Environmental Assessment Checklist

Project Name: Rhodes Draw Sanitation Project
Proposed Implementation Date: April, 2016
Proponent: Kalispell Unit, Northwest Land Office, Montana DNRC
County: Flathead

Type and Purpose of Action

Description of Proposed Action:

The Kalispell Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Rhodes Draw Sanitation Project. The project is located in Section 16, T29N R23W (refer to Attachments vicinity map A-**1** and project map A-**2**) and includes the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	**T29NR23W S16**	**640**	**434**
Public Buildings			
MSU 2nd 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:

1) To generate revenue for the Common School Trust by the harvest of valuable timber as directed in ARM 36.11.446
2) Capture the value of dead and dying timber before it loses economic value as directed by MCA 77-5-207
3) Improve the overall health and vigor of the stand by removing disease and insect infested trees.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	0
Seed Tree	0
Shelterwood	0
Selection	0
Commercial Thinning	44
Sanitation/Salvage	390
Total Treatment Acres	**434**
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	**0**
Planting	**0**
Proposed Road Activities	# Miles
New permanent road construction	0
New temporary road construction	0
Road maintenance	3.4
Road reconstruction	0
Road abandoned	0
Road reclaimed	0
Other Activities	

Duration of Activities:	2 years
Implementation Period:	April 2016 – November 2018

The lands 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 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),
- The Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) (DNRC 2010)
- All other applicable state and federal laws.

Project Development

SCOPING:

- DATE:

  - September 9 2015 – October 9 2015
- PUBLIC SCOPED:
  - The scoping notice was posted on the DNRC Website: http://dnrc.mt.gov/public-interest/public-notices
  - Local Landowners
- AGENCIES SCOPED:
  - FWP, CSKT, Blackfeet tribe, Northern Cheyenne Tribe, Chippewa Cree Tribe, Fort Peck Assiniboine and Sioux Tribes, Crow Tribe, Fort Belknap Assiniboine and Gros Ventre Tribe, Montana School Boards Association, Montana Wood Products Association
- COMMENTS RECEIVED:
  - How many: Four
  - Concerns: None, all comments were in support of the project.
  - Results (how were concerns addressed): N/A

DNRC specialists were consulted, including:

Tim Spoelma - Silviculturist, Forest Management Bureau, Missoula

Leah Breidinger – Wildlife Biologist, DNRC Northwestern Land Office

Marc Vessar – Hydrologist, DNRC Northwestern Land Office

Patrick Rennie – Archeologist, Forest Management Bureau, Missoula

Internal and external issues and concerns were incorporated into project planning and design and would 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 www.dnrc.mt.gov/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 -** 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.

- **Flathead County –** Flathead County has an air quality program and their authority supersedes any decision regarding burning from the Airshed Group and MT DEQ. This project area falls under county airshed regulations. By contacting the county before pile burning we can be certain only to burn on days with good smoke dispersion, mitigating potential adverse effects.

ALTERNATIVES CONSIDERED:

No-Action Alternative: No salvage or sanitation harvest of this section of state trust lands would occur. Forest health and vigor would continue to decline as a result of insect, disease, and wind throw. Dead and dying timber would lose economic value and increase the threat of wildfire spread.

Action Alternative: The Rhodes Draw Sanitation Project would include the salvage and sanitation of timber across 434 acres in section 16 T29N R23W. This project would remove prevalent Douglas-fir dwarf mistletoe infections as well as reduce risk of further bark beetle outbreaks in the treated area. The project would also salvage damaged trees that were infected with spruce budworm in recent years. These activities would simultaneously meet state silvicultural goals while generating revenue for the state 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: Forest cover types in the area are a mixture of Douglas-fir (*Pseudotsuga Menziesii*), Douglas-fir/western larch (*Larix Occidentalis*), mixed conifer and subalpine fir (*Abies lasiocarpa*). The proportional ratio of forest types in this stand does not meet the desired future conditions both in this stand, and across the Kalispell unit (see tables below). The primary age class in this project area is 100-149 years old and the dominant overstory species within treatment units is Douglas-fir. There is widespread Douglas-fir mistletoe in the stand which is weakening vigor in the overstory. These weakened trees are often easy prey for Douglas-fir beetle (*Dendroctonus pseudotsugae*) infections. Nearby stands in other ownerships have obvious signs of beetle infestation including red needled trees with characteristic boring holes and frass around the trunk. Also, all signs indicate that Armillaria Root Rot (*Armillaria mellea)* has infected many pockets of overstory timber resulting in large circular patterns of dead timber.

