Environmental Assessment Checklist

Project Name: Fatty Creek Restoration
Proposed Implementation Date: July, 2015
Proponent: Swan Unit, Northwest Land Office, Montana DNRC
County: Lake

Type and Purpose of Action

Description of Proposed Action:
The Swan Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Fatty Creek Restoration. The project is located approximately 16 air miles south of Swan Lake, MT, 7 miles west of MT Highway 83 on the Fatty Creek Road (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	**S35, T23N, R18W**	**640**	**117**
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	**S35, T23N, R18W**	**640**	**117**

Objectives of the project include:

- Reduce stand density and stocking levels
- Cover type conversion from predominantly lodgepole pine to western larch\Douglas-fir
- Reduce the overall risk factor for mountain pine beetle infestations
- Reduce fire hazard

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	
Selection	
Commercial Thinning	117
Salvage	
Total Treatment Acres	
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	117
Planting	
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	
Road maintenance	3.5
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	
Slash piling	117

Duration of Activities:	14 Months
Implementation Period:	July, 2015 – September, 2016

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 (SFLMP) (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)
- West Swan Valley Conservation Easement
- Swan Valley Grizzly Bear Conservation Agreement (SVGBCA)
- and all other applicable state and federal laws.

Project Development

SCOPING:

- DATE:
  - May 5, 2015 through June 5, 2015
- PUBLIC SCOPED:
  - The scoping notice was posted on the DNRC Website: http://dnrc.mt.gov/PublicInterest/Notices/Default.asp
  - Letters were mailed to DNRC resources specialists, adjacent landowners, statewide scoping list, newspapers, and interested parties
- AGENCIES SCOPED:
  - Montana DFWP
  - USFS, Flathead NF, Swan Lake Ranger District
  - Montana Tribal Historic Preservation offices
- COMMENTS RECEIVED:
  - How many: 3
  - Concerns: Forest health, long term management goals, and historical/cultural resources.
  - Results (how were concerns addressed): Responses to the comments are located in the project file, located at the Swan River State Forest unit office.

DNRC specialists were consulted, including: Leah Breidinger (wildlife biologist) and Tony Nelson (hydrologist).

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 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-** 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.

- **Montana Department of Fish, Wildlife and Parks (DFWP)-** DFWP has jurisdiction over the management of fisheries and wildlife populations in the project area. Additionally, lands in Section 35, Township 23 North, Range 18 West are within the *West Swan Valley Conservation Easement* between DNRC and DFWP. This easement requires DNRC to provide DFWP with prior notice of all forest-management activities on lands under the easement as well as submitting a project-level timber management plan to DFWP. DFWP is on the mailing list and was sent the scoping letter**.**

ALTERNATIVES CONSIDERED:

No-Action Alternative: The No-Action Alternative is used as a baseline for comparing the effects that the Action Alternative would have on the environment and is considered a possible alternative for selection. Under this alternative, the proposed commercial thinning and pre-commercial thinning would not take place and, therefore, no revenue would be generated for the Common Schools Trust. The stand would remain in an overstocked state with declining growth rates and vigor class. Firewood permits, recreational use, fire suppression, noxious-weed control, and other management activities may still occur. Natural events, such as windthrow, down fuel accumulation, mountain pine beetle infestations, and natural thinning through competition would continue to occur.

Action Alternative: Revenue would be generated for the Common Schools trust through commercial thinning and post and pole harvesting of approximately 11,125 tons of lodgepole pine, western larch, western red cedar, Douglas-fir, Engelmann spruce and grand fir. Also, mechanical thinning (pre-commercial and commercial) of lodgepole pine, western larch, western red cedar, Douglas-fir, Engelmann spruce, and grand fir would promote future growth and vigor through the decrease in competition. Post-treatment slash piling and burning would also occur to reduce fuel hazard. The desired future condition of this stand is to shift the cover type from lodgepole pine to western larch/Douglas-fir. Post-harvest stand conditions would have an average spacing of 17 feet between trees and approximately 150 trees per acre with a species composition of approximately 40% western larch, 50% lodgepole pine and 10% Douglas-fir. The stand would also retain any remnant, large diameter snags or live trees and retain approximately 8-12 tons/acre of coarse woody debris. The cover type conversion away from the lodgepole pine cover type would reduce the overall risk factor of mountain pine beetle infestations. Slash piling and burning would reduce fire hazard created from the harvesting activities.

