CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	**Triple Tree Trail Easement**
Proposed Implementation Date:	**September 2012**
Proponent:	**Gallatin County and Gallatin Valley Land Trust (GVLT)**
Location:	**SW4 Section 4-T3S-R6E**
County:	**Gallatin**

I. TYPE AND PURPOSE OF ACTION

The proposed action is the issuance of a 12-foot wide, public, non-motorized, permanent trail right-of-way easement on approximately 0.33 miles of existing trail and approximately 1.52 miles of new constructed trail, located on Capitol Buildings Trust Lands. Total length of the easement would be ~1.85 miles (~2.7 acres). Additionally, ~0.57 miles of existing trail would be closed and rehabilitated.

The existing trail is known as the 'Triple Tree Trail' and was constructed in the 1990's. It begins at the trail head off Sourdough Road, passes through the Triple Tree Ranch Subdivision and onto State Trust lands where it makes a loop back to the Triple Tree Ranch Subdivision. An easement for the trail was obtained from Triple Tree Ranch Subdivision but never from the State of Montana. The trail is very popular and receives heavy year-round use. Although the trail is maintained by GVLT, many segments are too steep to maintain properly, and there are erosion problems and additional maintenance issues.

The purpose of the easement is to reduce the current erosion, resource damage and maintenance issues by (1) designating a responsibly party for the supervision and maintenance of the trail; (2) the development and implementation of a maintenance plan to ensure the long-term preservation of the trail; (3) the relocation and construction of new trail to make it safer, more sustainable, and easier to maintain; and (4) the closure and rehabilitation of specific problem segments of the existing trail.

(See Attachment A - Site Specific maps)

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:
Provide a brief chronology of the scoping and ongoing involvement for this project.

A field review was conducted on April 16, 2012, by Gary Vodehnal (GVLT) and DNRC forester Chuck Barone.

Individual scoping notices were sent in June 2012.

Other contacts:

DNRC, Archaeologist, P. Rennie

MT Fish, Wildlife and Parks, Wildlife Biologist, J.Cunningham

GVLT, K. Pohl

J. Wilkes (adjacent landowner)

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

The Gallatin County Weed District Board administers the State weed laws in Gallatin County.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: An easement would not be granted. Current management actions would be maintained.

Action Alternative: A 12-foot wide, public, non-motorized, permanent trail right-of-way easement on approximately 0.33 miles of existing trail and approximately 1.52 miles of new constructed trail would be granted, with additional mitigation measures, to the Proponent. Additionally, ~0.57 miles of existing trail would be closed and rehabilitated.

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.

Geologically the project area presents a wide range of rock types and ages with numerous anticlines, synclines and thrust faults. All faults show very little motion and are presumed to be inactive. Drainage density is low to moderate due to the modest precipitation levels. In general, soil depth is typically greater than 60 inches before encountering bedrock with loam to clay loam surface textures. Deep soils with elevated clay contents, particularly on north aspects, typically remain moist well into summer months. Due to the fine texture of these soils, pore spaces are small and matrix water is bound tightly by capillary forces resulting in slow infiltration capacities and moderate to poor drainage attributes. The amount of coarse rock fragments within the soil profile typically is within the range of 5-30% by volume. The soils are moderately erosive but can be mitigated with standard drainage practices.

Surface ash deposits can be found under the duff layer, particularly on sheltered, high elevation, north to northeast facing terrain. Local ash depths range from 2-6 inches and provide significant water holding capacity to surface vegetation, particularly in late summer months and are typically associated with highly productive sites.

Presently, the trail on the State parcel is not authorized and receives heavy use. The trail is maintained but has minimal erosion features and numerous grades well in excess of 10%.

The proposed project would utilize ~0.33 miles of the existing trail and construct ~1.52 miles of new trail. These segments would have grades of <10% (max 12% on turns) and erosion features constructed. The remaining ~0.57 miles of the existing trail containing excessive grades would be closed and rehabilitated, greatly reducing the amount of erosion under the current conditions.

