WHITEFISH TRAIL PHASE III: SWIFT CREEK

CHECKLIST ENVIRONMENTAL ASSESSMENT

Montana Department of Natural Resources & Conservation
Northwestern Land Office - Stillwater Unit
September 2012

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CHECKLIST ENVIRONMENTAL ASSESSMENT (EA)

Project Name:	The Whitefish Trail – Phase III, Swift Creek
Proposed Implementation Date:	Fall 2012
Proponent:	City of Whitefish
Location:	The Swift Creek subarea, more specifically described as SW ¼ Section 29, NE ¼ Section 31, Section 32, T32N, R22W.
County:	Flathead

I. TYPE AND PURPOSE OF ACTION

The proponent, the City of Whitefish, acting in conjunction with Whitefish Legacy Partners (WLP), has requested the Montana Department of Natural Resources and Conservation (DNRC) to grant authorization for construction and operation of Phase III of The Whitefish Trail (WT). The WT project is an amenity identified in the previously-approved Whitefish Neighborhood Plan (WNP). Through that plan, DNRC agreed to allow a window of time within which WT proponents may initiate trail development and arrange corresponding compensation to the trust that will be due as the WT project is located on trust lands.

Montana Environmental Policy Act (MEPA) review was previously conducted on the WT project encompassing five trailheads and 14 ½ miles of trail in the Skyles Lake, Lion Mountain, and Beaver Lake areas *("Trails Run Through It Phase 1A Environmental Assessment dated 07/17/09", "The Whitefish Trail – Phase II, Beaver Lake dated 05/11/2011" and "Goguen Land Exchange EA dated 12/2008")*. A Land Use License (LUL) was subsequently granted to the City of Whitefish for the initial WT construction and maintenance.

DNRC is now conducting an additional MEPA review process specific to Phase III of the WT project which is limited to the specific trail segments as identified on Exhibit A. Granting the proposed authorization, which would require an amendment to the existing LUL, would meet the time frame and requirements of the WNP process, and would permit the proponent to construct and maintain a non-motorized recreation trail complex identified as "Phase III," and also provide for the day-to-day operation of that proposed trail amenity. The proposed project area is located on state trust lands in the Swift Creek subarea, more specifically described as SW ¼ Section 29, NE ¼ Section 31, Section 32, T32N, R22W.

The lands involved in this proposed project are held by the State of Montana in trust for ACB (Montana State, University 2nd grant), ACI (Montana State University, Morrill), and SM (School of Mines) per the 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)*.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

Public involvement for the original WT Plan (formerly called "The Trail Runs Through It" master plan) encompassed numerous public comment opportunities, beginning in May of 2003 when the DNRC approached the City of Whitefish to prepare a Neighborhood Plan for state trust lands near Whitefish. Local citizens petitioned the State Board of Land Commissioners (Land Board) to charter a committee comprised of Whitefish citizens working in collaboration with the DNRC to develop the Whitefish Neighborhood Plan (WNP) for the purpose of representing the needs and values of the community. The Whitefish school trust lands advisory committee was established and completed the WNP in October, 2004. Included in the implementation phase of the plan is the establishment of a recreation trail that provides public access near Whitefish Lake and the city of Whitefish.

Since that time, a planning committee for the project developed the WT Master Plan. Beginning in January, 2006, the planning committee met twice monthly through August 2006, and used the following techniques to gather public input and develop the trail plan: public meeting (130 in attendance); on-line survey (260 respondents); press releases; newspaper articles; radio and television coverage; monthly e-newsletter to 300 addresses; all-day design workshop; and field trips and tours. This plan was unveiled to the public at a public meeting on August 30, 2005. Public comments generated from that meeting were overwhelmingly positive.

An informational report was presented to the Montana Land Board at their September, 2006 meeting. Since 2006, numerous meetings and public gatherings have been held pertaining to the WT project. During the 200809 period, Whitefish Legacy Partners sponsored its own WT-related Open Houses on October 14, 2008 and May 5, 2009 held in the City Council chambers at the Whitefish City Hall.

Additionally, opportunities for public comment occurred during the MEPA process specific to Phase 1A and Phase II of the WT which included: letters requesting comment from neighboring landowners; interested parties and agencies; legal advertisements to local papers; and, an open house held on June 16, 2009. For MEPA requirements specific to Phase III, Swift Creek, the following opportunities for public comment occurred: Letters requesting comment from neighboring landowners, interested parties, and agencies were circulated on March 29, 2012. Additionally, legal advertisements for a "Request for Comments" were placed in the April 4, 2012 issue of the *Whitefish Pilot.* Approximately 9 written, verbal, and email comments were subsequently logged.

Issues Analyzed in Further Detail and Issues Eliminated from Further Analysis with EA Citations and/or Response

Issues/Comments Received	Where Addressed in the EA	Additional Information
Much of the King Bear Road system is on private land. Stoltze Land & Lumber Co. would not be in favor of the trail connecting into the King Bear Road where users would be inadvertently directed to private land. There is currently no easement on Stoltze land for a trail or for public use.	N/A	This portion of trail from the original proposal has been dropped from the current, analyzed proposal.
The Whitefish Lake gravel pit has a high weed infestation.	7. Vegetation cover, quantity and quality	
What, if any, restrictions would be placed on early spring activities and use the trail corridor to protect spring grizzly bear habitat?	9. Unique, endangered, fragile or limited environmental resources: Exhibit D	
Would food storage requirements be enforced in this area as outlined in the Habitat Conservation Plan (HCP)?	9. Unique, endangered, fragile or limited environmental resources: Exhibit D	Most of the project area lies outside the HCP although a small portion of the trail is within the boundaries of the HCP; however, recreation is not an HCP-covered activity.
How would miles of trail be considered with respect to HCP? Would trail miles affect the road miles allowed for this area?	N/A	Trail miles are not considered with respect to HCP and would not affect the road miles allowed for the area.
What mitigations would be implemented to reduce the potential for wildland fire ignition from increased public use? Who provides liability insurance and would be responsible for suppression costs and damage costs?	18. Demand for government services	
What are the proposed sanitation facilities? Who pays for construction and ongoing maintenance?	3. Alternatives considered	
Established trails have a negative effect on the economics of timber management as it relates to accommodations that are made to protect trail infrastructure and "forest aesthetics" around established recreation areas. What is the strategy to compensate the Trusts from lost revenue resulting from these accommodations?	24. Other appropriate social and economic circumstances	

What is the fee structure for the use of the trail system? Is the existing State lands license sufficient or will an additional membership in a Whitefish Trail program be required?	24. Other appropriate social and economic circumstances	Under the terms of the existing LUL, the WT must pay $200 per mile of trail per year, and an escalating minimum fee that grows to $9,000 per year by Year Four of trail operations along with the trailhead (calculated at approximately $0.016357 per square foot) per year. Currently, there is no associated cost to users of the trail.
How will the proposed trail affect historical snowmobile access out of Whitefish Lake Pit? Opposed to any action that would limit or eliminate this historic access point for snowmobiling.	20. Access to and quality of recreational and wilderness activities	
This area is a popular hunting location. Make provisions for continued historic hunting use.	20. Access to and quality of recreational and wilderness activities	

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Montana Department of Fish, Wildlife and Parks (FWP) has jurisdiction over the management of wildlife in the project area.

Montana Department of Environmental Quality (DEQ) has jurisdiction over open cut mining and reclamation of gravel pits in the project area.

Permits are also required from the Flathead County Environmental Health Department to authorize the installation of the proposed vault toilet.

3. ALTERNATIVES CONSIDERED:

Alternative A (No-Action Alternative): Under the No-Action Alternative, no activity pertaining to Phase III would be undertaken. No related trail would be constructed and no parking lots would be built; sections of the proposed trail corridor that are not located on existing roadbed would remain as productive timber-harvest land. Compliance with the goals of the WT Master Plan project as laid out in the WNP would not be achieved.

Alternative B (Action Alternative): The Whitefish Trail - Phase III, Swift Creek project would be constructed to International Mountain Biking Association (IMBA) standards and operated as a mixed-use recreational trail as proposed by the proponent. The project would consist of constructing approximately 3½ miles of new trail which includes trail construction on approximately 1.2 miles of existing roadbed. A main trailhead would be built at an existing gravel pit. Widening of the existing entrance road would be necessary to accommodate two-way traffic. The main trailhead could provide access to additional trail loops in the future as additional land use planning and trail expansion proposals take place. Amenities to the project would include both directional and interpretive signing along the trail as well as guardrails, kiosk, vaulted toilet and a rock wall armored ramp for ADA access at the trailhead. The planning and construction of the proposed trail system are being funded by earmarked donations through the City of Whitefish. The City of Whitefish (licensee) would be ultimately responsible for ongoing maintenance of the amenities.

Approximately 19,880 feet (3.5 miles) of proposed trail would be constructed (with these respective areas being removed from timber production), as well as a parking area (0.53 acres) and sanitation facilities. An approximately 48” wide ADA accessible trail would be centered on a trail corridor approximately a ½ mile long and generally 10’ wide. An approximately 39” wide trail would be centered on a trail corridor approximately 3 miles long and generally 10’ wide, but interspersed with wider trail “bulb-outs” placed approximately every thousand feet, as well as some additional intermittent width as necessary to accommodate the initial trail construction on steeper slopes. Varying portions of this trail corridor would also be removed from timber production. Some thinning of sub-merchantable (brush and small diameter) timber may occur up to 50’ on either side of the trail, to DNRC-designated forest-management standards. Compliance with the goals of the WT Master Plan project as described in the Whitefish Neighborhood Plan would be achieved.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:
Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

For documentary Geology and Soils analysis of both the No-Action Alternative and Action Alternative, and proposed mitigations, please see Exhibit B.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:
Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

For documentation on the effects of both the No-Action and Action Alternative on Water Quality, please see Exhibit C.

6. AIR QUALITY:
What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

No-Action Alternative: No measurable direct, indirect, or cumulative impacts to air quality are anticipated.

Action Alternative: Direct, indirect, and cumulative impacts related to the initial trail and parking lot construction are expected to be minor and temporary, with minor particulate being released during corresponding periods of soil disturbance. Once the trail is completed, traffic on the trail and associated parking lot would increase intermittently and seasonally over time as public awareness and use of the WT system increases. Also, as other phases of the WT are built out, the cumulative amount of trail use would be dispersed over the outlying segments of trail.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

Existing Condition:

The corridor of the area where trail work is proposed is characterized by densely stocked forestland. Much of the forest consists of mature, old growth stands dominated by Douglas-fir and Western larch. These old growth stands are showing signs of declining health through Douglas-fir bark beetle, Armillaria root rot, and reduced vigor (dying and thinning primarily due to spruce budworm) in the foliage. The western larch has dwarf mistletoe present in most of the stands.

The topography of the area ranges from riparian areas to steep well-drained southwestern aspects located on the lower slopes of the Whitefish Range. The forest productivity is rated high. Areas with shallower soils or drier south aspects commonly contain Douglas fir, western larch and occasionally ponderosa pine in the forest canopy. The moister, more productive sites contain species such as Douglas-fir, Western larch, grand fir, subalpine fir, Engelmann Spruce and several hardwoods. Common species of ground cover include wild sarsaparilla, twinflower, sweet scented bedstraw and queen cup beadlily.

Past disturbance in the area includes an active history of timber harvesting, wildfires, and substantial dispersed recreational use. Noxious weeds in the area include spotted knapweed, oxeye daisy, orange and yellow hawkweed. Most weeds occur in small spotty populations in the project area; however, a large infestation of noxious weeds exists in the Whitefish Lake gravel pit.

Direct and Indirect Effects to Vegetation

No-Action Alternative: With the No-Action Alternative, no new trail work would be authorized. No additional forest land would be taken out of timber production. Stands currently meeting DNRC's old-growth definition would become more decadent with heavier stocking levels and an increased loading of down woody debris and wildfire hazards. Shade-tolerant species would increase in stands and, potentially, more snags would eventually occupy the stands. The existing unauthorized trails in the area would likely continue to be used and a moderate increase in use over time may occur consistent with the area's population growth. Current uses of the area would continue with the potential of increased recreation in the future. The potential for the spread of noxious weeds would remain, and may increase over time with increased recreational use. The large infestation of weeds that exists in the pit would be chemically treated this fall with an existing weed spraying contract that DNRC has with Flathead County thus lowering the weed population in the pit.