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: The stands proposed for pre-commercial and commercial thinning are primarily pole sized timber with a component of sawlog sized trees intermixed. Species composition is predominantly western larch (30%), western red cedar (30%), lodgepole pine (23%), grand fir (8%), Douglas-fir (8%), and Engelmann spruce (1%). Scattered hardwoods also are present within the stand. Current stocking in the stands is approximately 3,789 trees per acre. Diameter at breast height (dbh) ranges from 2 to 10 inches (average 4.0 inches) and heights range from 24 to 73 feet tall (average 35 feet tall). The long-term plan for the stands is to manage for desired cover type, continued forest health (resistance to insect infestations and disease infection), and timber production. The average elevation for the stands is 4,600 feet. The topography

throughout the stands is a southeast aspect with slopes ranging from 10 to 50%. The primary habitat type is western red cedar/queen-cup beadlily (THPL/CLUN).

The current cover type of the proposed stands is lodgepole pine. The desired future condition for cover type is western larch/Douglas-fir with a stand composition of 45% western larch, 40% lodgepole pine, 10% Douglas-fir, and 5% grand fir, western red cedar, and Engelmann spruce. These are multistoried stands in the 40-99 year old age class. The primary concerns with the stands are the overstocking due to a lack of previous management activities and mountain pine beetle infestations. There has been mountain pine beetle activity in small pockets in adjacent stands along with signs of individual trees within the treatment stands being hit.

Noxious weeds are present within the project area and are well established on roads, old landings, and skid trails. The most common weeds are spotted knapweed, oxeye daisy, orange hawkweed, and Canada thistle.

No sensitive, threatened, or endangered plant species have been documented within the project area according to the Montana Natural Heritage Program.

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**			**No**	**1**
Old Growth	**X**				**X**				**X**					
Action														
Noxious Weeds		**X**			**X**				**X**					
Rare Plants	**X**				**X**				**X**					
Vegetative community			**X**			**X**				**X**				**2, 3, 4**
Old Growth	**X**				**X**				**X**					

Comments:

1) Under the No-Action Alternative, the stands would remain overstocked with declining growth rates and vigor class. Overcrowding of the stands would continue until natural stand thinning occurred, insect/disease mortality affected a species or individual, or wildland fire burned through the stand.
2) Under the Action Alternative, the long term goals for the stand would be to convert the current lodgepole pine cover type to a western larch/Douglas-fir cover type. Additionally, future treatments would continue to reduce the overall presence of lodgepole pine within the stand.
3) Under the Action Alternative, mechanical treatment would increase ground disturbance and increase the potential spread of noxious weeds that prefer disturbed sites.
4) Under the Action Alternative, fuel loading would increase immediately following harvesting, thinning, and slashing activities resulting in a greater fire hazard.

Vegetation Mitigations:

- All tracked and wheeled equipment will be cleaned of noxious weeds prior to beginning project operations.

- Prompt grass seeding (with a native grass seed mix or an annual mix) of disturbed roads will be required.
- Herbicide weed spraying will be used to control weeds along roads and disturbed areas to prevent further spread.
- Fire hazard would be reduced by requiring main stems be reduced to within 18" of the ground from the bottom side and reduce the total slash depth, including branches, to within 24" of the ground.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions: The proposed project area has had past salvage activities to remove large trees that survived the most recent fire event. These activities cover less than 10% of the proposed project area. Existing skid trails are widely spaced and not causing erosion.