The trail route would allow foot, horse and bicycle access and would be subject to activity essentially year round. Effective signing of the new access route would be conducted by the Proponents and the maintenance would be incorporated into the trail maintenance plan. Implementation of mitigation measures, trail best practices and a trail maintenance plan would reduce the risk of sedimentation from trail and reduce the risk and severity of soil erosion and potential sediment delivery. Soil effects would be minimal and considerably less than present conditions.

With recommended best practices and mitigation measures, no significant impacts or cumulative effects are expected to soil resources.

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.

The proposed project is located within the headwaters of an unnamed perennial tributary to Limestone Creek. Limestone Creek is a second order perennial tributary to Bozeman Creek and supports a brook trout fishery. The unnamed, perennial stream does not support any fishery. Channel stability for the unnamed stream was observed to be good to excellent with highly functional riparian habitats adjacent to the stream network. No current grazing license exists within this watershed on State lands.

The proposed project route would utilize existing trail and new trail construction on State lands. Approximately 0.57 miles of trail rehabilitation and 1.52 miles of new trail construction are proposed on the State parcel.

Within the State parcel, the existing trail follows an old road grade alongside the unnamed stream for ~0.2 miles before crossing above the headwaters. This segment of the trail would not have the location altered. Both sides of the trail are well vegetated and indicate minimal erosion and sedimentation. Vegetation buffer is 10-40 feet to the stream channel or wetland area. Additional drainage features would be installed at appropriate locations on the trail and all drainage features along this segment would have slash filters installed at their outlets.

Land management activities such as trail construction, maintenance and use can potentially increase levels of fine sediment delivery to streams if not properly located, designed, and mitigated. The primary risks to water quality that are associated with the proposed project are trail located along streams. Risk of erosion and sediment delivery are highest when trails are located in areas with inadequate buffering between streams and other drainage features, on erosive soils, or on steep and/or unstable slopes. A lack of periodic maintenance, inadequate surface drainage features, and use during wet periods or conditions may also contribute to higher risk.

Several other segments of the existing trail are too steep to maintain properly, lack sufficient drainage features and may cause erosion problems in the future if not properly mitigated. New trail would be constructed with adequate drainage features installed to by-pass these steeper segments of existing trail. The old, steep trail segments would be rehabilitated. A trail maintenance plan would be adopted and an annual maintenance program implemented.

Implementation of appropriate trail best practices and mitigation measures would reduce the risk of sedimentation from the trail; and reduce the risk and severity of soil erosion and potential sediment delivery to the unnamed stream, Limestone Creek and ephemeral drainage features.

With recommended trail best practices and mitigation measures, impacts and cumulative effects to water quality, water yield, watershed conditions, fisheries or any other beneficial uses associated with

the watersheds adjacent to the proposed project area or any downstream tributaries are expected to be minimal.

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.

The project may include piling and burning of slash. Localized short duration particulate emissions occur during slash burning. Slash burning is normally conducted in late October through November. The DEQ and the Cooperative Airshed groups regulate particulate emissions during this period. Burning times are coordinated to 1) limit burning periods of acceptable smoke dispersion and 2) to limit the cumulative generation of particulates.

DNRC is a member of the Montana/Idaho Airshed Group, which coordinates burning activities related to forest management among the group's members in order to minimize impacts from smoke generated by those activities. As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit in Missoula, MT. Thus direct, indirect, and cumulative impacts associated with the proposed action are expected to be minimal.

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.

The State parcel is located on the north end of the Gallatin Range along the forest/grassland interface. Lands occur in broken ground that includes ridges, draws, benches and rock outcrops. The elevations generally range from approximately 5,600 feet to 6,400 feet. Forest productivity is rated moderate to high. Past disturbance in the area includes a history of wildfires and recreational use.

Forested stands within the State parcel occur on northerly aspects and are predominately even aged, single story lodgepole pine and Douglas-fir cover types. Douglas-fir is indicated as a climax species and dominant seral on the drier slopes with Douglas-fir/Ninebark (Psme/Phma) as the most common habitat type. Forested stands are included in fire group six. Historically, fire was important with low to moderate intensity fires acting as thinning agents and intense, severe fire events acting as a stand replacement agent. Common species of ground cover include ninebark, spirea, snowberry, pinegrass and elk sedge. The absence of fire, in combination with encroachment, has resulted in overstocked and suppressed stands. These conditions make the stands more susceptible to fire and attack from insects and disease.