Action Alternative B: With the Action Alternative, activities such as pruning trees, removing downfall and hazardous trees, and clearing the trail tread of ground cover and other small areas adjacent to the trail that would be used for signs and benches would directly affect vegetation in these areas. The effect to vegetation would occur on a narrow, confined area and the overall vegetation in the general area would not be affected. The exposed areas would have a greater risk of weed infestation. Authorization of the proposed trail would remove 4.2 acres from timber production and, over time, possibly substantially increase the recreational use of the area. Consequently, there is a risk that more unauthorized trails could be constructed, which would spread more noxious weeds and remove additional acreage from timber production. Potential effects to vegetation include increased opportunity for weed spread. Abiding by the Montana County Noxious Weed Management Act, Mont. Code Ann., 7-22-2101, *et seq.* would be required. DNRC would approve method of control with the minimum requirement being a spring treatment of weeds in the trail corridors during the rosette stage by a certified applicator.

Cumulative Effects to Vegetation

Cumulative Effects of the No-Action Alternative:
Ongoing increased dispersed recreation, past harvesting and road construction in the area have resulted in impacts. These impacts include additional weed infestations and removal of forest acreage to become part of a road system. Current timber sales *(Beaver/Swift/Skyles Timber Sale Project EA)* and permits are planned in the area of the proposed trail, and have been designed by DNRC to have a long-term positive effect on forest growth, vigor, and desired species mix. Additional areas of exposed soil would be created by these projects and would increase the risk of the spread and establishment of noxious weeds. Increased weed management is often implemented with timber sale projects, greatly offsetting the effect, or providing a net benefit.

Cumulative Effects of the Action Alternative:
Potential cumulative effects to vegetation include increased soil area exposed to weed infestation as the area would receive additional public access and use under recreation management.

Another effect related to the construction of WT is likely to be an increase in the cost and time of managing current and future timber sales in the area, due to increased complications of arranging logging activities around a recreational corridor. Past harvesting and road construction in the area have impacted vegetation by allowing additional weed infestations and by removing some acreage from the forest which became part of a road system. Current timber sales *(Beaver/Swift/Skyles Timber Sale Project EA)* and permits are planned in the area of the proposed trail, and have been designed to have a positive effect on forest growth, vigor, and desired species mix. Additional areas of exposed soil would be created by these projects and would increase the risk of the spread and establishment of noxious weeds. Increased weed management is often implemented with timber sale projects, greatly offsetting the effect. Managing the trail system in the area under the Land Use License and WT Operating Plan would lead to identification and reclamation of problem weed areas on trails, as well as increased public information that would provide details on how to use the trail responsibly in order to

reduce the spread of noxious weeds, unauthorized trails, and human-caused fire. With the proposed increase in management, the trail may become more confined and better maintained, therefore mitigating potential negative effects to vegetation.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

For Terrestrial, Avian, and Aquatic Life and Habitats analyses of both the No-Action Alternative and Action Alternative, and proposed mitigations, please see Exhibit D.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of Special Concern. Identify cumulative effects to these species and their habitat.

For Unique, Endangered, Fragile, or Limited Environmental Resources analysis of both the No-Action Alternative and Action Alternative, and proposed mitigations, please see Exhibit D.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

An old sawmill site is located near the mid-point of the south margin of Section 31, and the route of a logging railroad is also located on the tract. The old saw mill site as well as the logging railroad lie outside the project area.

No measurable direct, indirect, or cumulative impacts are anticipated for either the No-Action Alternative or Action Alternative. Should historical archeological or cultural features be discovered during construction, a cultural resource specialist would be notified and work in that area would be suspended until the site can be properly evaluated.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

Existing Condition:

Lying within the boundaries of the project area is Smith Lake, a lake historically utilized by locals. It is currently visible from West Smith Lake Road, which lies directly west of Smith Lake on a bluff overlooking the lake. The whole of Smith Lake is visible from this viewpoint. A portion of Swift Creek also lies within the boundaries of the project area. The only current observable location of Swift Creek near the project area is at the Delray Road bridge location that crosses Swift Creek.

No-Action Alternative: No measurable direct, indirect, or cumulative impacts to aesthetics are anticipated.

Action Alternative: The proposed trail is anticipated to increase access to positive aesthetic opportunities and scenic locations. A portion of the proposed trail would run adjacent to the southwest shoreline of Smith Lake on a bluff overlooking the lake. Two scenic viewpoints overlooking Swift Creek would also be constructed. Due to the trail layout and location, the trail may be visible to drivers traveling the Lower Whitefish Road in a few specific locations; however, no measurable effect is anticipated in the area's view shed.

A parking area (0.5 acres) and sanitation facilities would be constructed at the current Whitefish Lake gravel pit location when entering state land from Delray Road. The parking area, associated kiosk with signage and vaulted toilet would not be visible to those traveling Delray Road.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

No measurable direct, indirect, or cumulative impacts on resources of land, water, air or energy are anticipated with either the No-Action Alternative or Action Alternative.

13. 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.

- February 2, 2009 Decision Memo, USDA/Forest Service for "A Trail Runs Through It Project," Flathead National Forest, Tally Lake Ranger District.
- April 2009, Beaver/Swift/Skyles Timber Sale Environmental Assessment.
- July 17, 2009 Checklist EA for the Trail Runs Through It Phase 1A.
- April 27, 2010, Checklist EA for the Smith Lake Dam Reconstruction.
- September 30, 2010, Checklist EA for Point of Pines Inc. Septic and Right-of-Way Easement Project
- May 11, 2011, Checklist EA for the Whitefish Trail – Phase II, Beaver Lake.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

Existing Condition:
The main access road for this project is East Lakeshore Drive. It is a narrow, winding, paved county road that lies adjacent to the east shore of Whitefish Lake. This road is used to access a number of single-family residences; numerous recreationalists also use this road to access the south end of Stillwater State Forest. The adjacent road that accesses the proposed trailhead is Delray Road.

The state trust lands accessed by East Lakeshore Drive have traditionally been a high-use recreation area, due to close proximity with the City of Whitefish, the lakes and forested property available for recreational pursuits in the Swift Creek and Smith Lake area. Growth in the Flathead Valley has also resulted in substantially-increased use of outdoor recreation locations such as this area. The trust lands in this area are classified Forest Land, and are regularly managed to provide ongoing revenue to the trust beneficiary and to maintain desired forest conditions.

Direct and Indirect Effects to Health and Human Safety

No-Action Alternative: A moderate related increase in use of East Lakeshore Drive may occur over time consistent with the area's population growth.

Action Alternative: As part of this proposal, two scenic viewpoints overlooking Swift Creek would be constructed along the proposed trail system. Both viewpoints are situated on a bluff above Swift Creek. The viewpoints are set back approximately 20 feet from the edge of steep embankments. For user safety, signs would be required to be posted at the viewpoints to inform users to stay on the trail. Large boulders or some other type of barrier would also be required to buffer the edge of the embankment.

Adjacent landowners would experience some adverse effects pertaining to the increased use of East Lakeshore Drive. Increased use of the road might lead to increased violation of road regulations such as speeding and parking.

Direct and indirect effects to health and human safety are expected to be minor.

Cumulative Effects to Health and Human Safety

Current and proposed projects that may affect Health and Human Safety within the cumulative effects analysis area include the Beaver/Swift/Skyles Timber Sale Project. Timber harvesting in the identified areas are slated to occur in conjunction with these projects.

No-Action Alternative: There would be less opportunity for interface between timber harvest operations, and recreationalists in the area using East Lakeshore Drive. Some risks to human health and safety may be reduced given that the area would be signed and restricted during the harvest process, as well as other mitigations being applied to reduce the risk to health and human safety.

Action Alternative: There would be increased opportunity for interface between timber harvest activities and construction of the proposed trail. The area would be signed and restricted during the harvest process, in addition to other mitigation measures that would be applied to reduce the risk to health and human safety; therefore, cumulative effects to health and human safety are expected to be fairly minimal.

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15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

No measurable direct, indirect, or cumulative impacts to industrial, commercial and agricultural activities are anticipated with either the No-Action Alternative or Action Alternative.

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16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

No measurable direct, indirect, or cumulative impacts are anticipated for the No-Action Alternative.

It is anticipated that limited seasonal construction jobs would be created by the implementation of the Action Alternative.

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17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

No measurable direct, indirect, or cumulative impacts to local and state tax base and revenues are anticipated with either the No-Action Alternative or the Action Alternative.

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18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

Existing Condition:

There are numerous undeveloped sites that have been utilized for target shooting. These sites have been a management issue in past years due to littering and resource damage problems. Signs have been posted in past years stating that the area has a littering problem and that continued abuse of the area could result in the site being closed. Earlier in 2012, three site locations receiving the most abuse were signed “closed to target practice”; however, the sites continue to receive unlawful use.

Near the north end of Whitefish Lake is an unauthorized disc golf course. The intense use associated with this activity has created an increased demand in management of the area as it relates to litter, unauthorized improvements and occasional fires from discarded cigarettes.

Direct, Indirect and Cumulative Effects on Recreational Activities

No-Action Alternative:

Currently, the No-Action Alternative requires some law enforcement efforts when unauthorized use or violations occur within the project area. The three target shooting sites would continue to be enforced as "closed" as well as ongoing management of the unauthorized disc golf site. Although it would be difficult to measure, it is anticipated that unauthorized use of the area is likely to increase with population growth, as it is located in an urban interface area.

Action Alternative: If the trail expansion is built, there would be a higher level of commitment from law enforcement to enforce the site closures to ensure safety to users of the trail. An increased presence of law-abiding public users may curtail the opportunities for violators. Implementation of the WT Operating Plan, and the trail monitoring and publication education proposed therein, may also reduce the number of violations and subsequent law enforcement response required to the area.

The potential exists for wildland fires igniting from increased public use of the trail and for additional needs in fire protection. Signage would be installed at trailheads and along the trail as a mitigation to inform users about trail-use safety. Additional mitigations outlined in the existing license include;

- Licensee must obtain and carry for the duration of this License comprehensive general liability insurance coverage with minimum limits of $1,000,000 for each claim or each occurrence.
- Licensee agrees to take all reasonable precautions to prevent and suppress wildland fires. Licensee accepts full responsibility, financial and otherwise, for fires resulting from trail maintenance activities that are authorized by Licensee. Licensee also agrees to assume responsibility, financial and otherwise, for fires caused by Licensee's negligent or willful misconduct.

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19. 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.

Whitefish Neighborhood Plan (adopted 2006):

The Whitefish Neighborhood Plan was adopted by the DNRC in 2006. The same plan was adopted by the City of Whitefish and Flathead County as the growth policy for their respective jurisdictional areas. Implementation Strategy 2.1 of the Whitefish Neighborhood Plan is to "Create a Regional Loop Trail." The proposal is anticipated to address the second phase of a growing trail system that would eventually establish a longer-term land use authorization.

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20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

Existing Condition: The Swift Creek project area, which contains Smith Lake, Swift Creek, mature forests, old and new logging roads and skid trails, is a prime area for recreation. The Lower Whitefish Road is a main access connection between Upper Whitefish Lake and Whitefish Lake, as well as a route to Werner Peak Lookout, Red Meadow Lake, and the North Fork of the Flathead River Basin. The primary dispersed recreational uses include snowmobile riding, Nordic skiing, hunting, fishing, hiking, berry picking, bicycling, disc golf, target shooting and camping. With the exception of the licensed Flathead Snowmobile Association's trailhead, the project area has no developed recreation sites. Some undeveloped sites do exist along roads and near Smith Lake throughout the project area. These sites usually consist of rock fire rings and/or small openings for tents.

The Flathead Snowmobile Association's trailhead and parking area is located in the Swift Creek project area at the Whitefish Lake gravel pit. This trailhead is used extensively for access to the groomed snowmobile trails on the forest lands by residents and licensed commercial snowmobile operations. There is a large parking area that

already accommodates trucks and snowmobile trailers. A short trail connects the trailhead to the Lower Whitefish Road.