Current and appropriate forest cover types for the Rhodes Draw project area.

Cover Type	Current Acres	Current Percent of Project Area	Desired Future Condition (DFC)	
			Acres	Percent
Subalpine fir	71	11%	81.2	13%
Douglas-fir	233	36%		
Lodgepole pine	0			
Mixed conifer	128	20%	21.3	3%
Ponderosa pine	0			
Western larch/Douglas-fir	208	33%	537.5	84%
Western white pine	0			
Non-stocked	0			
Non-forest	0			
Other (specify)	0			
Total:	***640***	***100%***	***640***	***100%***

Current and appropriate forest cover types for the Kalispell Unit.

Cover Type	Current Cover Type (Acres	Appropriate Cover Type (Acres)	Current Type Minus (-) Appropriate Type (Acres)
SAF	2249.9	254.8	1995.1
DF	1646.5	1029.4	617.1
HW	449	207	242
LP	2269.2	1376.8	892.4
MC	10265.8	2282.3	7983.3
PP	10636.9	11936.2	-1299.3
OTHER	3635.4	3576.2	59.2
WL/DF	25494.6	32974.5	-7479.9
WWP	567.6	3577.7	-3010.1
TOTAL	57214.9	57214.9	--

SAF = subalpine fir. DF = Douglas-fir. LP = lodgepole pine. MC = mixed conifer. PP = ponderosa pine. WL/DF = western larch/ Douglas-fir. WWP = western white pine. Other = non stocked lands, nonforest, or water. The Current Type minus Appropriate Type column above lists the excess and deficit (-) acres for each Cover Type.

Based upon the Natural Resource Heritage Database there are no sensitive vegetative species in the project area.

Noxious weeds are generally restricted to old logging roads and trails. Native plant species may not re-colonize these areas. Several roads in this section are the main access to private timberlands. These relatively high use roads increase the likelihood of continued weed encroachment in the Rhodes Draw area regardless of action alternatives. The primary species of noxious weeds are oxeye daisy (*Leucantheum vulgare)*, thistle (*Carduus nutans)*, St. Johnswort (*Hypericum perforatum)*, tansy ragwort (*Senecio jacobaea)* and spotted knapweed (*Centaurea biebersteinii)*.

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**			**Yes**	**1**
Rare Plants	**X**				**X**				**X**					
Vegetative community		**X**				**X**				**X**			**Yes**	**2**
Old Growth	**X**				**X**				**X**					
Action														
Noxious Weeds			**X**			**X**				**X**			**Yes**	**1**
Rare Plants	**X**				**X**				**X**					
Vegetative community		**X**				**X**				**X**			**Yes**	**2**
Old Growth	**X**				**X**				**X**					

Comments:

1) There are currently noxious weeds in this stand due to road use in the area. Under either alternative noxious weeds would continue to spread if not treated. Under the Action Alternative there is risk for aggravated spread of noxious weeds by logging equipment and through soil scarification but this impact can be mitigated.
2) The area is dominated by shade tolerant forest types (DF, SAF and MC) with 67% of the forest being in these types. In contrast the desired future condition (DFC) in this stand is 84% western larch / Douglas-fir forest type. Across the Kalispell unit we see a similar trend away from seral (PP, WL and WWP) towards more shade tolerant (MC, SAF, and DF) forest types. This is the result of fire suppression and historical logging practices. Fire suppression has resulted in fuel loading in this project area. This has led to a change from a frequent low-severity fire regime to an infrequent high-severity fire regime. Fire suppression has also promoted a higher percentage of shade tolerant species. This was aggravated by historical logging practices which reduced the proportion of seral species across the landscape as these species were favorable for historical wood products (i.e. rail-road ties).