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					
Action														
Physical Disturbance (Compaction and Displacement)		X				X				X			Y	S-1
Erosion	X				X				X					
Nutrient Cycling	X				X				X					
Slope Stability	X				X				X					
Soil Productivity	X				X				X					

Comments:

S-1) Based on DNRC soil monitoring on similar soils with similar harvest intensity, approximately 8.1% of area may be in an impacted condition (DNRC, 2006). 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.

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
- Use existing skid trails if they are in suitable locations to minimize potential for cumulative impacts to soil physical disturbance

- Leave approximately 10-15 tons of woody material 3-inches in diameter or greater on the ground for nutrient cycling

WATER QUALITY AND QUANTITY:

No stream channels currently exist in the proposed project area. There is a negligible risk that water quantity would be increased sufficient to scour a defined channel as a result of the proposed project. Commercial thinning typically has little effect on water quantity at a site since approximately half of the live canopy is removed, and remaining trees grow more vigorously following activity. As a result, water use and snowpack distribution are not changed substantially enough to create measurable or observable increases in water quantity.

Water Quality and Quantity Existing Conditions: No stream channels were identified in the proposed project area during field reconnaissance. Draws were found to be stable, well-vegetated and at low risk for developing a scoured channel.

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					
Water Quantity	X				X				X					
Action														
Water Quality	X				X				X					
Water Quantity	X				X				X					WQ-1

Comments:

WQ-1) No stream channels currently exist in the proposed project area. There is a very low risk of any proposed activities leading to increases in water quantity sufficient to scour a channel and form a stream. WQ-1: No stream channels currently exist in the proposed project area. There is a very low risk of any proposed activities leading to increases in water quantity sufficient to scour a channel and form a stream.

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

FISHERIES:

Fisheries Existing Conditions: No stream channels were identified in the proposed project area during field reconnaissance. As a result, there are no fisheries issues present in the proposed project area.

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					
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					

WILDLIFE:

No-Action: No activities associated with the Fatty Creek Restoration Project would occur. Thus no direct, indirect, or cumulative effects to terrestrial wildlife species would be anticipated.

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)* Habitat: Late-successional forest within 1 mile of open water	X				X				X					
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					
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, security from human activities		X				X				X			Y	WI-3

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					
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					
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	X				X				X					
Big Game Species														
Elk														
Whitetail	X				X				X					
Mule Deer	X				X				X					
Other	X				X				X					

Comments:

WI -1: The Project Area is located in the Piper Creek Grizzly Bear Subunit of recovery zone habitat associated with the NCDE (Northern Continental Divide Ecosystem, *USFWS 1993*). The proposed commercial and precommercial thin would reduce the effectiveness of grizzly bear cover for 10-20 years in approximately 120 acres. These acres would not provide effective hiding cover after the thinning is complete considering that less than 40% of conifer canopy cover would be retained. The proposed activities would occur primarily in the summer and fall of 2015 with all harvesting completed by July 2016. Forest management activities would be prohibited in the Project Area from April 1 – June 15 to provide security for grizzly bears in the spring. Riparian habitat and wet meadows, which are frequently used by bears at low elevations, would not be affected by the proposed activities.

WI-2: The proposed commercial and precommercial thin would affect a total of 120 acres of suitable lynx habitat, which consists primarily of dense pole timber lodgepole pine stands with a western red cedar understory (*USFWS and DNRC 2010*). After the thinning occurs, these stands would retain less than 40% canopy cover of conifers and would not be suitable for lynx use in many areas. Overall, these stands would likely support fewer snowshoe hares, the primary prey of lynx for approximately 10 years until trees regenerate. However, inaccessible patches of habitat would be retained and the connectivity of lynx habitat in the Project Area would remain high post-harvest.

WI-3: The 2014 home range of the Cedar Pack is located in the vicinity of the Project Area (*MFWP wolf pack data, 2015*). Disturbance associated with forest management activities 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)*).