A popular activity near the north end of Whitefish Lake is disc golf. Although DNRC was aware and had allowed the activity to occur on State Land, no structures or permanent trails between holes were ever authorized.. The intense use associated with this activity is leaving wide swaths of trampled vegetation, compacted soils, litter and occasional fires from discarded cigarettes. Improvements or organized events such as this would normally fall under a *Special Recreation Use License* or *Land Use License*. This recreational activity is not supported by a license; therefore, any improvements or organized events associated with this activity is an unauthorized use of trust land. A proponent made an effort to formalize the interests of disc golf a few years ago, however, the proponent received little support from the public for this endeavor at that time. Stillwater State Forest is continuing discussion on a long-term solution that can be developed for this activity through a *License*.

Another popular activity in the project area is target shooting. There are numerous undeveloped sites that have been utilized for target shooting. These sites have been a management issue in past years due to littering and resource damage problems. Signs have been posted in past years stating that the area has a littering problem and that continued abuse of the area could result in the site being closed. Earlier in 2012, three site locations receiving the most abuse were signed "closed to target practice"; however, the sites continue to receive unlawful use.

Direct, Indirect and Cumulative Effects on Recreational Activities

No-Action Alternative:
A moderate increase in dispersed recreational use over time would occur, consistent with the area's population growth. It is probable that there could be a corresponding risk of increased noxious weed spread, littering and garbage problems, diminished privacy to adjacent landowners, human-caused fires, and trespass/vandalism to trust land and neighboring property. The existing unauthorized trails in the area would likely continue to be used. The three target shooting sites would continue to be enforced as "closed".

Action Alternative:
The Whitefish Trail and the Flathead Snowmobile Association (FSA) would share the Whitefish Lake gravel pit site during winter months. The proposed development of the WT trailhead has amenities situated at the southwest half of the pit roughly encompassing half an acre. This would leave approximately the northeast half of the pit undeveloped for snowmobile trailhead parking as it has been used traditionally. Some shared use of the proposed WT amenities would be expected between WT and FSA users. The short trail connecting the snowmobile trailhead to Lower Whitefish Road would remain undisturbed with this proposal and would continue to be utilized by snowmobiles accessing the groomed trail on the Lower Whitefish Road. Both the FSA and WT existing licenses require winter plowing of trailheads. The Whitefish Lake gravel pit would require an agreement over shared plowing between the licensed parties. There could be minor conflicts between different user groups sharing a common site for separate trails/trailheads, however; the proposed mitigations below should offset many of the adverse effects.

The proposed WT trail does not go through or adjacent to the existing, unauthorized disc golf area; therefore, no direct, indirect or cumulative effects are anticipated. The WT proposed trails would run adjacent to the three closed target area sites that are receiving unlawful use. There would be a safety concern to users of the trail if the unlawful target practice continues. If the trail expansion is built, there would be a higher level of commitment from law enforcement to enforce the site closures to ensure safety to users of the trail. Additional signage would be posted at the target site locations as well, notifying the public of the close proximity of the trail.

The proposed WT trail would traverse through highly popular hunting areas. There could be a safety concern to users of the trail during prime hunting seasons. Additional signage would be posted at all DNRC signboards in the project area notifying the public of the close proximity of the trail to potential hunting sites. Signage would also be required by the licensee to be posted at the WT trailhead notifying all users of the trail to take precautions during hunting seasons and wear appropriate "hunter's blaze orange" attire.

Adjacent landowners and others may experience adverse effects pertaining to the proposed trail construction, and the maintenance, use, and associated activities. Possible adverse effects include; littering and garbage problems, diminished privacy, weed introduction, and human-caused fires. If the trail is not monitored, policed, and maintained, unauthorized use and violations in the area could increase. While a formal trail system would

increase the overall use of the area, active management of the trail use is expected to increase the access to, and quality of, recreational use.

Mitigation measures were developed to offset many of the adverse effects and include:

- The proposed trail route has been specifically engineered and professionally designed to minimize potential mixed-use conflicts, minimize illegal motorized trail use, and provide for safe recreational use. Trail design is consistent with the industry standards developed by IMBA for sustainable trail design and multi-use or shared-use systems, and encompasses design features such as
    - reduced grade percentages to facilitate adequate stopping for bikers,
    - avoiding blind corners,
    - thinning trail corridor vegetation to maintain lines of sight so various users can see each other,
    - providing for multiple "pull-outs" along the trail for users to pass one another or stop and rest along the trail.
- Signage would be installed at trailheads and along the trail to inform users about trail-use safety, procedures, etiquette, and other pertinent information.
- A volunteer force would be organized by the WT Operations Committee/WT coordinator and would provide for both parking lot steward responsibilities as well as a bike patrol. The parking lot steward would assist the project coordinator in maintaining trailheads and parking areas, including picking up garbage, checking restrooms for cleanliness and supplies, providing information to visitors, and reporting vandalism. The bike patrol would ride the trail individually or in teams, providing education and assistance to other trail users. Although the patrol would not provide law enforcement, it would provide visitor assistance, monitor illegal trail activity such as motorized use or unauthorized trail building, and would make note of trail hazards that require maintenance or mitigation.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No measurable impact to density and distribution of population and housing is anticipated under either the No-Action Alternative or the Action Alternative.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No measurable disruption of social structures is anticipated as a result of either the No-Action Alternative or the Action Alternative.

The Action Alternative would formalize the use of an area traditionally used by the community for recreation.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

No impact to cultural uniqueness and diversity is anticipated as a result of either the No-Action Alternative or the Action Alternative.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

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 estimate of return for timber production is determined by calculating the annual sustained yield per acre within the Whitefish Neighborhood Plan Beaver/Swift subunit, multiplying that value by the 5-year average stumpage rate, and then multiplying that value by the acres within the Zone boundaries. The estimate of return for the proposed trail would be the trail fee-per-mile charge. The estimate of return for the proposed trailhead is based on land values obtained during the issuance of the Land Use License currently in effect. This economic analysis is based on Swift Creek

segment of trail and associated trailheads and does not include the revenue generated over the entire Land Use License currently if in effect.

Existing Condition: DNRC has four classifications for state trust surface rights. These classifications are (1) forest, (2) agriculture and grazing, (3) minerals, and (4) real estate. The classifications are based on the lands estimated productivity for highest and best use. The project area is classified forest lands. Currently, classified-forest trust lands in the Beaver/Swift subunit generate average timber revenue of approximately $52.00 per acre, per year. Current DNRC management allows for stacked uses on trust lands. This allows for the multiple incomes to be generated on tracts of land while broadening the portfolio for compensation to trust beneficiaries.

No-Action Alternative

The No-Action Alternative would leave the proposed trail corridor in timber production and potentially produce approximately $52.00 in average annual per-acre return (without incurring increased costs due to trail-based management issues), however, there would be no annual recreation revenue generated on that same property as provided for in the Action Alternative.

Action Alternative

The proposed trail corridor licensing area of the Action Alternative encompasses approximately 4.2 acres. While timber harvest would be authorized to continue in some portions of the trail corridor, the amount of timber harvested within the previously-cleared trail corridor is likely to be negligible. Effectively, up to approximately 4.2 acres may be removed from timber production, totaling an annual decline in timber revenue for the project area at a value of approximately $218.40 per year. Conversely, the recreation revenue generated by the Action Alternative, as outlined in the current Land Use License, would be (at the base fee of $200/mile of trail) at least $700.00 per year, and the trailhead (calculated at approximately $0.016357 per square foot) would be $377.63 for approximately .52 of an acre.

Future timber sales in the project area would likely bear an increased cost (e.g., added restrictions on the timber sale contract in turn increasing the cost to the potential purchaser) due to management issues involved in working around and accommodating recreational trails threading through the sale area. The WT proponents and DNRC, however, are committed to working together to come up with reasonable solutions to reducing these costs. If the timber -related trail accommodations became too costly, there are systems in place that would allow the DNRC to charge the licensee for some of the additional costs. It should be noted however, that historically there are usually higher costs associated with timber sales that are located within urban-interface areas.

EA Checklist Prepared By:	**Name:**	Nicole Stickney	**Date:**	08/28 /2012
	Title:	Special Uses Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

Upon review of The Whitefish Trail – Phase III, Swift Creek Checklist EA, and associated documents, I find the Action Alternative, as proposed, meets the intent of the project objectives as stated in *Section I – Type and Purpose of Action*. The Action Alternative is designed for the construction and operation of Phase III of the Whitefish Trail. The WT project is an amenity identified in the previously approved Whitefish Neighborhood Plan. The trail project is being implemented to provide for a high quality recreational experience for non-motorized use in close proximity to the Whitefish community and another source of revenue from associated School Trust property. The Action Alternative would be implemented in a way that addresses the concerns that were identified with the project, including but not limited to the following:

- **Design:** The trail will be built to meet International Mountain Biking Association (IMBA) standards and operated as a mixed-use recreational trail as proposed by the proponent. The trail is designed to provide adequate drainage to avoid erosion or water quality impacts; control speed; provide signage and

information as needed; and is located to avoid long excessive steep side slope construction and unnecessary travel through riparian areas.

- **Management:** The trail will be operated under a Land Use License that requires an operating plan which is updated annually. The operating plan requires monitoring and maintenance of trail conditions as well as the management of trailheads and associated amenities such as vaulted toilets, kiosks, public information and litter control. Mitigation to protect wildlife is incorporated into the Land Use License the trail will operate under, including but not limited to:

    1. Educating trail users by maintaining signs at the trailheads to inform users of the inherent risks of recreating in an area with large carnivores and to educate recreationists of proper behavior around wildlife.
    2. Provide and maintain bear-resistant garbage containers at trailhead to reduce the risk of attraction or habituation to human activity.
    3. DNRC may instate seasonal trail closures if deemed necessary and may instate temporary closures if conflicts with wildlife occur.

- **Long Term Commitments:** The proponents are committed to long term solutions for weed maintenance and public involvement. The proponents schedule a public trail meeting annually to provide the opportunity for trail users and neighbors to discuss concerns and recommendations. The proponents will be required to be actively involved in providing signs and other public information opportunities to address safety issues associated with target shooting near the Lower Whitefish Road in close proximity to the proposed trail.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

After a review of the project file; scoping documents; project design; this Checklist Environmental Assessment; and, Department policies, standards and guidelines; I find that all of the identified resource management concerns have been fully addressed. Specific project design features and various recommendations of the resource management specialists have been implemented to ensure that this project will fall within the limits of acceptable environmental change. No project activities are being conducted on important fragile or unique sites. In summary, I find that the identified adverse impacts will be controlled, mitigated, or avoided by the design of the project to the extent that the impacts are not significant.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

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

EA Checklist Approved By:	**Name:**	Brian Manning
	Title:	Unit Manager, MT DNRC Stillwater Unit
Signature: /s/ *Brian Manning*		**Date**:9/11/12