Vegetation Mitigations:

1) Introduction of noxious weeds could be mitigated by prewashing harvesting equipment and enforcing the state weed management plan as directed by ARM 36.11.445. This management will include weed spraying where appropriate and continued spot spraying of high weed areas as unit priorities and budgets allow.
2) This project will promote DFC by reducing overall canopy closure and reducing Douglas-fir seed source. Logging generated scarification of soils will create opportunity for western larch regeneration. By primarily removing shade tolerant species (Douglas-fir) we will increase opportunity for larch seed to colonize newly scarified soils.

References:

DNRC. 1996. Forestry Best Management Practices: State Forest Management Plan. Montana DNRC, Forest management Bureau. Missoula, MT.

Green, P., J. Joy, D. Sirucek, W. Hann, A. Zack, and B. Naumann. 1992. Oldgrowth forest types of the Northern Region. USDA Forest Service, Northern region. Missoula, Montana.

Losensky, J. 1997. Historical Vegetation of Montana. Contact #970900. Montana DNRC. Missoula, MT. 109pp.

Pfister, Robert D., Bernard L. Kovalchik, Stephen f. Arno, Richard C. Presby. 1977. Forest Habitat Types of Montana. USDA Forest Service. General Technical Report INT-34

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

Landtypes in the in the proposed harvest areas include 23-9 (139 acres), 26G-7 (156 acres) and 26A-8 (139 acres). All land types in the project area are well suited to ground-based harvest with moderate erosion potential. Soils are considered moderate to highly productive.

A review of the harvest history in the parcel shows large harvests in 1940's (7.5mmbf) and 1999 (1.2mmbf). More recently, a salvage sale of approximately 550mbf was harvested in 2013. Past harvest in the parcel is evident from stumps and existing skid trails. While tree growth is likely slower on the main skid trails, no chronic erosion impacts were observed during field review.

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														
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**				**1**
Action														
Physical Disturbance (Compaction and Displacement)		**X**			**X**					**X**			**Yes**	**1**
Erosion		**X**			**X**					**X**			**Yes**	**1**
Nutrient Cycling		**X**			**X**					**X**			**Yes**	
Slope Stability	**X**				**X**				**X**					

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		
Soil Productivity		**X**			**X**					**X**			**Yes**	**1**

Comments:

1) Soil productivity impacts are associated with reduced nutrient cycling and increased soil disturbance. Examples of these impacts include compaction and displacement. Mitigation for these impacts are generally summarized as implementing Forestry BMPs which includes timing restrictions, equipment restrictions for slope and leaving/returning slash in units.

Soil Mitigations:

ARM 36.11.422 (2) and (2) (a) state that appropriate BMPs shall be determined during project design and incorporated into implementation. To ensure that the incorporated BMPs are implemented, the specific requirements would be incorporated into the DNRC Timber Sale Contract. As part of this alternative design, the following BMPs and recommendations are considered appropriate and, would be implemented during harvesting operations:

1) Limit equipment operations to periods when soils are relatively dry, (less than 20 percent), frozen, or snow-covered in order to minimize soil compaction and rutting, and maintain drainage features. Check soil moisture conditions prior to equipment start-up.

2) On ground-based units, the logger and sale administrator would agree to a skidding plan prior to equipment operations. Skid-trail planning would identify which main trails to use and how many additional trails are needed. Trails that do not comply with BMPs (i.e. trails in draw bottoms) would not be used unless impacts can be adequately mitigated. Regardless of use, these trails may be closed with additional drainage installed, where needed, or grass-seeded to stabilize the site and control erosion.

3) Tractor skidding should be limited to slopes of less than 40 percent unless the operation can be completed without causing excessive displacement or erosion. Based on site review, short, steep slopes may require a combination of mitigation measures, such as adverse skidding to a ridge or winchline, and skidding from more moderate slopes of less than 40 percent.

4) Keep skid trails to 20 percent or less of the harvest unit acreage. This would require a spacing of at least 60 feet between trails. Provide for drainage on skid trails and roads concurrently with operations.

5) Slash disposal: Limit the combination of disturbance and scarification to 30 to 40 percent of the harvest units. No dozer piling on slopes over 35 percent; no excavator piling on slopes over 40 percent, unless the operation can be completed without causing excessive erosion. Consider lopping and scattering or jackpot burning on the steeper slopes. Consider disturbance incurred during skidding

operations to, at least partially, provide scarification for regeneration where desired.