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 1 mile of the Project Area contact a DNRC biologist.
- 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*). Ensure that all attractants such as food, garbage, and petroleum products are stored in a bear-resistant manner.
- Prohibit management activities as per the Swan Valley Grizzly Bear Conservation Agreement (*SVGBCA)* from April 1- June 15th to provide security for grizzly bears. Operations may occur during the non-denning period in the Piper Grizzly Bear Subunit from 2015-2017. An exception from USFWS will be necessary to haul logs across the closed Porcupine Woodward subunit.
- Restrict public access at all times on any restricted roads that are opened for the proposed activities.
- Ensure that at least 2 large snags and 2 large snag recruits (≥ 21 in dbh) per acre are retained throughout the harvest units (i.e., at least 240 large snags or snag recruits would be present in the harvest unit post-harvest). The largest size-class of available snags must be retained (regardless of species), but Douglas-fir and western larch are preferred leave species. Broken-top snags are acceptable for retention, but must be at least 6 feet tall to apply toward minimum snag requirements.

Literature Cited:

USFWS. 1993. Grizzly bear recovery plan. Missoula, Montana. 181 pp.

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. September 2010.

DFWP 2015. 2014 Montana wolf pack locations. Individual GIS data layer. Montana Fish, Wildlife and Parks. Helena, 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				
Dust		X				X				X				

Comments:

1) The project is located within Montana Airshed 2. Slash pile burning would occur in the fall of 2016. Burning would introduce particulate matter into the local airshed, which may temporarily affect local air quality.
2) Dust may be created from log hauling on portions of native surface roads during the summer of 2015 and 2016.

Air Quality Mitigations:

- To minimize cumulative effects during burning operations, burning would be done in compliance with the Montana Airshed Group, reporting regulations and any burning restrictions imposed in Airshed 2. This would provide for burning during conditions of acceptable ventilation and dispersion.
- Contract clauses would provide for the use of dust abatement or require trucks to reduce speed, if necessary.

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					1
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					

Comments:

1) DNRC has no record of cultural resources within the proposed project area.

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.*

- White Porcupine Multiple Timber Sale Project FEIS (January 2009)
- Scout Lake Multiple Timber Sale Project FEIS (March 2012)
- Cilly Cliffs Multiple Timber Sale Project FEIS (August 2014)
- Goat Rot Flats Restoration (June 2015)

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					

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		
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 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: N/A

Mitigations: N/A

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 Record of Decision (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 HCP. Approval of the ROD was followed by the issuance of a 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 3 fish species (bull trout, westslope cutthroat trout, and Columbia redband trout).

- The project would adhere to the agreements made in the SVGBCA.

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 School Trust. The estimated return to the trust for the proposed harvest is $7,500.00 based on an estimated harvest of 100 thousand board feet of sawlogs (750 tons) with a stumpage value of $10.00 per ton and 10,375 tons of non-sawlogs (pulp and post and pole) with a weighted stumpage value of $6.58 per ton and an estimated value of $68,236. 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. An estimated $2,513.00 would be generated from Forest Improvement fees collected at a rate of $3.35/ton.

Mechanical and/or hand pre-commercial thinning and slashing would cost an estimated $64,965.00 based on a cost of $545.00/acre.

A matching Western Pine Beetle grant would pay half of the cost pre-commercial thinning, and slashing for a total grant funding of $32,485.50.

The estimated cost to the DNRC Forest Improvement account for the entire project implementation would be $32,482.50 or $277.63 per acre.

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: Neil Young, Karen Goode, Leah Breidinger, Tony Nelson
Title: Forester, Forester, Wildlife Biologist, Hydrologist
Date: June 25, 2015

Finding

Alternative Selected

Two alternatives are present and fully analyzed in the CEA:

- The No-Action Alternative includes existing activities, but does not include the commercial harvesting of 11,127 tons of lodgepole pine, western larch, western red cedar, Douglas-fir, Engelmann spruce, and grand fir. It would also not include mechanical thinning or slashing of submerchantable trees.