Whitefish Trail, Swift Creek proposal

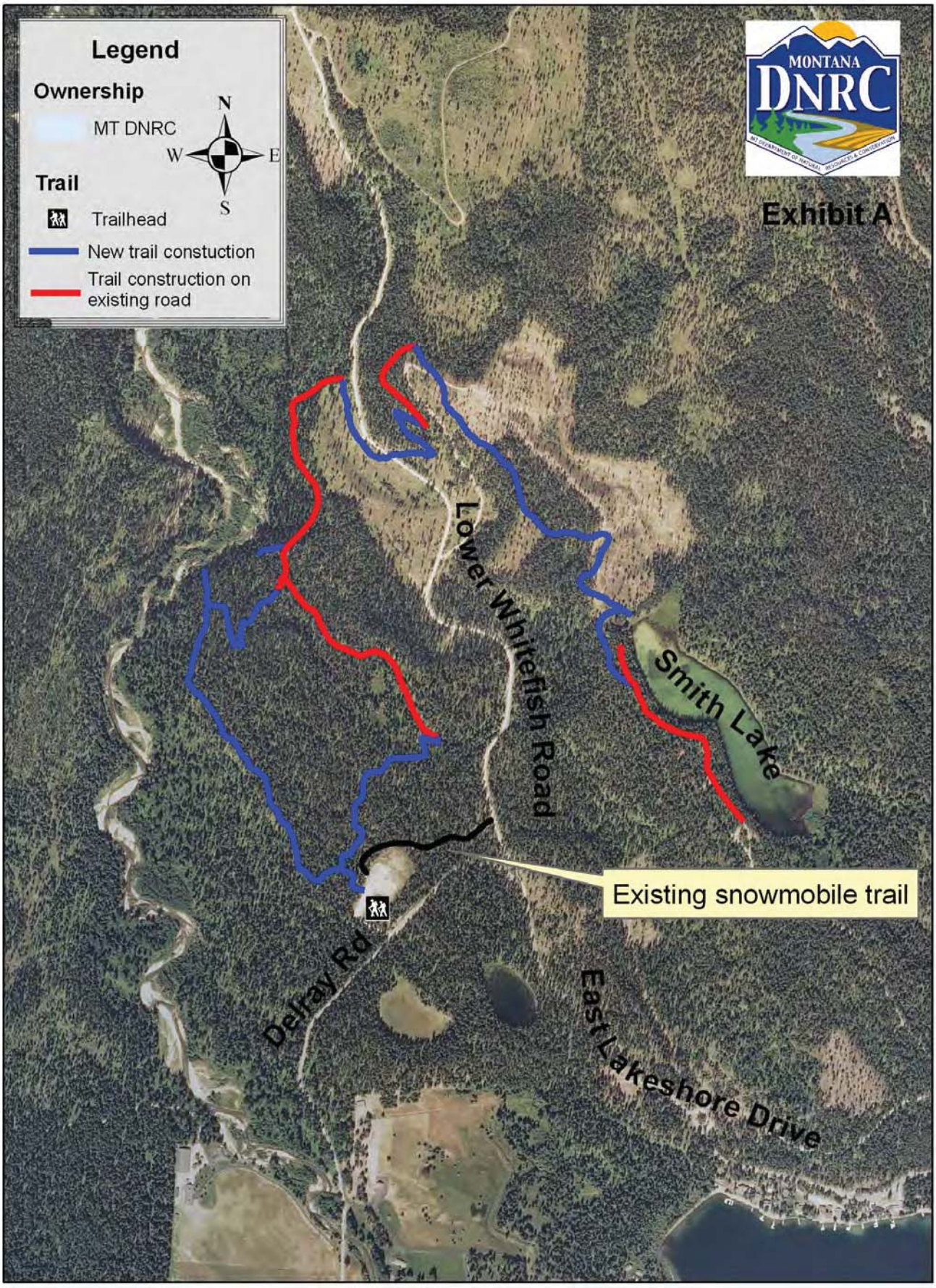

EXHIBIT B:
SOILS ANALYSIS

INTRODUCTION

Project Area and Project Activities
The gross project area includes 964 acres within the Stillwater State Forest. Affected soil map units include glacial kettles and terraces, and glacial outwash. The proposed action alternative would construct approximately 3.5 miles of trails suitable for hiking and/or mountain biking.

Issues and Measurement Criteria
The following issues encompass the specific issues and concerns raised through public comment and scoping of the proposed project.

Soil Erosion
Soil erosion can increase with construction and use of trails by increasing bare soil on trail running surfaces.

Forest Land Removed from Timber Production
Forest land may be removed from timber production due to construction of hiking and/or mountain biking trails. The physical trails and the associated corridor would no longer produce timber.

Analysis Area
Analysis area for direct, indirect and cumulative effects to soil erosion will be land on and adjacent to all proposed trails. Analysis area for forest land removed from timber production will include the gross project area.

Analysis Methods
Analysis methods to assess direct, indirect and cumulative impacts to soil erosion will include soil map unit descriptions and the associated map unit limitations. Analysis area for forest land removed from timber production will include a qualitative assessment of the trail corridor and its potential to produce timber.

EXISTING ENVIRONMENT

Soil Erosion
Existing conditions for soil erosion in the project area are mainly tied to soil map units found in the gross project area. Map units found in the proposed project area include 27-8 and 28-7. Map unit 27-8 is described as glacial till on kettles or terraces with 20-40% slopes. Map unit 28-7 is described as glacial outwash on terraces with 0-20% slopes.

Each of these soil map units are considered well-drained to very well-drained, and are considered to have a low surface erodibility and low landslide potential according to the *Soil Survey of Flathead National Forest Area, Montana* (USDA, 1998). Some isolated sloughing of road fill slopes was identified during field reconnaissance along an existing road proposed for use in the trail system. These areas were well vegetated with trees and brush at the time of field review, and the cause of the sloughing was not apparent.

Forest Land Removed from Timber Production

Existing conditions for forest land removed from timber production were assessed by looking at how many roads and skid trails exist in the proposed project area since these areas are the main loss of timber production. On classified forest land, DNRC strives to maintain soil productivity by limiting soil impacts to 15% or less of an area. Existing roads and skid trails found in the project area were constructed to haul timber during past harvest entries. There are several miles of existing road in the project area that are no longer considered productive timber land. Pace transects of old skid trails revealed approximately 60-75 foot spacing, so less than 15% of harvested acres is in an impacted condition. Knife penetration tests showed compaction is beginning to ameliorate due to frost and root penetration, and most of these skid trails are vegetating in well.

ENVIRONMENTAL EFFECTS

Direct, Indirect and Cumulative Effects of No-Action Alternative

No measurable direct, indirect or cumulative impacts to soil erosion are expected, and no additional ground would be removed from timber production.

Direct, Indirect and Cumulative Effects of Action Alternative

Soil Erosion

Risk of measurable direct, indirect or cumulative impacts to soil erosion from proposed trail construction is expected to be low. Risk would be increased over the existing condition for approximately 2-3 years until bare soil is re-vegetated. All proposed trails would be constructed on well-drained soils. Installation of surface drainage features on all trail surfaces combined with the well-drained nature of the soils would make the risk of soil erosion low. In addition, all cut- and fill-slopes would be re-vegetated with a site-specific grass seed mix to further reduce bare soil erosion.

To further reduce potential adverse impacts to soil erosion, the following mitigation measures are recommended:

- All cut and fill slopes should be constructed at a stable angle
- Side-cast material should be spread at depths that would not inhibit existing vegetation
- No side-cast material is to be placed in a draw

- Bare soils should be seeded within 7 days of activity to stabilize soils and reduce the risk of weed infestation
- Erosion control and surface drainage must be maintained at all times

Forest Land Removed from Timber Production

Direct, indirect and cumulative impacts to forest land removed from timber production are expected to be low. Under the proposed Action Alternative, approximately 4.2 acres of forest land within the gross project area would be removed from timber production along 3.5 miles of proposed trail. The 4.2 acres of proposed trail corridor represents approximately 0.4% of the gross project area. The direct and indirect impacts of this reduction would likely not be measurable within the gross project area. Cumulative impacts to forest land removed from timber production are also not expected to be measurable. The 4.2 acres of additional land with decreased timber production, when added to the existing reductions from past timber harvesting activities would still leave the gross project area with less than 15% in an impacted condition.

EXHIBIT C:
WATERSHED AND HYDROLOGY ANALYSIS

INTRODUCTION

Project Area and Project Activities

The gross project area includes 964 acres within the Stillwater State Forest. Affected watershed is the Brush Creek and the Swift Creek drainage. This watershed includes land managed by the Flathead National Forest, Plum Creek Timber Company, private ownership and the DNRC. The proposed action alternative would construct approximately 3.5 miles of trails suitable for hiking and/or mountain biking.

Issues and Measurement Criteria

The following issues encompass the specific issues and concerns raised through public comment and scoping of the proposed project.

Sediment Delivery

Construction and use of trails can lead to water-quality impacts by increasing the production and delivery of fine sediment to streams. None of the proposed trail use or construction is within 200 feet of a live stream.

Analysis Area

Direct, indirect and cumulative effects to sediment delivery will be reviewed in the gross project area.

Analysis Methods

Analysis methods included field reconnaissance which reviewed all proposed trail locations. A qualitative assessment of sediment delivery potential was conducted based on this reconnaissance.

Risk Assessment Criteria

Where risk is assessed in the sediment delivery analysis, the following definitions apply to the level of risk reported:

- low risk means that impacts are unlikely to result from proposed activities,
- moderate risk means that there is approximately a 50-percent chance of impacts resulting from proposed activities, and
- high risk means that impacts are likely to result from proposed activities.

Where levels or degrees of impacts are assessed in this analysis, the following definitions apply to the degree of impacts reported:

- very low impact means that impacts from proposed activities are unlikely to be measurable or detectable and are not likely to be detrimental to the water resource;
- low impact means that impacts from proposed activities would likely be measurable or detectable, but are not likely to be detrimental to the water resource;
- moderate impact means that impacts from proposed activities would likely be measurable or detectable, and may or may not be detrimental to the water resource;
- high impact means that impacts from proposed activities would likely be measurable or detectable, and are likely to have detrimental impacts to the water resource.

Relevant Agreements, Laws, Plans, Rules, and Regulations

Montana Surface Water-Quality Standards

None of the streams in the proposed project area are currently listed as water-quality-limited waterbodies in the *2012 Montana 303*(*d*) list. Swift Creek is currently listed on the *2012 Montana 303(d)* list, but is listed as fully supporting all beneficial uses.

Montana SMZ Law

There are no features in the proposed project area that meet the definition in *ARM 36.11.312* of a stream.

Forest Management Rules

In 2003, DNRC drafted Administrative Rules for Forest Management. The portion of those rules applicable to watershed and hydrology resources include ARM 36.11.422 through 426. All applicable rules will be implemented if they are relevant to activities proposed with this project.

EXISTING ENVIRONMENT

Introduction

The proposed project lies entirely within the Swift Creek watershed. Precipitation in the gross project area is approximately 25 inches annually.

Sediment Delivery

No sediment delivery was observed in the proposed project area from any existing roads, or in proposed locations of trails. No stream channels were identified along any of the proposed trail routes. There is a pond at the head of Brush Creek in Section 32 of the proposed project area. This pond holds water perennially, is approximately 0.1 acres in surface area, and is not fed by any surface water sources. The proposed trail is approximately 200 feet from this pond.

ENVIRONMENTAL EFFECTS

Direct, Indirect and Cumulative Effects of the No-Action Alternative

No measurable direct, indirect or cumulative impacts to water quality from sediment delivery are expected.

Direct, Indirect and Cumulative Effects of the Action Alternative

No measurable direct, indirect or cumulative impacts to water quality from sediment delivery are expected. Field reconnaissance of all proposed trail locations revealed no stream channels within 200 feet of proposed trail construction. In addition, the only surface water identified near the trail location is a 0.1 acre pond that is approximately 200 feet from any proposed construction activity. This distance from the water, combined with a well-vegetated buffer of grass, forbs, shrubs and trees leave a very low risk of very low impacts from sediment delivery to the pond.

EXHIBIT D:
WILDLIFE ANALYSIS

INTRODUCTION

The wildlife analysis is designed to disclose the existing condition of wildlife resources and the anticipated direct, indirect, and cumulative effects that may result from implementing the No-Action and Action alternatives. The following issue statements were developed from concerns raised by DNRC specialists and public comments received during scoping and will be addressed in the following analysis:

- **Human Access.** The proposed trail construction, maintenance, and use of the trail by recreationists and their pets could increase disturbance to wildlife in the vicinity of the trail, which could displace wildlife.
- **Human-wildlife Conflicts.** The proposed trail construction, maintenance, and use could increase littering, which could attract wildlife species and/or habituate wildlife, creating potential for increased conflicts.
- **Grizzly Bears.** The proposed trail construction, maintenance, and use could reduce visual screening and increase human access, which could adversely affect bears by displacing them from important habitats and/or increase the risk of human-caused bear mortality.
- **Gray Wolves.** The proposed trail construction, maintenance, and use could increase human access and reduce big game winter range habitat quality, which could displace gray wolves from denning and rendezvous sites, increase the risk of wolf-dog conflicts, and reduce prey availability.
- **Big Game.** The proposed trail construction, maintenance, and use could disturb big game species, reducing the quality of winter range habitat.

ANALYSIS AREAS

Direct and Indirect Effects

The direct and indirect effects of the proposed activities on all species/issues were analyzed within the project area (FIGURE W-1 –ANALYSIS AREAS), which consists of 964 acres of DNRC-managed lands in T32N, R22W Sections 29, 31, and 32.