6) Retain large woody debris and a feasible majority of all fine litter following harvesting operations. On units where whole tree harvesting is used, implement one of the following mitigations for nutrient cycling: 1) use in-woods processing equipment that leaves slash on site; 2) return-skid slash and evenly distribute within the harvest area; or 3) cut tops from every third bundle of logs so that tops are dispersed as skidding progresses.

WATER QUALITY AND QUANTITY:

Due to the low intensity forest management proposed in much of this project, the lack of native fish species and the discontinuous characteristics of Big Lost Creek, cumulative watershed effects due to the proposed project would be expected to be low.

Water Quality and Quantity Existing Conditions: While the main channel bisecting the section is Big Lost Creek, the parcel is encompassed in the Spring Creek watershed (6th code HUC). Big Lost Creek is spatially discontinuous from downstream bodies of surface water. Within the parcel, two perennial streams were observed in addition to Big Lost Creek. The perennial stream in the western half of the section does not contribute surface flow to Big Lost Creek and it does not contain fish. The perennial tributary to Big Lost Creek that flows from north to south in the center of the section contains eastern brook trout. Several wetlands are present adjacent to the streams. During field review, no substantial sediment sources were identified on any of the streams.

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		
No-Action														
Water Quality	**X**				**X**					**X**			**N**	
Water Quantity	**X**				**X**					**X**			**N**	
Action														
Water Quality	**X**				**X**					**X**			**N**	**1**
Water Quantity		**X**			**X**					**X**			**N**	**2**

Comments:

1) Water quality impacts are low in the watershed, however they do exist as a result of past timber harvest in the riparian area and at stream crossings.
2) Annual water yield was not modelled for this project due to the small scope of the project; however, field observations of the channel condition did not indicate moderate or high impacts from increased annual water yield.

Water Quality & Quantity Mitigations:

- All harvest units are located outside of SMZ's in this area.
- Streams would be protected in accordance with State of Montana Streamside Management Zone rules in order to meet ARM 36.11.422.
- Follow all applicable Forestry BMPs

FISHERIES:

Fisheries Existing Conditions: A search of the Montana Fisheries Information System database shows that eastern brook trout are abundant and rainbow trout are rare in Big Lost Creek. Riparian habitat along Big Lost Creek and the perennial, fish-bearing tributary in the center of the parcel is generally intact with a fully stocked stand of mature trees. Woody debris recruitment has diverted the channel in multiple locations above the main haul route resulting in braided reaches.

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**				**2**
Stream Shading	**X**				**X**					**X**				**2**
Stream Temperature	**X**				**X**					**X**				**2**
Connectivity	**X**				**X**					**X**				
Populations	**X**				**X**						**X**			**1**
Action														
Sediment		**X**				**X**				**X**			**Yes**	
Flow Regimes		**X**			**X**				**X**					
Woody Debris	**X**					**X**				**X**			**Yes**	**2**
Stream Shading	**X**				**X**					**X**			**Yes**	**2**
Stream Temperature	**X**				**X**					**X**			**Yes**	**2**
Connectivity	**X**				**X**					**X**				
Populations	**X**				**X**						**X**		**No**	**1**

Comments:

1) Cumulative effects to populations is moderate due to the data showing only introduced species, however these introduced species appear to be surviving and reproducing.

2) Evidence of historic riparian harvesting was observed during field reconnaissance. While the riparian stand is fully stocked, it is reasonable to conclude that the historic harvesting had an impact on woody debris recruitment, stream shading and stream temperature.

Fisheries Mitigations:
The proposed harvest would not remove trees within the SMZ of any stream, therefore all recruitable trees that would provide woody debris and shading would be retained within 50 feet. Additionally, the low intensity salvage harvest would retain most (>75%) trees within the RMZ of fish bearing streams.

All applicable Forestry BMPs should be implemented that minimize impacts to fisheries habitat and populations.