The existing unauthorized trail 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 moderate. Noxious weeds in the area include hound's tongue and Canada thistle with most weeds occurring in small spotty populations. Noxious weeds have been noted along the access route to the proposed project and on the State tract.

Trail construction and maintenance activities such as pruning trees, removing downfall and hazardous trees, and clearing the trail of ground cover 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 ~2.7 acres from timber production and, over time, possibly substantially increase the recreational use of the area. Consequently, there is risk that more unauthorized trails could be constructed, which could spread more noxious weeds. Potential effects to vegetation include increased opportunity for weed spread, human-caused fires, and creation of unauthorized trails. Mitigations outlined in this document and the trail maintenance plan are designed to address these effects.

Managing the trail system in the area under an easement and maintenance plan would lead to identification and reclamation of problem areas on the trail, 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 would become more controlled and better maintained, therefore mitigating potential negative effects to vegetation.

Additionally, Mountain Pine Beetle has killed many of the mature lodgepole pine and has created a potential safety hazard. Dead trees within reach of the trail considered to be a safety hazard would be felled as a safety precaution under the trail maintenance plan.

All disturbed areas would be seeded with a native grass mixture and erosion control features would be installed where needed. No rare plants or cover types have been noted in the project area or State tract.

The DNRC requires the washing of equipment, seeding of disturbed areas and monitoring of disturbed areas to minimize the potential of noxious weeds being introduced.

With recommended trail best practices and mitigation measures, no significant impacts or cumulative effects to vegetative communities are expected from the proposed actions.

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.

A variety of big game, small mammals, raptors and songbirds potentially use this area. The unnamed perennial stream within the project area does not support any fishery.

There would be no human development that would decrease linkage value and proposed activities would not impede wildlife movements across the landscape, valleys or mountain ranges. The proposed additional trail construction still remains within the existing trail use area. The trail would continue to make a small loop without connecting to other trails and would not run perpendicular to adjoining drainages or wildlife movement corridors.

No adverse impacts are expected to terrestrial, avian or aquatic habitats.

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.

The unnamed perennial stream within the State parcel does not support any cold-water fishery. Limestone Creek drainage supports a population of brook trout. Due to the location of the trail, relatively gentle topography, and distance from any cold-water fishery, the proposed project should not adversely affect fisheries habitats.

The project area lies approximately 21 miles due north of the GYE grizzly bear recovery zone, and occurs at the northerly edge of the occupied habitat boundary. There have been a number of confirmed grizzly bear sightings in the Bear Canyon/Mount Ellis area during the last 34 years, 4 of which have occurred during the last 10 years. Given the frequency and types of observations, it is possible that a few grizzly bears may periodically use the general area as part of their home ranges during the non-denning seasons. Cover and habitat connectivity associated with riparian areas would not be altered. Ample amounts of hiding cover and connected mature forest patches would remain in the project area, which would maintain suitable cover conditions for grizzly bears, should they occasionally use the area. Adverse direct, indirect and cumulative impacts to grizzly bears as a result of this project are expected to be minimal.

While many of the current forest cover types within the project area are considered suitable for use by lynx, most typically do not contain high horizontal cover comprised of subalpine and spruce bows. Thus, even considering the common presence of several habitat attributes within the project area that are known to be important for lynx and snowshoe hares, habitat in this area is likely best suited as travel habitat or matrix habitat that would facilitate movement, linkage, and provide habitat for secondary prey species such as red squirrels. The amount of habitat that would be affected is a relatively small amount in the context of an average lynx home range size; associated habitat effects (if any) would be temporary; present amounts of suitable habitat would remain in the project area and surrounding area and habitat connectivity and linkage would not be altered by the project. Adverse direct, indirect or cumulative impacts to lynx as a result of this project are expected to be minimal.

No known gray wolf denning or rendezvous sites occur within 1 mile of the project area. However, wolves may occasionally use the project area and occasional sightings have been noted in the area. Minimal risk of direct, indirect or cumulative effects that would result in harm to wolves would be anticipated.