Cumulative Effects

The cumulative effects of the proposed activities on all species/issues were analyzed at a broad surrounding landscape scale that varies according to the issue or wildlife species being discussed. Cumulative effects analysis areas are named according to the size of the area and are summarized in *TABLE W-1 –ANALYSIS AREAS* and *FIGURE W-1 –ANALYSIS AREAS*. Cumulative effects analysis areas include the project area as well as lands managed by other agencies and private landowners. Detailed descriptions of each analysis area are located in the **Existing Condition** section for each issue or species evaluated (e.g., grizzly bears, etc.).

TABLE W-1. ANALYSIS AREAS. *Descriptions of the project area and cumulative effects analysis areas.*

ANALYSIS AREA NAME	DESCRIPTION	TOTAL ACRES	ISSUE(S)/SPECIES ANALYZED
Project Area	DNRC managed lands in Sections 29, 31, and 32, T32N, R22W.	964	Direct & indirect effects for all issues/species
Medium Cumulative Effects Analysis Area	Portions of the Lazy Creek, Swift Creek-Hemlock Creek, and Whitefish Lake Subwatersheds	10,544	Human-wildlife conflicts, human access, gray wolves, big game winter range
Large Cumulative Effects Analysis Area	The Lazy Creek Grizzly Bear Subunit of the Northern Continental Divide Ecosystem and portions of the Lazy Creek, Swift Creek-Hemlock Creek, and Whitefish Lake Subwatersheds.	39,838	Grizzly bears

ANALYSIS METHODS

Analysis methods are based on DNRC State Forest Land Management Rules, which are designed to promote biodiversity. The primary basis for this analysis includes information obtained by: field visits, review of scientific literature, Montana Natural Heritage Program (MNHP) data queries, DNRC Stand Level Inventory (SLI) data analysis, aerial photograph analysis, consultation with professionals, and study of the A Trail Runs Through It Master Plan (*McMahon et al. 2006*), Trail Runs Through It Phase 1A (*DNRC 2009*) and Whitefish Trail – Phase II, Beaver Lake (*DNRC 2011*) Environmental Assessments. The coarse-filter wildlife analysis section includes analyses of the direct, indirect and cumulative effects of the proposed alternatives on old-growth forest, connectivity of mature forest habitats, snags and coarse woody debris, human access and potential for wildlife conflicts. In the fine-filter analysis, individual species of concern are evaluated. These species include wildlife species federally listed under the Endangered Species Act, species listed as sensitive by DNRC, and species managed as big game by Montana Department of Fish Wildlife and Park (DFWP).

Cumulative effects analyses account for known past and current activities, as well as planned future agency actions. Ongoing non-timber sale activities in the cumulative effects analysis areas include:

- DNRC Smith Lake Dam Rehabilitation (ongoing) – Replacement of the concrete spillway to be completed in the fall of 2012.
- Stillwater snowmobiling trails (ongoing) – All snowmobiling trails are located on existing roads and trails. A trailhead is located at the Whitefish Lake gravel pit, which is the proposed site of the new trailhead.

Recent timber sale projects (≤10 years) that could contribute to cumulative effects include:

- DNRC Dog Meadow South Timber Sale (2003) – Approximately 435 harvested acres within the large cumulative effects analysis area.

- DNRC King Bear Timber Sale (2006) – Approximately 44 harvested acres within the medium and large cumulative effects analysis areas.
- DNRC Olney Urban Interface Timber Sale (2009) - Approximately 457 harvested acres within the large cumulative effects analysis area.
- DNRC Beaver Smith Timber Sale (2009) - Approximately 277 harvested acres within the large cumulative effects analysis area.
- DNRC Lupfer #3 Timber Sale (2010) - Approximately 126 harvested acres within the medium cumulative effects analysis area and 203 harvested acres within the large cumulative effects analysis area.
- DNRC SE Stryker Ridge Timber Sale (2010) – Approximately 52 harvested acres within the large cumulative effects analysis area.
- DNRC NE Smith Timber Sale (ongoing) - Approximately 81 harvested acres within the medium and large cumulative effects analysis areas.
- DNRC (proposed) Lazy Swift II Timber Sale – The proposed project would harvest 4-8 MMbf of sawtimber from 850 acres of state trust lands in portions of Sections 19, 30, 31 T32N, R22W. Portions of these harvest units may occur within the project area, medium cumulative effects analysis area, and large cumulative effects analysis area.
- DNRC (proposed) Whitefish Trail Thinning Project – Thinning on 13.4 acres to create spaces between the crowns of large diameter overstory trees and remove diseased, damaged, and poor growing stock. Located within the project area.

Changes to forest structure resulting from all DNRC projects, with the exception of proposed projects and the ongoing DNRC NE Smith Timber Sale, have been accounted for in SLI data used for this analysis.

RELEVANT AGREEMENTS, LAWS, PLANS, RULES, AND REGULATIONS

Legal documents dictate management criteria for the management of wildlife and their habitat on state lands. The documents most pertinent to this project include: *DNRC Forest Management Rule*s, *DNRC Forested Trust Lands Final Environmental Impact Statement and Habitat Conservation Plan (USFWS and DNRC 2010)*, the *Endangered Species Act*, the *Migratory Bird Treaty Act*, and the *Bald and Golden Eagle Protection Act*.

COARSE-FILTER WILDLIFE ANALYSIS

TABLE W-2 –COARSE-FILTER. *Analysis of the anticipated effects for coarse-filter resource topics on the DNRC Whitefish Trail Expansion Proposal*.

COARSE-FILTER RESOURCE TOPIC	COARSE-FILTER ANALYSIS
Old-Growth Forest	Approximately 557 acres of old-growth forest occur in the project area. Some trees would be removed to accommodate the 3.5 mile long trail, which would consist of a 39-48 inch wide trail centered on an approximately 10 foot wide trail corridor. In general the trail is designed such that few trees > 15 inches dbh would be removed. Due to the small spatial scale of the tree removal, the availability of old-growth forested habitat is not expected to change post-harvest, thus negligible direct, indirect or cumulative effects would be anticipated.

Connectivity of Mature Forest Habitat	Trail construction would create small openings in mature canopy cover to accommodate the new trail. However, the trail would be designed such that few trees > 15 inches diameter would be removed. Given the small spatial scale of the tree removal, the availability of mature forested habitat is not expected to be affected by the proposed activities. Thus, negligible adverse direct, indirect or cumulative effects on species sensitive to removal of mature forest cover would be anticipated.
Snags and Coarse Woody Debris	Some individual snags and downed logs could be removed due to trail construction. However, all existing snags would be retained where they do not pose a safety hazard and coarse woody debris would be retained in amounts that would meet or exceed those recommended by *Graham et al. 1994*. Thus, negligible adverse direct, indirect and cumulative effects on species that depend on these resources would be anticipated.
Human Access & Potential for human-wildlife conflicts	***Detailed Analysis Provided Below*** – The proposed construction of 3.5 miles of trail would increase human access and the potential for human-wildlife conflicts in the project area.

WILDLIFE HABITAT ALTERED WITH HUMAN ACCESS

> ***Issue:*** *The proposed trail construction, maintenance, and use of the trail by recreationists and their pets could increase disturbance to wildlife in the vicinity of the trail, which could displace wildlife.*
>
> ***Issue:*** *The proposed trail construction, maintenance, and use could increase littering, which could attract wildlife species and/or habituate wildlife creating potential for increased conflicts.*

Introduction

Recreational activities on public lands have the potential to adversely affect wildlife by causing avoidance behavior, or conversely, causing habituation or food-related attraction to humans and associated development. The responses of individual animals may range from increased alertness to flight, which adversely affects energy budgets by causing the animal to allocate energy that could be used for feeding or breeding activities to increased vigilance or flight. Over time, disturbance may lead to temporary or permanent displacement from preferred habitat, lower population levels, or changes in the composition of wildlife communities. Furthermore, the area affected is not limited to the narrow trail corridor, but extends considerably further into the area surrounding the trail. The area affected by disturbance depends upon the wildlife species under consideration and may be further extended if dogs accompany recreationists. Important factors in the response of wildlife to disturbance include the type of activity, the predictability of the activity, the frequency and magnitude of the activity, timing, the relative location, and the type of animal (*Joslin and Youmans 1999*). Management considerations for reducing the impact of humans on wildlife in recreational areas include reducing the risk of disturbance and displacement of wildlife by locating trails in areas that are not important wildlife habitat and reducing the potential for conflicts with wildlife by encouraging control of dogs and by encouraging proper disposal of wildlife attractants such as garbage (*Joslin and Youmans 1999*).

Analysis Area

The analysis area for direct and indirect effects is the 964-acre project area (*FIGURE W-1 –ANALYSIS AREAS*). The analysis area for cumulative effects is the medium, 10,544-acre cumulative effects area described in *TABLE W-1 –ANALYSIS AREAS* and depicted in *FIGURE W-1 –ANALYSIS AREAS*. The

medium cumulative effects analysis area is centered on the project area and represents an area large enough to support a diversity of species that could be affected by increased human access.

Analysis Methods

Analysis methods include Geographical Information System (GIS) analysis of aerial-photographs, DNRC stand level inventory data (SLI), and field evaluations. Factors considered in the analysis include: 1) the miles of trail constructed, 2) level of human access, 3) risk of displacement of wildlife, and 4) the likelihood of introducing wildlife attractants. Additional information related to the affect of human access on specific wildlife species can be found in the FINE-FILTER WILDLIFE ANALYSIS section.

Existing Conditions

Disturbance & Risk of Conflicts

The project area currently experiences moderate levels of disturbance to wildlife in the form of hiking, fishing, biking, firewood gathering, snowmobiling, dog sledding, and hunting. The Whitefish Lake gravel pit is the site of the proposed trailhead and currently serves as a winter trailhead for snowmobilers and dog sledders. Additionally, many residences are located on the north shore of Whitefish Lake and the surrounding area. The project area receives elevated levels of traffic due to the proximity of the area to the city of Whitefish. Access to the area is facilitated by the open Upper Whitefish Lake Road as well as additional closed roads. Open road density in the project area is 2.6 miles/square mile and the density of open and restricted roads is 4.8 miles/square mile.

The medium cumulative effects analysis area receives moderate levels of disturbance in the form of hiking, fishing, biking, firewood gathering, snowmobiling, dog sledding, and hunting. This area also receives elevated levels of human activity due to its proximity to the town of Whitefish. The majority of the large cumulative effects analysis area is owned by the Montana DNRC (4,136 acres), private landowners (2,368), and Plum Creek (1,941 acres). The majority of the 2,368 acres of private lands are concentrated in the southern portion of the analysis area just north of Whitefish Lake. The Delrey Road, East Lakeshore Drive, Upper Whitefish Lake Road, and Werner Peak Road are all open roads that provide access within the medium cumulative effects analysis area. Open road density in the medium cumulative effects analysis area is 1.2 miles/square mile and the density of open and restricted roads is 4.0 miles/square mile.

Environmental Effects

Direct and Indirect Effects of the No-Action Alternative on Disturbance & Risk of Conflicts

None of the proposed trail construction and associated activities would occur. Existing levels of disturbance and potential for conflicts would not change. Thus, since: 1) no change in the level of human access would occur, 2) the risk of altering wildlife use of the project area would not change, and 3) the risk of introducing attractants would not change, no direct or indirect effects associated with the anticipated risk of disturbance and wildlife conflicts would be expected as a result of the No-Action Alternative.