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 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 *(Ursus arctos)* Habitat: Recovery areas, security from human activity		**X**				**X**				**X**			**Y**	**WI-1**
Canada lynx (*Felix lynx)* Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone		**X**				**X**				**X**			**Y**	**WI-2**
Wolverine *(Gulo gulo)*	**X**				**X**				**X**					
Sensitive Species														
Bald eagle *(Haliaeetus leucocephalus)*	**X**				**X**				**X**					

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Habitat: Late-successional forest within 1 mile of open water														
Black-backed woodpecker *(Picoides arcticus)* Habitat: Mature to old burned or beetle-infested forest	**X**				**X**				**X**					
Coeur d'Alene salamander *(Plethodon idahoensis)* Habitat: Waterfall spray zones, talus near cascading streams	**X**				**X**				**X**					
Columbian sharp-tailed grouse *(Tympanuchus Phasianellus columbianus)* Habitat: Grassland, shrubland, riparian, agriculture	**X**				**X**				**X**					
Common loon *(Gavia immer)* Habitat: Cold mountain lakes, nest in emergent vegetation	**X**				**X**				**X**					
Fisher *(Martes pennanti)* Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian		**X**				**X**				**X**			**Y**	**WI-3**
Flammulated owl *(Otus flammeolus)* Habitat: Late-successional ponderosa pine and Douglas-fir forest	**X**				**X**				**X**					
Gray Wolf *(Canis lupus)* Habitat: Ample big game populations,		**X**				**X**				**X**			**Y**	**WI-4**

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
security from human activities														
Harlequin duck *(Histrionicus histrionicus)* Habitat: White-water streams, boulder and cobble substrates	**X**				**X**				**X**					
Northern bog lemming *(Synaptomys borealis)* Habitat: Sphagnum meadows, bogs, fens with thick moss mats	**X**				**X**				**X**					**WI-5**
Peregrine falcon *(Falco peregrinus)* Habitat: Cliff features near open foraging areas and/or wetlands	**X**				**X**				**X**					
Pileated woodpecker *(Dryocopus pileatus)* Habitat: Late-successional ponderosa pine and larch-fir forest		**X**				**X**				**X**			**Y**	**WI-6**
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	**X**				**X**				**X**					
Big Game Species														
Elk	**X**				**X**				**X**					
Whitetail		**X**				**X**				**X**				**WI-7**
Mule Deer	**X**				**X**				**X**					

Comments:

WI-1 Grizzly bear – The proposed activities would occur outside of recovery zone and non-recovery occupied habitat (*USFWS 1993, Wittinger 2002*) associated with the Northern Continental Divide Ecosystem, however, grizzly bear observations in the Salish Mountains are becoming more frequent and bears may use the Project Area at any time. The salvage

operations proposed under the Action Alternative would reduce stand density; however distance to cover would remain low reducing impacts to bears and operations would not occur within wetlands, which may provide important bear foods. No roads are proposed for construction although bears could be displaced during operations.

WI-2 Lynx – The structure of 385 acres of lynx habitat would be altered under the Action Alternative and post-harvest, 19 of these acres of lynx habitat would not be suitable for lynx use (3.2% of existing habitat in the Project Area). Throughout the harvest units, canopy cover would be somewhat patchy due to the distribution of trees affected by insects and disease which would result in small 1-acre openings. To ensure that forest structural attributes preferred by snowshoe hares remain following harvest, dense patches of advanced regeneration would be retained where possible within portions of lynx winter forage habitat. Additionally, 12 to 25 tons/acre of coarse woody debris would be retained in accordance with DNRC Forest Management Rules (*ARM 36.11.414)* and retention of downed logs ≥15 inch diameter would be emphasized. Lynx habitat connectivity would be reduced; however, a connectivity corridor would be retained along Big Lost Creek and a perennial tributary to Big Lost Creek. Overall, suitable lynx habitat would remain continuous.

WI-3 Fisher – Approximately 285 acres of fisher habitat would be affected by the proposed harvest. Post-harvest these acres would remain suitable for fisher use, albeit at a reduced stand density. Small 1-acre openings would be present throughout harvest units post-harvest due to the nature of the salvage. Riparian fisher habitat would not be affected by the proposed activities. 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*) and connectivity would be retained in all riparian areas.

WI-4 Gray wolves - Wolves may use habitat in the vicinity of the Project Area. Disturbance associated with timber sales at den and rendezvous locations can adversely affect wolves; however, there are no known den or rendezvous locations in the project area. If den or rendezvous sites are documented timing restrictions would apply. (*ARM 33.11.430(1) (a) (b)*).