The proposed project area falls within the range of wolverines. The DNRC is not aware of any specific observations of wolverines associated with the proposed project area, however, periodic or transient use of the proposed project area could occur. Activities associated with this proposal are expected to have minimal effect on wolverines.

No occurrence records for greater sage grouse exist for the QQLL (39A3) containing the project area. Extensive stands of sagebrush community types do not occur within or near the project area. No direct, indirect or cumulative effects to greater sage grouse would be anticipated.

Black-backed woodpeckers have been documented within the QQLL (39A3) that encompasses the proposed project area. Due to the small size of the proposed project only a minor potential for direct, indirect or cumulative effects to black-backed woodpeckers would be expected to occur.

No other threatened/endangered species, sensitive species or species of special concern have been documented within the proposed project area.

No adverse impacts are expected to threatened/endangered species, sensitive species or species of special concern.

(See Attachment D & E – Bear Canyon Timber Sale Wildlife Analysis; CLO Checklist for Endangered, Threatened and Sensitive species)

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

There are no cultural resource concerns associated with this proposed project. No measurable direct, indirect, or cumulative impacts are anticipated.

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.

The project area is visible to populated areas. Due to the topography, tree canopy cover, location, size and nature of proposed action, impacts concerning aesthetics are not expected.

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.

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.

Bear Canyon Timber Sale Project Environmental Assessment (August 2011).
Bear Canyon Fuels Reduction Timber Permit EAC (December 2005)

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.

Presently, hazard trees and possible human-caused fires pose potential health and safety risks. The existing unauthorized trail on the State parcel would continue to be used and a moderate increase in use over time may occur consistent with the area's population growth.

Mountain Pine Beetle have killed many of the mature lodgepole pine and have created a potential safety hazard. Users of the trail could be at risk to falling limbs and trees. Heavy public use of the trail poses the threat of human-caused fire.

Signage installed at trailhead, parking area, and along the trail would provide increased opportunities to educate and inform users about trail-use safety, procedures, etiquette, and fire risk, safe practices, and prevention opportunities. Dead trees within reach of the trail determined to be a safety hazard would be felled as a safety precaution under the trail maintenance plan.

With implementation of best practices and mitigation measures, direct and indirect effects to health and human safety are expected to be minimal.

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 are anticipated.

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 impact to quantity and distribution of jobs is anticipated as a result of this proposal.

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.

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

Currently, some law enforcement efforts may be required when unauthorized use or abuse occur within the project area. Though 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.

With implementation of the Action Alternative, recreational use of the area is anticipated to gradually increase over time and traffic patterns are thus also likely to increase on the roads providing access to the trailhead.

Increased presence of public users may limit the opportunities for potential violators. Implementation of the trail maintenance plan, and the trail monitoring and publication education proposed therein, may also help reduce misuse and law enforcement response required to the area.

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.

The DNRC adopted the Administrative Rules for State Land Surface Management (ARM 36.25.101 through 36.25.817), applicable to management activities on school trust lands.

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.

The existing trail, although used heavily by the general public, is currently not an authorized trail on State Trust Lands. Persons having legal access to the parcel and possessing a valid state lands general recreational use license or FWP conservation license may conduct specific recreational activities on the State tract. The proposed project would allow the State tract to be legally accessed with a designated open trail and would not affect the existing access for the general public.

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 activities.

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.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

No measurable disruption of social structures and mores is anticipated.

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.

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 estimates of return are based upon a per-acre fee.

The estimated return to the trust would be $8,437.50 (2.7 acres @ $3,125.00/acre).

EA Checklist Prepared By:	**Name:**	Chuck Barone	**Date:**	September 6, 2012
	Title:	Bozeman Unit Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative with stipulations: Allow 12-foot wide, public, non-motorized, permanent trail right-of-way easement on approximately 0.33 miles of existing trail and approximately 1.52 miles of new constructed trail would be granted, with additional mitigation measures, to the Proponent. Additionally, ~0.57 miles of existing trail would be closed and rehabilitated.