Direct and Indirect Effects of the Action Alternative on Disturbance & Risk of Conflicts

Approximately 3.5 miles of trails would be constructed in the area, increasing human access and disturbance levels. The trails would facilitate hiking, running, biking, and equestrian uses, increasing the risk of wildlife disturbance, displacement, or altered habitat use. Elevated disturbance levels may cause

some animals to avoid the area or to alter their diurnal patterns of use. Other animals could become habituated to human use or become attracted to the area if attractants such as garbage provide food rewards. Providing bear-resistant trash receptacles and educating trail-users about packing out their garbage would reduce this risk of causing wildlife to become attracted to humans. However, in general, the risk of wildlife/human conflicts would increase in the area. The trail is located in areas that receive wildlife use but are not known to be habitats of particularly high importance (see the FINE FILTER section for additional details relevant to specific wildlife species). Conflicts could be reduced by encouraging dog owners to control their dogs by using leashes or to control animals vocally, which would decrease the area disturbed by trail-users and reduce the potential for dogs to chase or harass wildlife. Educational signs at the trailhead would be put in place and maintained to inform users of the inherent risks of recreating in an area with large carnivores and educate trail-users of proper behaviors around wildlife including proper disposal of wildlife attractants. Thus, since: 1) 3.5 miles of trails would be constructed, increasing the level of human access; 2) the risk of altering wildlife use of the project area would increase, but would be mitigated by educational signs encouraging control of dogs and appropriate behaviors around wildlife; and 3) the risk of introducing attractants would increase, but would be mitigated by educating trail-users and providing bear resistance trash receptacles; moderate direct and indirect effects associated with the anticipated risk of disturbance and wildlife conflicts would be expected as a result of the Action Alternative.

Cumulative Effects of the No-Action Alternative on Disturbance & Risk of Conflicts

None of the proposed trail construction and associated activities would occur. Existing levels of disturbance and potential for conflicts would not change. Any proposed or ongoing activities within the medium cumulative effects analysis area could affect the risk of disturbance and wildlife conflict. Thus, since: 1) no change in the level of human access would occur, 2) the risk of altering wildlife use of the project area would not change, and 3) the risk of introducing attractants would not change, no cumulative effects associated with the anticipated risk of disturbance and wildlife conflicts would be expected as a result of the No-Action Alternative.

Cumulative Effects of the Action Alternative on Disturbance & Risk of Conflicts

Approximately 3.5 miles of trails would be constructed, increasing the risk of disturbance and human-wildlife conflicts in the medium cumulative effects analysis area. Increased levels of human access for recreation would be additive to the current level of recreation including hiking, biking, fishing, and hunting as well as snowmobiling and dog sledding in the winter. However, educational signs at the trailhead would inform users of the inherent risks of recreating in an area with large carnivores and educate trail-users of proper behaviors around wildlife including proper disposal of wildlife attractants, minimizing potential for disturbance and human-wildlife conflicts. Additionally, bear-resistant garbage cans would be installed at trailheads to minimize the risk of wildlife becoming attracted to trails due to food rewards. Thus, since: 1) 3.5 miles of trails would be constructed, increasing the level of human access; 2) the risk of altering wildlife use of the project area would increase, but would be reduced by educational sings encouraging control of dogs and appropriate behaviors around wildlife; and 3) the risk of introducing attractants would increase, but would be mitigated by educating trail-users and providing bear resistance trash receptacles; minor adverse cumulative effects associated with the anticipated risk of disturbance and wildlife conflicts would be expected as a result of the Action Alternative.

FINE-FILTER WILDLIFE ANALYSIS

The fine-filter wildlife analysis discloses the existing conditions of wildlife resources and the anticipated direct, indirect, and cumulative effects that may result from the No-Action and Action alternatives.

Wildlife species considered include: 1) species listed as threatened or endangered under the Endangered Species Act of 1973, 2) species listed as sensitive by DNRC, and 3) species managed as big game by DFWP. *TABLE W-3 –FINE-FILTER* provides an analysis of the anticipated effects for each species.

TABLE W-3 –FINE-FILTER. *Status of species considered in the fine-filter wildlife analysis and effects assessments for the Whitefish Trail Expansion Project. For several species, more detailed analysis is provided below where indicated*.

SPECIES/HABITAT	EFFECTS ASSESSMENT
THREATENED & ENDANGERED SPECIES	
Canada lynx (*Felis lynx*) Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zones	The project area contains 136 acres of suitable lynx habitat, all of which is considered winter forage habitat based on stand characteristics. The proposed trail construction would remove some trees and snags adjacent to potential lynx habitat along approximately 0.6 miles of trail, 0.3 miles of which would be new construction. The proposed trail construction would not change the classification of lynx habitat types. Increased human access to the area and the presence of dogs could disturb lynx; however, due to habitat structure, the majority of lynx activity in the area is likely to occur in the winter, when trail use would be minimal. If a lynx den is discovered in the vicinity of the trail, a temporary trail closure would be instated. Thus, since only 0.3 miles of trail would be constructed in lynx habitat, the structure of lynx habitat would not change and risk of disturbance is minimal, negligible direct, indirect, and cumulative effects to lynx would be anticipated.
Grizzly bear (*Ursus arctos*) Habitat: Recovery areas, security from human activity	***Detailed Analysis Provided Below*** – The project area is located in grizzly bear recovery zone habitat and non-recovery occupied habitat associated with the Northern Continental Divide Ecosystem (*USFWS 1993, Wittinger 2002*).

SENSITIVE SPECIES	
Bald eagles (*Haliaeetus leucocephalus*) Habitat: Late-successional forest less than 1 mile from open water	The proposed activities are located within the home range of a bald eagle pair associated with Whitefish Lake. A few trees and snags would be removed to construct the trail. The project area is not located within known bald eagle flight paths, but bald eagles may travel along Swift Creek. However, there are only 2 view points of Swift Creek along the trail and the likelihood of disturbing bald eagles in this area is minimal due to the presence of visual screening and distance between the trail and Swift Creek. In general, due to the distance from Whitefish Lake and the topography of the area, the proposed project area is not likely to be used by bald eagles (*Paige 1991*). Thus, negligible direct, indirect, and cumulative effects to bald eagles would be anticipated.
Black-backed woodpeckers (*Picoides arcticus*) Habitat: Mature to old burned or beetle-infested forest	No recently (<5 years) burned areas occur in the project area. Thus, no direct, indirect, or cumulative effects to black-backed woodpeckers would be expected to occur as a result of either alternative.
Coeur d'Alene salamanders (*Plethodon idahoensis*) Habitat: Waterfall spray zones, talus near cascading streams	No moist talus or streamside talus habitat occurs in the project area. Thus, no direct, indirect, or cumulative effects to Coeur d'Alene salamanders would be expected to occur as a result of either alternative.
Columbian sharp-tailed grouse (*Tympanuchus Phasianellus columbianus*) Habitat: Grassland, shrubland, riparian, agriculture	No suitable grassland communities occur in the project area. Thus, no direct, indirect, or cumulative effects to Columbian sharp-tailed grouse would be expected to occur as a result of either alternative.
Common loons (*Gavia immer*) Habitat: Cold mountain lakes, nest in emergent vegetation	Smith Lake occurs within 500 feet of the proposed trail. However, there are no records of common loons using the lake and the likelihood of occupancy is less than 50% (*C. Hammond, DFWP, wildlife biologist, pers. comm., July 30, 2012*). Additionally, the trail is located 0.7 miles from Whitefish Lake. Thus, since the proposed trails are not located within 500 feet of lakes likely to be occupied by loons, negligible direct, indirect and cumulative effects to common loons would be expected to occur as a result of either alternative.

Fishers (*Martes pennanti*) Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian	Approximately 597acres of suitable fisher habitat occur within the project area. The proposed activities would remove a few trees and snags located adjacent to approximately 2.4 miles of trail including 1.9 miles of new trail construction. Following trail construction, human activity would increase in the area; however, due to the small amount of new trail construction and current accessibility of the area provided by numerous roads, the risk of trapping mortality is not expected to increase. Thus, since the proposed activities would have a minimal effect on the structure of fisher habitat and human activity is unlikely to increase trapping mortality, negligible direct, indirect and cumulative effects to fishers would be expected to occur as a result of either alternative.
Flammulated owls (*Otus flammeolus*) Habitat: Late-successional ponderosa pine and Douglas-fir forest	Approximately 27 acres of flammulated owl preferred habitat types occur within the project area. However, the proposed trail would not pass through these acres. Additionally, flammulated owls are relatively tolerant of human disturbance and nest abandonment is rare (*McCallum 1994*). Given the lack of suitable habitat in the vicinity of the proposed trail and tolerance of flammulated owls to disturbance, negligible direct, indirect, and cumulative effects to flammulated owls would be expected to occur as a result of either alternative.
Gray wolves (*Canis lupus*) Habitat: Ample big game populations, security from human activities	***Detailed Analysis Provided Below*** – The 2011 home range of the Lazy Creek Pack is located within 5 miles of the project area (*MFWP wolf pack data, 2011*).
Harlequin ducks (*Histrionicus histrionicus*) Habitat: White-water streams, boulder and cobble substrates	Potentially suitable high-gradient stream habitat associated with Swift Creek occurs adjacent to portions of the proposed trail. Harlequin duck pairs have been observed on Swift Creek, but breeding has not been documented (*MNHP data 2012*). Two overlooks would provide views of Swift Creek; however, the overlooks are located along a cliff that would discourage the majority of trail-users from accessing the streambed and disturbing harlequin ducks, if they are present in the area. Additionally, visual screening exists between Swift Creek and the remainder of the trail and the proposed activities would not affect riparian habitat or reduce sight distances into potential harlequin habitat. Thus, negligible direct, indirect and cumulative effects to harlequin ducks would be anticipated.
Northern bog lemmings (*Synaptomys borealis*) Habitat: Sphagnum meadows, bogs, fens with thick moss mats	No suitable sphagnum bogs or fens occur in the project area. Thus, no direct, indirect, or cumulative effects to northern bog lemmings would be expected to occur as a result of either alternative.

Peregrine falcons (*Falco peregrinus*) Habitat: Cliff features near open foraging areas and/or wetlands	No suitable cliffs/rock outcrops for nest sites occur in the project area or within 0.5 miles of the project area. Thus, no direct, indirect, or cumulative effects to peregrine falcons would be anticipated as a result of either alternative.
Pileated woodpeckers (*Dryocopus pileatus*) Habitat: Late-successional ponderosa pine and larch-fir forest	Approximately 627 acres of pileated woodpecker habitat occur in the project area. The proposed activities would remove a few trees and snags from suitable pileated woodpecker habitat located adjacent to approximately 2.8 miles of trail, which are proposed for construction. All snags that do not pose a safety hazard would be retained. Human activity would increase in the area following trail construction; however, pileated woodpeckers are fairly tolerant of human disturbance (*Bull and Jackson 1995*). Thus, since the proposed activities would have a minimal effect on the structure of pileated woodpecker habitat and human activity is unlikely to adversely affect productivity, negligible adverse direct, indirect, and cumulative effects to pileated woodpeckers would be anticipated.
Townsend's big-eared bats (*Plecotus townsendii*) Habitat: Caves, caverns, old mines	No suitable caves or mine tunnels are known to occur in the project area. Thus, no direct, indirect or cumulative effects to Townsend's big-eared bats would be expected to occur as a result of either alternative.
BIG GAME	
Elk (*Cervus canadensis*)	***Detailed Analysis Provided Below*** – The project area contains 964 acres of potential elk, mule deer, and white-tailed deer winter range habitat as identified by DFWP (*DFWP 2008*).
Mule Deer (*Odocoileus hemionus*)	
White-tailed Deer (*Odocoileus virginianus*)	

THREATENED AND ENDANGERED SPECIES

GRIZZLY BEAR

Issue*: The proposed trail construction, maintenance, and use could reduce visual screening and increase human access, which could adversely affect bears by displacing them from important habitats and/or increase the risk of human-caused bear mortality.*

Introduction

Grizzly bears are opportunistic omnivores that inhabit a variety of habitats in Montana. Preferred grizzly bear habitats include avalanche chutes, fire-mediated shrub fields, and riparian areas, all of which provide seasonal food sources (*Servheen 1983, McLellan and Hovey 2001*). Grizzly bears are currently listed as "Threatened" under the *Endangered Species Act of 1973* and primary threats are related to human-bear

conflicts and long-term habitat loss associated with human development. Man-caused deaths were the leading cause of grizzly bear mortality in the Northern Continental Divide Ecosystem in 2011; hence, reducing the potential for human-grizzly conflicts is especially important (*Mace and Roberts 2012*), particularly regarding bear acquisition of unnatural foods. A number of studies have documented disturbance and displacement of grizzly bears associated with human use of trails and roads (*Jope 1985*, *McLellan and Shackleton 1989*, *Mace and Waller 1996*, *Waller and Servheen 2005*). Graves (*2002*) found that grizzly bears selected against areas within 450 to 600 m from single-track trails similar to the system proposed under the action alternative for this project. Management considerations for constructing recreational trails in grizzly bear habitat include retaining visual screening, considering the location of seasonally important habitat, encouraging proper disposal of attractants, and educating recreationists on proper behaviors in bear country.