WI-5 Northern bog lemming – Extensive sphagnum moss mats occur in the southwest portion of the Project Area adjacent to Big Lost Creek and bog lemming use of the area is possible, although it has not been documented (*MTNHP data, December 1, 2015*). To minimize the potential for adverse impacts to bog lemmings harvest would not occur within ≥50 feet of the wetland.

WI-6 Pileated woodpeckers – The proposed sanitation harvest would reduce the stand density of pileated woodpecker habitat on 363 acres (73.8% of habitat available in the Project Area) and would remove trees that provide foraging habitat for the birds. Approximately 45 of these acres (9.2% of habitat in the Project Area) would not be suitable for pileated woodpecker use due to low stand density of mature trees. 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-7 Big game – Approximately 10 acres of white-tailed deer winter range as identified by DFWP (*2008*) would be affected by the Action Alternative in addition to approximately 150 acres that were not identified by DFWP but show signs of heavy use by wintering white-tailed deer including extensive browsing on young Douglas-fir trees. Portions of winter range areas would be treated to remove trees affected by bark beetles and mistletoe. Due to the patchy distribution of disease pockets, post-harvest the canopy cover in these areas would also be patchy with small 1-2 acre openings present. Although canopy cover would be reduced, these areas are anticipated to continue providing thermal cover to wintering deer. To reduce adverse impacts to big game, visual screening would be retained between roads and portions of units where heavy disease and insect infestation occurs.

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 ½ mile of the Project Area contact a DNRC biologist.
- Contractors would 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)* and *GB-PR2* (*USFWS and DNRC 2010)*.
- Restrict public access at all times on restricted roads that are opened for harvesting activities.
- Retain at least 2 snags and 2 snag recruits per acre >21 inches DBH or the next available size class, regardless of merchantability, 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 12-25 tons/acre of coarse-woody and emphasize retention of 15-inch diameter downed logs where they occur as required in *LY-HB2* (*USFWS and DNRC 2010*).
- Retain patches of advanced regeneration of shade-tolerant trees as per *LY-HB4* (*USFWS and DNRC 2010*) in all harvest units.
- Retain a 300-foot wide corridor containing ≥40% canopy cover of conifers along Big Lost Creek and the unnamed tributary to Lost Creek located in the center of the parcel to provide connectivity for lynx, fishers, and other wildlife species.
- Retain visual screening along roads where possible to increase security for wildlife, especially adjacent to areas where extensive sanitization of diseased trees may occur.

Literature Cited:

DFWP. 2008. Maps of moose, elk, mule deer, and white-tailed deer distribution in Montana. 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. 1993. Grizzly bear recovery plan. Missoula, MT.

Wittinger, W. 2002. Grizzly bear distribution outside of recovery zones. Unpublished memorandum on file at USDA Forest Service, Region 1, Missoula, MT.

AIR QUALITY:

No Action: There would be no impacts to air quality under the No Action Alternative.

Action Alternative: This area is within Airshed 2 as defined by the Montana/Idaho Airshed Group, and portions of the section are also within the Kalispell Impact Zone. The Airshed Group monitors weather conditions and manages open burning restrictions for its members within the airshed in order to limit smoke impacts from prescribed burning operations, including slash burning. There are also households along the main haul route out of this section. This road is maintained by the county and has regular forest industry use.

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**			**Yes**	**1**
Dust		**X**			**X**				**X**				**Yes**	**2**

Comments:

1. This project area is currently managed under the Montana Airshed Group and Flathead County and lies within Airshed 2. Smoke produced from pile burning in the project area could directly reduce air quality for a limited time during burning.
2. There are households along the main haul route out of this section that may be affected by dust generated from the Action Alternative.

Air Quality Mitigations:

1.) Timber harvesting has the potential to temporarily reduce air quality in the project area. Slash burning would be completed in cooperation with the Montana Airshed Group and Flathead County regulations. This would provide for burning when conditions are acceptable in terms of ventilation and dispersion and effectively mitigate impacts.