- The Action Alternative includes the commercial harvesting of approximately 112 MBF of which would generate revenue for the Common Schools Trust. Mechanical thinning (precommercial and commercial) of lodgepole pine, western larch, western red cedar, Douglas-fir, Engelmann spruce, and grand fir would promote future growth and vigor, and reduce the threat of disease infection or insect infestation of residual trees. Slash piling and burning would reduce fire hazard of activity fuels created from the commercial harvesting, thinning, and slashing.

I have reviewed the correspondence from the public and information presented in the CEA. I have selected the Action Alternative without additional modifications. I feel the Action Alternative best meets the purpose and need for action for the following reasons:

- The selected Action Alternative meets the goals and objectives listed in this CEA.

- The analysis of identified issues did not reveal information to persuade me to select the No-Action Alternative.

- The project area is located on state-managed lands that are principally valuable for the timber that is on them (*77-1-402 MCA*). DNRC manages these lands according to the standards adopted by the Administrative Rules for Forest Management (*ARM 36.11.401* through *450*) and the philosophy within the SFLMP, which states:

  > *Our premise is that the best way to produce long-term income for the trust is to manage intensively for <u>healthy</u> and biologically diverse forests…in the future; timber management will continue to be our primary source of revenue and our primary tool for achieving biodiversity objectives.*

- The Action Alternative meets all requirements of the Administrative Rules for Forest Management (*ARM 36.11.401* through *450*), the Montana DNRC Forested State Trust Lands Habitat Conservation Plan, Multi-resource Management Plan for the North Swan Conservation Easement, and the SVGBCA, in that, impacts are minimal, mitigated, and minor in scope.

- The Action Alternative provides an important mechanism to manage intensively for a healthy and biologically diverse forest in a way that harvests dead, dying, or damaged timber before a substantial value loss occurs, while limiting environmental impacts.

As mandated by State statute (*77-5-222 MCA*), the Action Alternative will contribute to DNRC's sustained yield.

Significance of Potential Impacts

I find that the Action Alternative will not have significant impacts on the human environment for the following reasons:

- The Action Alternative conforms to the management philosophies of DNRC and is in compliance with existing laws, rules, policies, easement requirements, and standards applicable to this type of proposed action.
- The proposed project remains within operating windows allowed under the SVGBCA for the Piper Creek Subunit.
- DNRC will not be precluded from analyzing future actions on state trust lands.

The Action Alternative is similar to past projects on state trust lands using common practices in the industry and activities are not being conducted on unique or fragile sites.

Need for Further Environmental Analysis

Based on the following, I find that a more detailed EA or an EIS does not need to be prepared:

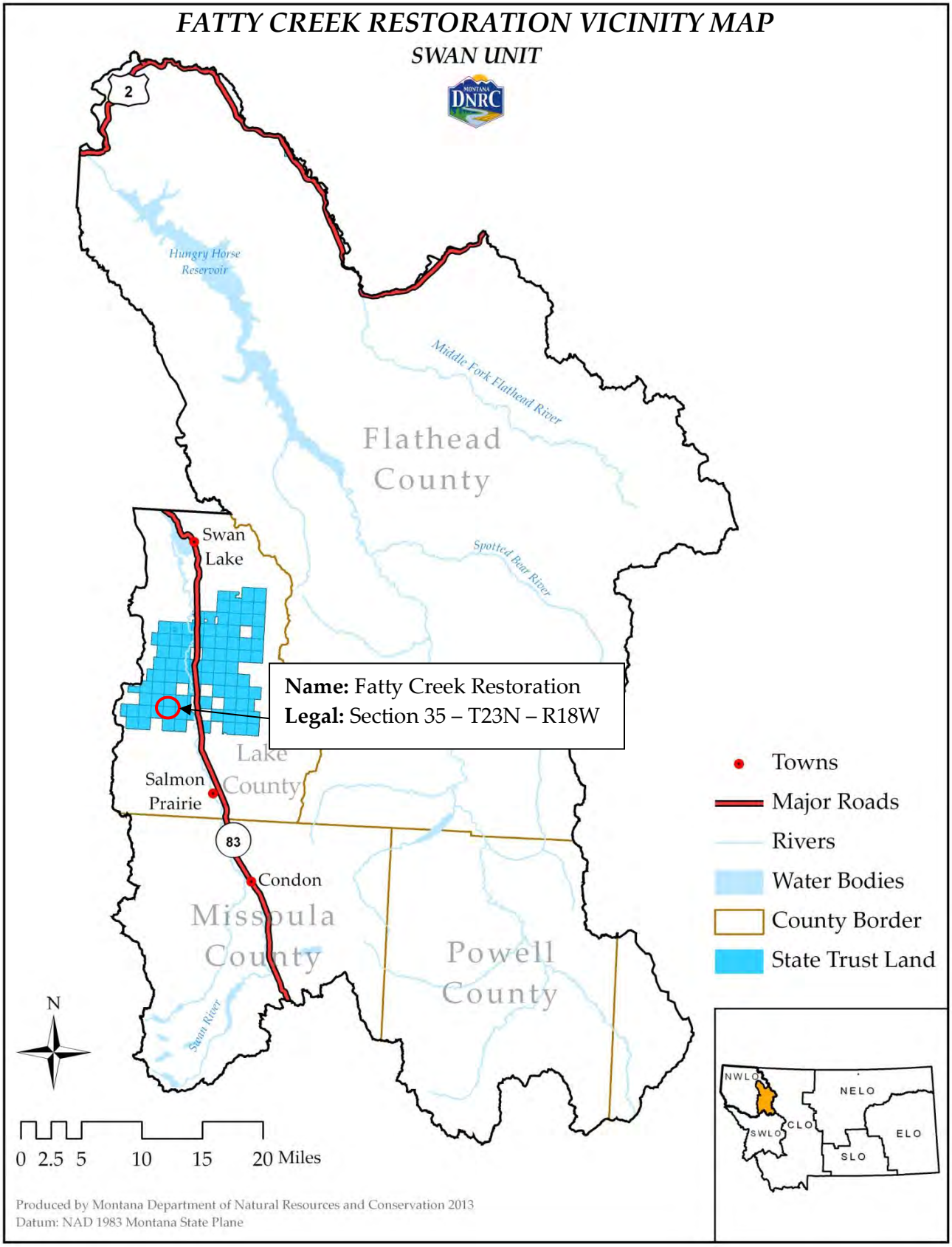
- The CEA adequately addressed the issues identified during project development and has displayed the information needed to make a decision.
- Evaluation of the potential impacts of the proposed Fatty Creek Restoration Project indicates that no significant impacts would occur.