Analysis Area

The analysis area for direct and indirect effects is the 964-acre project area (*FIGURE W-1 –ANALYSIS AREAS*). The analysis area for cumulative effects is the 39,838-acre large cumulative effects analysis area described in *TABLE W-1 –ANALYSIS AREAS* and depicted in *FIGURE W-1 –ANALYSIS AREAS*. The large cumulative effects analysis area is centered on the project area and is defined according to geographic features (i.e., ridgelines, watershed boundaries), which bound a reasonable analysis area for grizzly bears. This area includes the Lazy Creek Grizzly Bear Subunit, which approximates the size of a female grizzly bear home range as well as additional lands located adjacent to Whitefish Lake.

Analysis Methods

Analysis methods included field evaluations, Geographical Information System (GIS) analysis of SLI data, consultation with wildlife professionals, and aerial photograph interpretation. To estimate the size of the area where bears could be displaced, the proposed trail was buffered by 500 meters. This distance as selected based upon research in similar trail systems indicating that grizzly bears select against habitat located within 450 to 600 meters from single-track trails (*Graves 2002*). Factors considered in the analysis included: 1) the level of human access, 2) the availability of visual screening cover, 3) the location of important seasonal habitat, 4) and risk of displacement or conflict.

Existing Conditions

Grizzly Bears

The project area is located within grizzly bear recovery zone habitat and non-recovery occupied habitat (NROH) associated with the Northern Continental Divide Ecosystem (hereafter NCDE, *Wittinger 2002*). NROH consists of occupied areas near grizzly bear recovery zones in Montana that were mapped by grizzly bear researchers and managers to account for increased sightings of grizzly bears outside of recovery zones. The project area is located southwest of the Whitefish Range in low elevation habitat that receives considerable grizzly bear use, particularly in the spring. Riparian habitat associated with Brush Creek, King Creek, Swift Creek, Smith Creek as well as Smith Lake and small wetlands located throughout the project area likely provide suitable foraging habitat for bears. Other important grizzly bear habitats, including fire-mediated shrub fields and avalanche chutes, were not observed within the project area. Open and seasonally open road density in the project area is 2.6 miles/square mile and total road density is 4.8 miles/square mile. The Whitefish Lake gravel pit and site of the proposed trailhead also serve as a trailhead for winter recreationists. Private property and residences are located adjacent to the project area, resulting in elevated levels of disturbance and risk of habituation or attraction to human activity.

The large cumulative effects analysis area is also located within grizzly bear recovery zone habitat and non-recovery occupied habitat (NROH) associated with the NCDE (*Wittinger 2002*). This majority of the area consists of forested habitats relatively uninfluenced by human developments and contains a variety of preferred grizzly bear habitats (berry fields, riparian areas, etc.). The area is owned primarily by Montana DNRC (16,598 acres), Plum Creek (15,289 acres), and the USFS (4,958 acres), and is managed for timber harvest. Open road density in the large cumulative effects analysis area is 1.1 miles/square mile and total road density is 4.0 miles/square mile.

Environmental Effects

Direct and Indirect Effects of the No-Action Alternative on Grizzly Bears

None of the proposed activities would occur. No trail construction or changes to grizzly bear habitat would occur. Thus, since: 1) the level of human access to the area would not change, 2) the availability of visual screening would not change, 3) preferred seasonal habitat would not be affected, and 4) the risk of displacement or conflict would not change, no direct or indirect effects associated with grizzly bear displacement or human-caused bear mortality risk would be anticipated as a result of the No-Action Alternative.

Direct and Indirect Effects of the Action Alternative on Grizzly Bears

Approximately 3.5 miles of trail would be constructed including 1.2 miles of trail construction on existing roadbed and 2.3 miles of new trail construction. Approximately 0.7 (0.4 miles new construction, 0.3 miles trail construction on existing road bed) of these miles would be constructed within NCDE recovery zone habitat. Some trees, snags, and brush would be removed during trail construction, but minimal effects to visual screening availability are anticipated. Trail construction would increase recreational use of the area substantially, particularly hiking and mountain biking. Recreationist activity on the trail could cause displacement from approximately 722 acres associated with the trail (74.9% of the project area; 500 meter buffer around trail). Displacement and risk of conflict is of most concern during the spring because the project area contains low elevation riparian and wetland habitat that likely receives considerable grizzly bear use in the spring. To minimize potential for adverse effects to bears in spring, DNRC would instate a seasonal spring closure on the trail system if conflicts with trail-users and grizzlies occur. Temporary closures would also be considered if grizzly bears are observed in the area. To further reduce the risk of human-bear conflicts and food conditioning, bear-resistant garbage cans would be present at the trailhead along with signs encouraging trail-users to properly dispose their garbage, to leash dogs or keep them under vocal control, and to carry pepper spray. Thus, since: 1) approximately 3.5 miles of trail would be constructed within NCDE NROH and recovery zone habitat, increasing human access to the area; 2) the availability of visual screening would not change; 3) preferred seasonal habitat may be affected, but seasonal trail closures would be instated if human-bear conflicts occur during this time period; and 4) the risk of displacement would increase on approximately 722 acres (74.9% analysis area) adjacent to the proposed trail; moderate adverse direct and indirect effects associated with grizzly bear displacement or human-caused bear mortality risk would be anticipated as a result of the Action Alternative.

Cumulative Effects of the No-Action Alternative on Grizzly Bears

None of the proposed activities would occur. No trail construction or changes to grizzly bear habitat would occur although ongoing and proposed forest management projects within the cumulative effects analysis area could affect human access, visual screening, and the risk of displacement or conflict. Thus, since: 1) the level of human access to the area would not change, 2) the availability of visual screening

would not change, 3) preferred seasonal habitat would not be affected, and 4) the risk of displacement or conflict would not change, no cumulative effects associated with grizzly bear displacement or human-caused bear mortality risk would be anticipated as a result of the No-Action Alternative.

Cumulative Effects of the Action Alternative on Grizzly Bears

The proposed activities would include 3.5 miles of trail construction including 1.2 miles of trail construction on existing roadbed and 2.3 miles of new trail construction, approximately 0.7 of which would be constructed in the grizzly bear NCDE recovery zone. The increase in recreational activity would be additive to recreational activity already occurring in the large cumulative effects analysis area including hiking, biking, fishing, hunting, snowmobiling, and camping. No additional plans for recreational trails in the area have been proposed. Some trees and shrubs would be removed during the construction of the trail, but impacts to visual screening are expected to be minimal. Displacement may occur on 838 acres within 500 meters of the trail (2.1% of the large cumulative effects analysis area). Other activities that could be additive to potential displacement of bears from habitats preferred by grizzly bears include the DNRC NE Smith Timber Sale (ongoing), the Lazy Swift Timber Sale (proposed), and a small DNRC thinning project (proposed) (see **ANALYSIS METHODS** section of the Introduction for a detailed description of projects). The proposed trail is located in suitable grizzly bear spring habitat, which receives considerable use by grizzly bears (*T. Thier, DFWP, wildlife biologist, pers. comm., August 3, 2012*). However, potentially suitable spring habitat is available north of the project area on lands that are managed for timber production and are relatively free of residential development. DNRC would instate a seasonal spring closure on the trail system if conflicts with grizzlies occur. Temporary closures would also be considered if grizzly bears are observed in the area at any time. To further reduce the risk of human-bear conflicts and food conditioning, bear-resistant garbage cans would be present at the trailhead along with signs encouraging trail-users to properly dispose their garbage, to leash dogs or keep them under vocal control, and to carry pepper spray. Thus, since: 1) approximately 3.5 miles of trail would be constructed within NCDE NROH and recovery zone habitat, increasing human access to the area; 2) the availability of visual screening would not change; 3) preferred seasonal habitat may be affected, but seasonal trail closures would be instated if human-bear conflicts occur during this time period; and 4) the risk of displacement would increase on approximately 838 acres (2.1% of analysis area) adjacent to the proposed trail; moderate adverse cumulative effects associated with grizzly bear displacement or human-caused bear mortality risk would be anticipated as a result of the Action Alternative.

SENSITIVE SPECIES

GRAY WOLVES

> ***Issue:*** *The proposed trail construction, maintenance, and use could increase human access and reduce big game winter range habitat quality, which could displace gray wolves from denning and rendezvous sites, increase the risk of wolf-dog conflicts, and reduce prey availability.*

Introduction

Wolves are wide-ranging opportunistic carnivores that prey on ungulates. In general, wolf densities are positively correlated to prey densities (*Fuller et al. 1992*). Wolves prey primarily on white-tailed deer, and, to a lesser extent, elk and moose, in northwest Montana (*Kunkel et al. 1999*). However, some studies have shown that wolves may prey upon elk more frequently during certain portions of the year (particularly winter) or in areas where elk numbers are higher (*Arjo et al. 2002, Kunkel et al. 2004, Garrott et*

al. 2006). Thus, reductions in big game numbers and/or winter range productivity could be indirectly detrimental to wolf populations. Management considerations for constructing recreational trails in wolf habitat are primarily related to reducing the potential for conflicts with dogs and reducing the potential for negative impacts on the big game.

Analysis Area

The analysis area for direct and indirect effects is the 964-acre project area (*FIGURE W-1 –ANALYSIS AREAS*). The analysis area for cumulative effects is the 10,544-acre medium cumulative effects analysis area described in *TABLE W-1 –ANALYSIS AREAS* and depicted in *FIGURE W-1 –ANALYSIS AREAS*. The cumulative effects analysis area is centered on the project area, defined according to geographic features (i.e., ridgelines), and provides a reasonable analysis area for wolves that could be influenced by project-related activities.

Analysis Methods

Analysis methods include field evaluation, aerial photograph interpretation, and GIS analysis of available habitats. Factors considered in the analysis include: 1) the level of human access, 2) the location of any known den or rendezvous sites, and 3) effects of recreation on big game winter range.

Existing Conditions

Gray Wolves

The project area contains 43 acres (0.4% of home range) of the Lazy Creek Pack estimated 2011 annual home range. No wolf rendezvous sites, den sites, or wolf use of the project area have been documented (*K. Laudon, DFWP, wolf management specialist, pers. comm., July 26, 2012*); however, wolf use of the area could occur at any time. The entire project area is considered elk, moose, mule deer, and white-tailed deer winter range as described by DFWP (*TABLE W-4 BIG GAME, DFWP 2008*). Evidence of summer big game use of the project area was also observed during visits to the area. The project area likely provides habitat for elk, moose and deer throughout the year.

The medium cumulative effects analysis area contains 4,337 acres of the estimated 2011 home range of the Lazy Creek Pack (38.7% of home range). Portions of the cumulative effects analysis area are identified as elk, mule deer, moose, and white-tailed deer winter range by DFWP (*TABLE W-4 BIG GAME, DFWP 2008*).

Environmental Effects

Direct and Indirect Effects of the No-Action Alternative on Gray Wolves

None of the proposed activities would occur. No trail construction or changes to big game winter range would occur. Thus, since: 1) the level of human access would not change, 2) wolf rendezvous or den sites would not be disturbed by trail-users, and 3) no change in big game winter range quality would occur, no direct or indirect effects to wolves associated with displacement, conflicts, or changes in prey availability would be anticipated as a result of the No-Action Alternative.