2.) The dirt road that would be used as a main haul route for this sale would produce a direct and short-term amount of dust. However, due to the small size and current forest industry use of this road it is unlikely that these impacts would be significant. Also, this road is maintained by the county and has regular forest industry use so this impact is already being mitigated by county road maintenance activities

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES: Scoping letters were sent to those Tribes that requested to be notified of DNRC timber sales. No response was returned that identified a specific cultural resource

issue. A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE on state land. No additional archaeological investigative work will be conducted in response to this proposed timber salvage. However, 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.

No limited resources were identified. No direct, indirect, or cumulative effects are expected with implementation of either alternative.

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**					
Aesthetics	**X**				**X**				**X**					
Demands on Environmental Resources of Land, Water, or Energy	**X**				**X**				**X**					

Comments: Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or paleontological resources, proposed timber salvage activities are expected to have *No Effect* to *Antiquities*. No additional archaeological investigative work would be conducted in response to this proposed development.
The project area is located Northwest of Kalispell and not visible from any populated areas. There are no residential homes in the nearby vicinity that would be affected. The area is also landlocked by private timber lands with restricted access; recreational uses in this area are limited.

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

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

The US Forest Service has planned the Lost Beetle Forest Health Improvement project in adjacent timber lands. This project aims to sanitize insect and disease issues in USFS and Stoltze properties. In terms of cumulative effects this would increase the efficacy of both projects by removing disease issues across a larger part of the landscape.

No other DNRC projects are planned in this area. Stoltze Land and Lumber and Montana Forest Products have timber harvest activities planned on nearby company owned lands. However, this area has traditionally been classified as actively managed timber lands so cumulative effects from this low volume project are negligible.

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				Yes	1, 2
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					

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		
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**					

Comments:

1) Smoke generated from this project could be hazardous to human health, by burning with approval from both Flathead County and the Montana/Idaho airshed group we would mitigate this potential hazard.
2) Logging traffic could create hazardous driving conditions for local residents. By posting signs that notify local drivers of the presence of log trucks we can greatly reduce this hazard.

Mitigations: Due to the small size and scope of this sale no mitigations are necessary to prevent impacts on the human population.

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.*

In 1996, the Land Board approved the ROD for the SFLMP. The SFLMP provides philosophical basis, consistent policy, technical rationale, and guidance for the management of forested state trust lands. In 2003, DNRC adopted the Forest Management Rules (ARM 36.11.401 through 456). The Forest Management Rules are the specific legal resource management standards and measures under which DNRC implements the SFLMP and subsequently its forest management program.

In December 2011, the Land Board approved the ROD for the Montana DNRC Forested State Trust Lands HCP. Approval of the ROD was followed by the issuance of an Incidental Take Permit (Permit) by the USFWS. The HCP is a required component of an application for a Permit which may be issued by the USFWS to state agencies or private citizens in situations where otherwise lawful activities might result in the incidental take of federally-listed species. The HCP is the plan under which DNRC intends to conduct forest management activities on select forested state trust lands while implementing specific mitigation requirements for managing the habitats of grizzly bear, Canada lynx, and three fish species: bull trout, westslope cutthroat trout, and Columbia redband trout.

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 Alternative: The timber harvest would generate additional revenue for the Common Schools Trust. The estimated return to the trust for the proposed harvest is $195,000 based on an estimated harvest of 750 thousand board feet (4875 tons) and an overall stumpage value of $40.00 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: Caleb Deitz
Title: Forester
Date: December 12, 2015

Finding

Alternative Selected
Action Alternative

Significance of Potential Impacts
I find that the impacts of the proposed action alternative as described in this Environmental Assessment are not significant. This Environmental Analysis has been completed for the Rhodes Draw Sanitation Timber Sale. After a thorough review of the EA, project file, response and discussions with Department and other specialists, Department policies, standards and guidelines, and the State Land Management Rules, and HCP rules I have taken the decision to choose the action alternative. I believe that this EA has described a good approximation what this project would accomplish. Salvage dead and dying timber before it loses its economic value, and improve stand health and vigor of the stand by thinning the remaining portions of the stand. This project will reduce the susceptibility of residual trees to epidemic insect infestations and outbreaks, and improve the availability of necessary nutrients, water, and sunlight that may be limited in this stand.