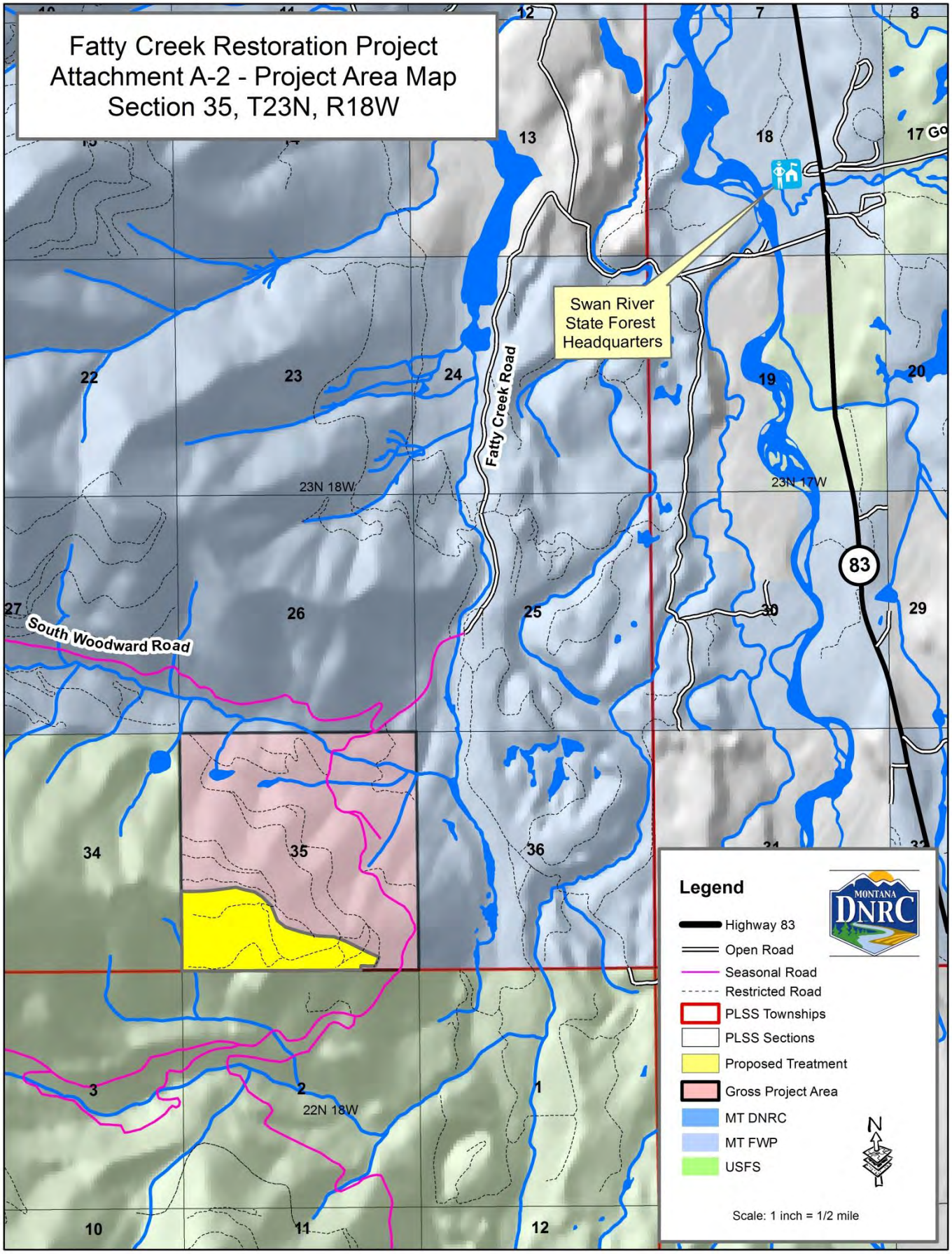
The ID Team provided adequate opportunities for public review and comment. Public concerns were incorporated into the project design and the analysis of impacts as displayed on page 3: *Scoping*.

	EIS		More Detailed EA	X	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Jason Parke
Title: Forest Management Supervisor
Date: June 25, 2015
Signature: /s/ Jason Parke


FATTY CREEK RESTORATION VICINITY MAP
SWAN UNIT
MONTANA DNRC
2
Hungry Horse Reservoir
Middle Fork Flathead River
Flathead County
Spotted Bear River
Swan Lake
Name: Fatty Creek Restoration
Legal: Section 35 – T23N – R18W
Lake County
Salmon Prairie
83
Condon
Missoula County
Powell County
Swan River
N
0 2.5 5 10 15 20 Miles
Towns
Major Roads
Rivers
Water Bodies
County Border
State Trust Land
NWLO
NELO
CLO
SWLO
ELO
SLO
Produced by Montana Department of Natural Resources and Conservation 2013
Datum: NAD 1983 Montana State Plane


Fatty Creek Restoration Project
Attachment A-2 - Project Area Map
Section 35, T23N, R18W
Swan River
State Forest
Headquarters
Fatty Creek Road
South Woodward Road
23N 18W
23N 17W
22N 18W
83
Legend
Highway 83
Open Road
Seasonal Road
Restricted Road
PLSS Townships
PLSS Sections
Proposed Treatment
Gross Project Area
MT DNRC
MT FWP
USFS
N
Scale: 1 inch = 1/2 mile