Direct and Indirect Effects of the Action Alternative on Gray Wolves

Approximately 3.5 miles of trail construction would occur within elk, mule deer, moose, and white-tailed deer winter range including 1.2 miles of trail construction on existing roadbed and 2.3 miles of new trail construction. Wintering big game could be disturbed by recreationists and their pets on approximately 722 acres (74.9% of big game winter range in the project area) located within 500 meters of the proposed trail. However, the trail would not be maintained for winter recreationists (i.e., no trail grooming) and

minor adverse effects to big game are anticipated. Currently, there are no known wolf rendezvous or den sites in the vicinity of the project area. However, if the area is used by wolves for rendezvous or den sites in the upcoming seasons the area may be temporarily closed to provide increased security for wolves and for the safety of trail-users pending consultation with Montana Fish Wildlife and Parks biologists. The proposed trail construction could cause conflicts between dogs and wolves, which could result in injury or death to the dog. To reduce the likelihood of conflicts occurring, signs posted at trailheads would warn trail-users of the risks associated with using the trail and would require recreationists to maintain vocal control of their pets or keep them on a leash. Thus, since: 1) the level of human access would increase due to the construction of 3.5 miles of trail; 2) wolf rendezvous or den sites could be disturbed by trail-users, but DNRC would retain the right to close the trail if deemed necessary; and 3) minor adverse effects to big game winter range quality would occur; minor direct and indirect effects to wolves associated with displacement, conflicts, or changes in prey availability would be anticipated as a result of the Action Alternative.

Cumulative Effects of the No-Action Alternative on Gray Wolves

None of the proposed activities would occur. Wolves would not be disturbed by recreational activities on DNRC lands. Disturbance of wintering big game would not change within the project area, but may change on other ownerships outside the project area due to other potential proposed and ongoing projects. Thus, since: 1) no disturbance to wolf den or rendezvous sites would occur and 2) no change in big game winter range quality would occur, no direct and indirect effects to wolves associated with displacement, conflicts, or changes in prey availability would be anticipated as a result of the No-Action Alternative.

Cumulative Effects of the Action Alternative on Gray Wolves

Approximately 3.5 miles of trail construction would occur within elk, mule deer, moose, and white-tailed deer winter range including 1.2 miles of trail construction on existing roadbed and 2.3 miles of new trail construction. Wintering big game could be disturbed by recreationists and their pets on approximately 838 acres (13.9% of elk, 7.9% of moose, 13.9% mule-deer, and 10.4% white-tailed deer winter range within the medium cumulative effects analysis area) located within 500 meters of the proposed trail. However, since the trail would not be maintained for winter recreationists, the adverse effects of the trail on wintering big game are expected to be minor. DNRC is unaware of any wolf dens or rendezvous sites in the vicinity of the project area, but wolves may have rendezvous or den sites in other portions of the medium cumulative effects analysis area. If documented in the vicinity of the project area in upcoming seasons, DNRC may instate seasonal closures for public safety and wolf security pending consultation with DFWP biologists. To reduce the likelihood of conflicts occurring between wolves and dogs, signs posted at trailheads would warn trail-users of the risks associated with using the trail and would require recreationists to maintain vocal control of their pets or keep them on a leash. Any adverse effects related to big game winter range quality, disturbance at wolf den or rendezvous sites, or increased potential for wolf-dog conflicts would be additive to effects from ongoing logging projects and recreational activities currently occurring in the medium cumulative effects analysis area including; hiking, fishing, hunting, biking, and snowmobiling in the winter. Thus, since: 1) the level of human access would increase due to the construction of 3.5 miles of trail; 2) wolf rendezvous or den sites could be disturbed by trail-users, but DNRC would retain the right to close the trail if deemed necessary; and 3) minor adverse effects to big game winter range quality would occur; minor cumulative effects to wolves associated with displacement, conflicts, or changes in prey availability would be anticipated as a result of the Action Alternative.

BIG GAME WINTER RANGE

Issue: *The proposed trail construction, maintenance, and use could disturb big game species, reducing the quality of winter range habitat.*

Introduction

During winter big game, including elk, moose, mule deer, and white-tailed deer are seasonally restricted to areas with adequate amounts of cover and forage at lower elevations. In Western Montana, effective big game winter range contains ample mid-story and overstory coniferous cover, which minimizes severe winter conditions by reducing wind velocity and providing snow intercept, enabling big game to move across the landscape and access forage with less energy expenditure. Recreational activities may adversely affect big game by causing responses ranging from increased vigilance to flight, all of which have consequences for energy budgets. Additionally, research demonstrates that ungulates often respond to recreational activities by avoiding areas near roads and trails. Management considerations for constructing recreation trails in big game winter range include reducing risk of disturbance by informing recreationists of proper behavior around big game and encouraging control of dogs (*Joslin and Youmans 1999*).

Analysis Area

The analysis area for direct and indirect effects is the 964-acre project area (*FIGURE W-1 –ANALYSIS AREAS*). The analysis area for cumulative effects is the 10,544-acre medium cumulative effects analysis area described in *TABLE W-1 –ANALYSIS AREAS* and depicted in *FIGURE W-1 –ANALYSIS AREAS.* The medium cumulative effects analysis area is centered on the project area and defined according to geographic features including watershed boundaries (i.e. ridgelines), which would somewhat confine movements of local wintering big game animals in the vicinity of the project area, and it provides a reasonable biological analysis unit for local big game animals that could be influenced by project-related activities.

Analysis Methods

Analysis methods include field evaluations, aerial photograph interpretation, and GIS analysis of available big game winter range (*unpublished interagency map, 2008*). The proposed trail was buffered by 500 meters to estimate the area in which big game could be disturbed by recreationists and their pets. This distance falls within the range of displacement distances reported for ungulates from roads and trails as reviewed by Gaines et al. (*2003*) and provides a reasonable area for analyzing the effects of non-motorized recreation. Factors considered in the analysis include: 1) the level of human access, and 2) risk of disturbance of wintering big game.

Existing Conditions

Big Game Winter Range

The entire project is considered elk, moose, mule deer, and white-tailed deer winter range as described by DFWP (TABLE W-4 BIG GAME, *DFWP 2008*). Evidence of winter big game use of the project area in the form of browsed twigs and droppings was also observed during visits to the area. The project area is situated at the base of the southwest facing slopes of the Whitefish Range in low elevation habitat below 3,800 feet that consists primarily of moderate-to-well stocked stands of trees ≥ 9 inches dbh (70% of the project area). Due to the availability of canopy cover and low elevation, the area likely provides suitable habitat for wintering big game. The Whitefish Lake gravel pit and site of the proposed trailhead are

currently used as a trailhead for winter recreationists that snowmobile on existing roads and trails located to the north of the project area, which may disturb wintering big game in the area.

Portions of the medium cumulative effects analysis area are identified as elk, mule deer, moose, and white-tailed deer winter range by DFWP (TABLE W-4 BIG GAME, *DFWP 2008*). The winter range is located primarily in the southern portion of the project area where snowpack is lighter due to the low elevation of the area. Due to timber harvesting history in the medium cumulative effects analysis area, the availability of mature forested habitat with suitable canopy cover for wintering big game varies across the area. Winter recreationists snowmobiling on existing trails and roads in the area, including the Werner Peak Road and Upper Whitefish Road, may disturb wintering big game.

TABLE W-4 –BIG GAME. *Acreages (and percentages) of big game winter range for 4 species in the DNRC Whitefish Trail Expansion Project occurring in the medium cumulative effects analysis area. Estimates derived from DFWP winter range distribution maps (DFWP 2008).*

BIG GAME SPECIES	ANALYSIS AREA	
	Project Area	Acreages within Medium Cumulative Effects Analysis Area
Elk (% of area)	964 (100%)	6,029 (57.2%)
Mule Deer (% of area)	964 (100%)	6,029 (57.2%)
Moose (% of area)	964 (100%)	10,544 (100%)
White-tailed Deer (% of area)	964 (100%)	8,020 (76.1%)

Environmental Effects

Direct and Indirect Effects of the No-Action Alternative on Big Game Winter Range

None of the proposed trail construction would occur. Thus, since: 1) the level of human access to the area would not change, and 2) the risk of disturbance to wintering big game would not change, no direct and indirect effects to big game winter range quality would be anticipated as a result of the No-Action Alternative.

Direct and Indirect Effects of the Action Alternative on Big Game Winter Range

Approximately 3.5 miles of trail construction would occur within elk, mule deer, moose, and white-tailed deer winter range including 1.2 miles of trail construction on existing roadbed and 2.3 miles of new trail construction. Wintering big game could be disturbed by recreationists and their pets on approximately 722 acres (74.9% of big game winter range in the project area) located within 500 meters of the proposed trail. However, the trail would not be maintained for winter recreationists (i.e., no trail grooming). The trailhead would continue to be used by snowmobilers accessing roads and trails located to the north of the project area. Since the proposed trails would not be maintained for recreationists in winter, the number of users accessing these trails during time periods when snowpack is high and big game are

more vulnerable to disturbance is expected to be low. However, to reduce the potential impact of recreationists on big game, trail-users would be required to keep their pets within vocal control or on a leash. Additionally, signs at the trailhead would ask recreationists not to approach wildlife. Thus, since: 1) human access to the area would increase following the construction of 3.5 miles of trail; 2) wintering big game could be disturbed by recreationists on 722 acres (74.9% of big game winter range in the project area), but trail use during winter is expected to be minimal when snowpack is high; and 3) recreationists would be required to control their pets and be discouraged from approaching wildlife; minor adverse direct and indirect effects to big game animals and winter range quality would be anticipated as a result of the Action Alternative.

Cumulative Effects of the No-Action Alternative on Big Game Winter Range

None of the proposed trail construction would occur. The level of access and risk of disturbance would not change within the project area, but may change on other portions of the medium cumulative effects analysis area. Thus, since: 1) the level of human access to the area would not change within the project area, and 2) the risk of disturbance to wintering big game would not change, no cumulative effects to big game animals or winter range quality would be anticipated as a result of the No-Action Alternative.

Cumulative Effects of the Action Alternative on Big Game Winter Range

Approximately 3.5 miles of trail construction would occur within elk, mule deer, moose, and white-tailed deer winter range including 1.2 miles of trail construction on existing roadbed and 2.3 miles of new trail construction. Wintering big game could be disturbed by recreationists and their pets on approximately 838 acres (13.9% of elk, 7.9% of moose, 13.9% mule-deer, and 10.4% white-tailed deer winter range within the medium cumulative effects analysis area) located within 500 meters of the proposed trail. Trail use is expected to be minimal on the proposed trail in the winter because the trails would not be maintained for winter recreationists; however, some winter use would likely occur. The increased disturbance to wintering big game would be additive to snowmobiling already occurring on existing roads and trails in the analysis area including the Upper Whitefish Road and the Werner Peak Road. To reduce the effect of recreational activities on big game, trail-users would be required to maintain vocal control of their dogs or keep them on a leash. Additionally, signs at the trailhead would discourage recreationists from approaching wildlife. Thus, since: 1) human access to the area would increase following the construction of 3.5 miles of trail; 2) wintering big game could be disturbed by recreationists on 838 acres (13.9% of elk, 7.9% of moose, 13.9% mule-deer, and 10.4% white-tailed deer winter range within the medium cumulative effects analysis area), but trail use during winter is expected to be minimal when snowpack is high; and 3) recreationists would be required to control their pets and discouraged from approaching wildlife; minor adverse cumulative effects to big game winter range quality would be anticipated as a result of the Action Alternative.

LIST OF MITIGATIONS

- If a threatened or endangered species is encountered, consult a DNRC biologist and develop additional mitigations that are consistent with the Forest Management Rules for managing threatened and endangered species (*ARM 36.11.428* through *36.11.435*).
- 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 -- HCP Vol. II p. 2-5*).
- Contractors will adhere to food storage and sanitation requirements as per GB-PR3 (*DNRC HCP FEIS Vol. II p. 2-6*).

- Post and maintain signs at the trailheads to inform users of the inherent risks of recreating in an area with large carnivores and to educate recreationists of proper behavior around wildlife. Signs should focus on the following:
    - Inform trail-users of risks associated with recreating in grizzly and wolf country.
    - Encourage trail-users to carry pepper spray.
    - Require trail-users to maintain vocal control over their dogs or keep them on a leash to minimize disturbance to wildlife, particularly big game, wolves, and grizzlies.
    - Require trail-users to properly dispose of garbage to reduce the risk of food-conditioning.
    - Discourage trail-users from approaching wildlife.
- Provide and maintain bear-resistant garbage containers at trailhead to reduce the risk of attraction or habituation to human activity.
- DNRC may instate seasonal trail closures if deemed necessary and may instate temporary closures if conflicts with wildlife occur.

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FIGURE W-1 –ANALYSIS AREAS. *Wildlife analysis areas for the proposed Whitefish Trail Expansion Project*.