denning sites for fishers.

WI-4 Gray wolves - Wolves may use habitat near the Project Area. Disturbance associated with timber sales at den and rendezvous locations can adversely affect wolves; however, timing restrictions would apply if den or rendezvous sites are documented (*ARM 33.11.430(1)(a)(b)*).

WI-5 Pileated woodpeckers – The proposed activities would affect 18 acres of suitable pileated woodpecker habitat. These acres would be treated with a shelterwood treatment reducing mature canopy cover to 20-30% and causing these stands to become unsuitable for pileated woodpecker use post-harvest. Habitat connectivity would be reduced somewhat, although habitat would remain connected by a 500-foot wide corridor along Flower Creek. To reduce potential adverse effects on pileated woodpeckers, at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh) would be retained and all snags cut for safety reasons would be left in the harvest unit (*ARM 36.11.411*).

WI-6 Big game – The proposed activities would reduce thermal cover on approximately 18 acres of potential white-tailed deer, mule deer, and elk winter range (*DFWP 2008*). However, to reduce impacts of the proposed harvest on big game a 500-foot wide corridor would remain along Flower Creek facilitating travel along the drainage to patches of thermal cover. Additionally, young submerchantable trees would be retained to the extent possible to provide visual screening.

Wildlife Mitigations:

- If a threatened or endangered species is encountered, consult a DNRC biologist immediately. Similarly, if undocumented nesting raptors or wolf dens are encountered within $\frac{1}{2}$ mile of the Project Area, contact a DNRC biologist.
- Contractors will adhere to food storage and sanitation requirements as described in the timber sale contract. Ensure that all attractants such as food, garbage, and petroleum products are stored in a bear-resistant manner.
- Prohibit contractors and purchasers conducting contract operations from carrying firearms while on duty as per *ARM 36.11.444(2)*.
- Close roads and trails to the extent possible after logging is complete to reduce illegal entry into the Project Area.

- Restrict public access at all times on restricted roads that are opened for harvesting activities; signs should be used during active periods and a physical closure must be used during inactive periods (nights, weekends, etc.).
- Retain patches of advanced regeneration of shade-tolerant trees in the shelterwood and blowdown units to provide visual screening for big game.
- Retain at least 2 snags and 2 snag recruits per acre >21 inches dbh or the next available size class, particularly favoring western larch and Douglas-fir for retention. If snags are cut for safety concerns, they must be left in the harvest unit.
- Retain coarse-woody as per DNRC Forest Management Rules according to habitat type and emphasize retention of 15-inch diameter downed logs aiming for at least one 20-foot-long section per acre.

Literature:

DFWP. 2008. Maps of moose, elk, mule deer, and white-tailed deer distribution in Montana. In Individual GIS data layers. Available online at:

<http://fwp.mt.gov/gisData/imageFiles/distributionElk.jpg>

<http://fwp.mt.gov/gisData/imageFiles/distributionMoose.jpg>

<http://fwp.mt.gov/gisData/imageFiles/distributionMuleDeer.jpg>

<http://fwp.mt.gov/gisData/imageFiles/distributionWhiteTailedDeer.jpg>.

USFWS, and DNRC. 2010. Montana Department of Natural Resources and Conservation Forested Trust Lands Habitat Conservation Plan, Final Environmental Impact Statement, Volumes I and II., U.S. Department of Interior, Fish and Wildlife Service, Region 6, Denver, Colorado and Montana Department of Natural Resources and Conservation, Missoula, MT.

AIR QUALITY:

Air Quality	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Smoke	X				X				X					
Dust	X				X				X					
Action														
Smoke		X				X				X			Y	1,2
Dust		X			X				X				Y	3

Comments:

1. The project area is located in Montana Airshed 1 and inside the Libby impact zone. Slash piles consisting of tree limbs, tops and other vegetative debris would be created throughout the project area during harvesting. These slash piles would ultimately be burned after harvesting operations have been completed

2. Burning that may occur on adjacent properties in combination with the proposed action could potentially increase cumulative impacts to the local airshed. Thus cumulative impacts to air quality due to slash pile burning associated with the proposed action would also be expected to be minimal.