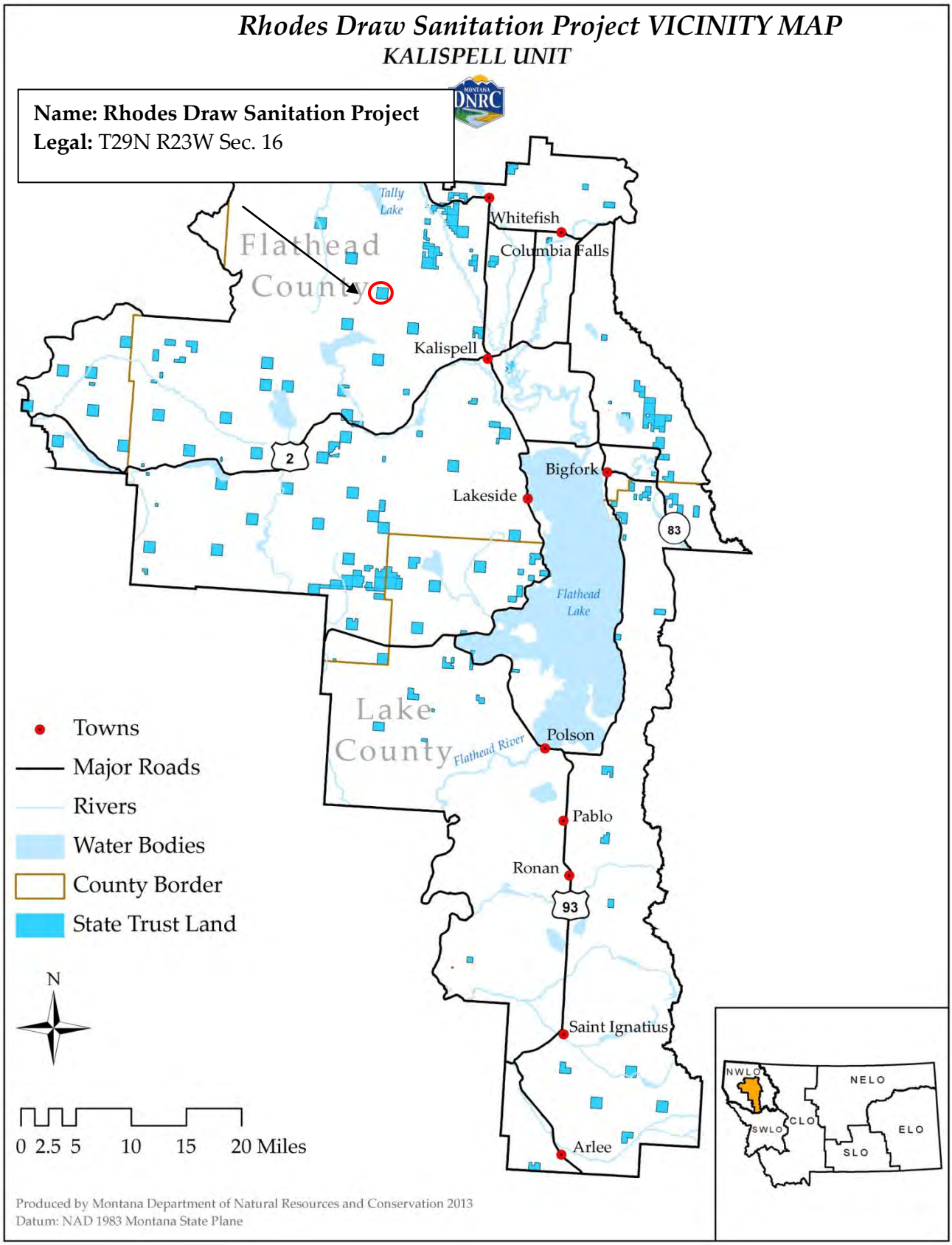
Need for Further Environmental Analysis

[ ]	EIS	[ ]	More Detailed EA	[X]	No Further Analysis

Environmental Assessment Checklist Approved By:
Name: David M. Poukish
Title: Kalispell Unit manager, DNRC
Date: 2/22/16
Signature: /s/ David M. Poukish

Attachment A- Maps

A-1: Timber Sale Vicinity Map



A-2: Timber Sale Harvest Units