3. Dust may be generated by log hauling activities during dry conditions. However, because dust would be localized to skid trails and haul roads and operating seasons would be short in duration, effects to air quality as a result of dust generated during harvest activities are expected to be low.

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Historical or Archaeological Sites	X				X				X					
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					
Action														
Historical or Archaeological Sites		X				X				X			Y	A-1
Aesthetics		X				X				X			Y	A-2
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					

Comments:

A-1 DNRC is currently un-aware of any historical or archeological sites that would be affected by the action alternative.

A-2 The project area is not located on a prominent topographic feature. The proposed timber harvest area would be visible from a county road. Primary impacts would be increased visibility through the treated timber stand as a result of timber harvest and pre-commercial thinning.

Mitigations: If previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA: *List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

- Severely wind damaged timber is planned to be salvaged by the DNRC, associated with both the Upper Flower TS, and Flower Creek TS Environmental Assessments.

Impacts on the Human Population

Evaluation of the impacts on the proposed action including **direct, secondary, and cumulative** impacts on the Human Population.

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Health and Human Safety	X				X				X					
Industrial, Commercial and Agricultural Activities and Production	X				X				X					
Quantity and Distribution of Employment	X				X				X					
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of Recreational and Wilderness Activities	X				X				X					
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				X					
Action														
Health and Human Safety		X			X				X					
Industrial, Commercial and Agricultural Activities and Production		X			X				X					
Quantity and Distribution of Employment		X			X				X					
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of	X				X				X					

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Recreational and Wilderness Activities														
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				X					

Comments:

1. No unusual safety considerations are associated with the proposed project. Because of the relatively small size of the proposed project, and mitigations measure that would be taken, health and safety risks posed by the project would be minimal.
2. A consistent flow of timber contributes towards meeting the current and future demand of these construction materials.
3. Employment in the logging industry is common in the area and this project would in a small part contribute to local employment.

Locally Adopted Environmental Plans and Goals: *List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

- N/A

Other Appropriate Social and Economic Circumstances:

Costs, revenues and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return. The estimated stumpage is based on comparable sales analysis. This method compares recent sales to find a market value for stumpage. These sales have similar species, quality, average diameter, product mix, terrain, date of sale, distance from mills, road building and logging systems, terms of sale, or anything that could affect a buyer's willingness to pay.

No Action: The No Action alternative would not generate any return to the trust at this time.

Action: The timber harvest would generate additional revenue for the Common Schools Trust. The estimated return to the trust for the proposed harvest is \$44,860.00 based on an estimated harvest of 308 thousand board feet (2,000 tons) and an overall stumpage value of \$22.43 per ton. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives, they are not intended to be used as absolute estimates of return.

References

DNRC 1996. State forest land management plan: final environmental impact statement (and appendixes). Montana Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, Montana.

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?

No

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?

No

Environmental Assessment Checklist Prepared By:

Name: Dave Marsh
Title: Forest Management Supervisor
Date: April 8, 2020

Finding

Alternative Selected

The Action Alternative meets the project objectives and is selected for implementation. The No action alternative fails to meet the stated objectives concerning this project.

Significance of Potential Impacts

No significant impacts have been identified to occur as a result of the implementation of the Action Alternative.

Need for Further Environmental Analysis

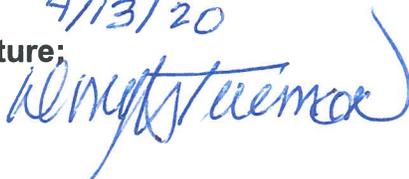
EIS

More Detailed EA

No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Doug Turman
Title: Libby Unit Manager
Date: 4/13/20
Signature:

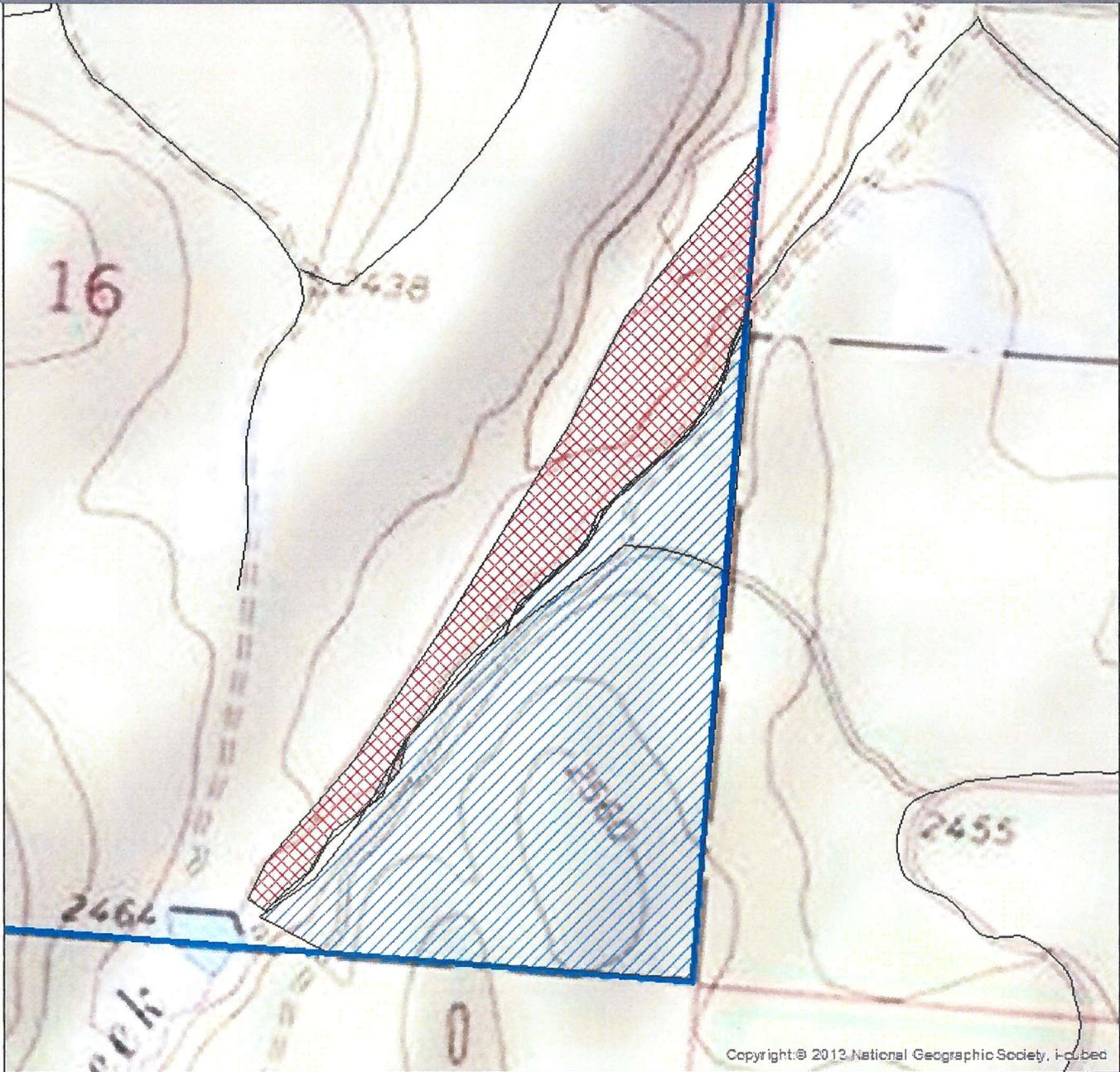


Attachment A- Maps

SE Flower 16_Vincent Timber Permit

Section 16, Township 30N, R31W

Attachment A



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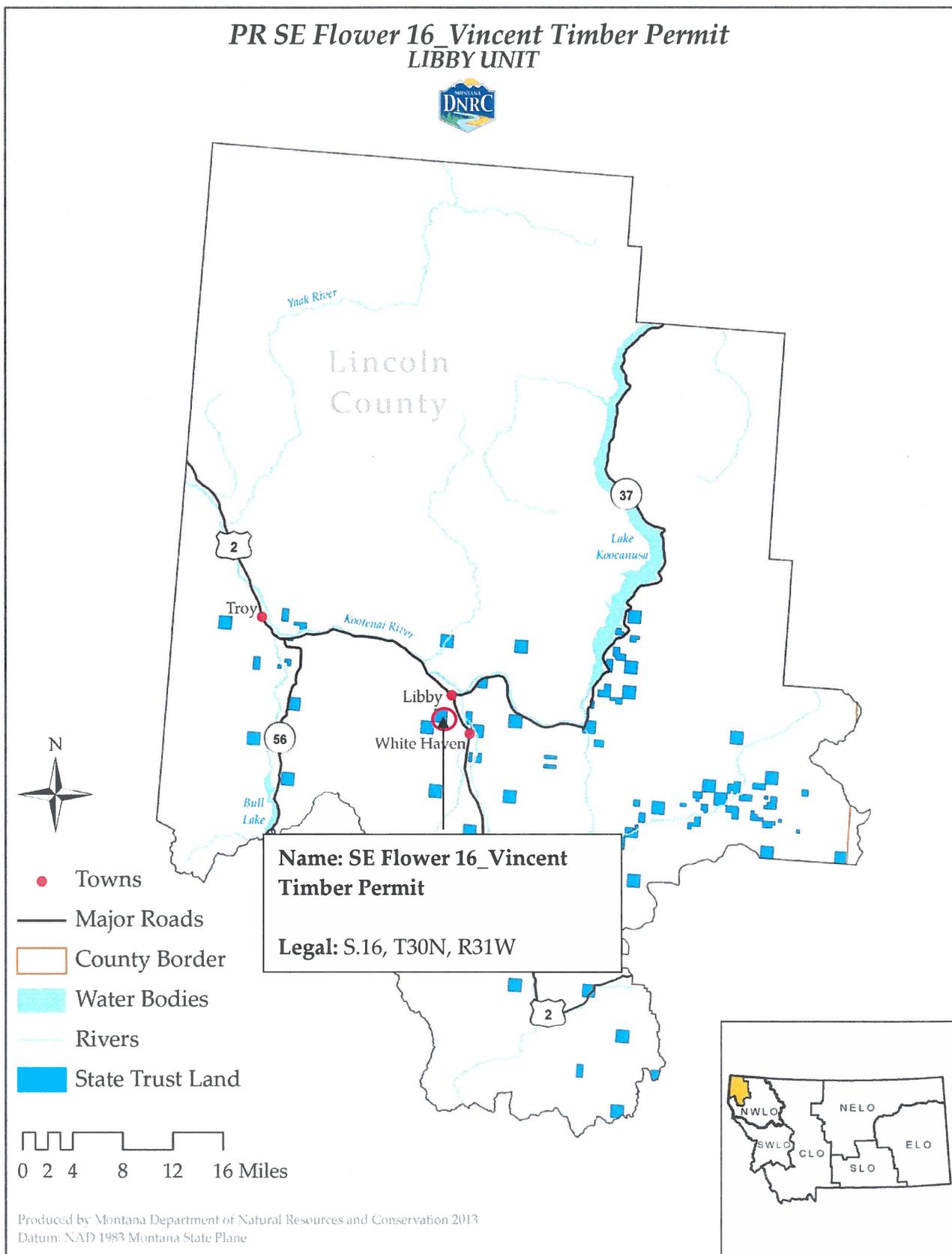
-  Tractor Unit (53.6 Ac.)
-  Cable Unit (20.5 Ac.)
-  State Trust Land

Montana DNRC
Libby Unit
2-13-2020



1 inch equals 0.11 miles

A-1: Timber Sale Vicinity Map



A-2: Timber Sale Harvest Units