With the following stipulations:

1. Trail construction/rehabilitation will be broken into two phases allowing recreational use on half the trail during the construction/rehabilitation period. Notices and closure signs would be posted at the trail head and in the vicinity of the construction/rehabilitation zone prior to initiation.
2. All heavy equipment will be washed and inspected prior to mobilizing its use on the site. The Proponent is responsible for cleaning up all stakes and flagging at the end of the project.
3. Silt fences or slash filters will be used to prevent sedimentation into streams and draws during trail construction/rehabilitation/maintenance.
4. No live trees over 4 inches in diameter will be removed. Dead trees over 4 inches in diameter can be removed within 4 feet of trail. Dead hazard trees may be removed within falling zone of trail if determined to be a safety hazard. All logs would be cut and all brush trimmed to 4 feet from centerline of trail. Branches will be cut flush to trunk 10 feet above ground and 4 feet from centerline of trail. Stump height would be 6 inches.
5. Trail will be built to the best-practices specifications identified by the US Forest Service and the International Mountain Bicycling Association.

   Trail Specifications
   - Grade: 5% - 10% (max 12% on turns).
   - Outslope: 5% on all sections.
   - Trailbed width: 30 inches with side slopes up to 45%, 36 inches with side slopes greater than 45%.
   - Grade Reversals: every 150 feet on 5-8% grade, every 100 feet on 9% grade or greater.
   - Turns: sloped climbing turns with 6-8 foot radius, maximum grade of 12%. Grade reversals above and below all turns.
6. Abandoned segments of existing trail will be scarified with drainage features installed every 100 feet, and closed with downed forest materials. Seed would be gathered on site and raked into scarified sections of the reclaimed trail. The abandoned trail would be monitored for 2 years after reclamation to assure revegetation is successful. If needed, additional native grass seed will be spread to facilitate revegetation.
7. A maintenance plan for the trail will be developed and implemented by the Proponent. The maintenance plan would be subject to approval by the DNRC.
8. Annually in the spring, the Proponent will inspect the trail and clear it of downed vegetation and other debris. The Proponent will survey the current condition of the trail to identify erosion issues, noxious weed infestations, signage needs, and other problems that should be addressed. Throughout the summer months, GVLT staff and/or GVLT-led volunteer crews will complete the necessary work identified in the spring inspection, as well as clean up any garbage or other nuisance issues that may arise.

9. The new trail will be constructed with grade reversals to minimize erosion. If drainage or erosion issues arise, the Proponent will repair the trail using current best practices.
10. The Proponent will install and maintain signage as needed to keep people on the trail, identify public/private land boundaries, and educate trail users. The Proponent will monitor and work to minimize any side trails or short cuts created by users. If side trails develop and are identified during annual inspections, the Proponent will scarify the trail surface, rake in seed, and cover it with brush and other debris to deter use. If necessary, will install signs indicating that users should stay on the main trail.
11. Maintenance Plan: Issues to be addressed under plan

    Trail information/etiquette/safety
    Trail User education
    Signage (Info/education/notices/property boundaries)
    Annual inspection/maintenance log/reporting/Periodic plan update
    Noxious weed control
    Erosion control (grade breaks/waterbars/rolling dips)
    Sediment control (slash filters)
    Riparian Areas
    Debris removal
    Slash abatement
    Trail clearing (brush/limbs/stumps, etc.)
    Trail repair
    Trail construction specifications
    Trail rehabilitation specifications
    Hazard Tree removal
    Unauthorized Side trails
    Garbage cleanup
    Trespass onto adjacent landowners
    Monitoring
    Other nuisance issues

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I have determined that none of the anticipated environmental impacts outlined in the EA are significant according to the criteria outlined in *ARM 36.2.524.* I find that no impacts are regarded as severe, enduring, geographically widespread, or frequent. Further, I find that the quantity and quality of various resources, including any that may be considered unique or fragile, will not be adversely affected to a significant degree. I find no precedent for future actions that would cause significant impacts, and I find no conflict with local, State, or Federal laws, requirements, or formal plans. In summary, I find that the identified adverse impacts will be avoided, controlled, or mitigated by the design of the project to the extent that the impacts are not significant.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

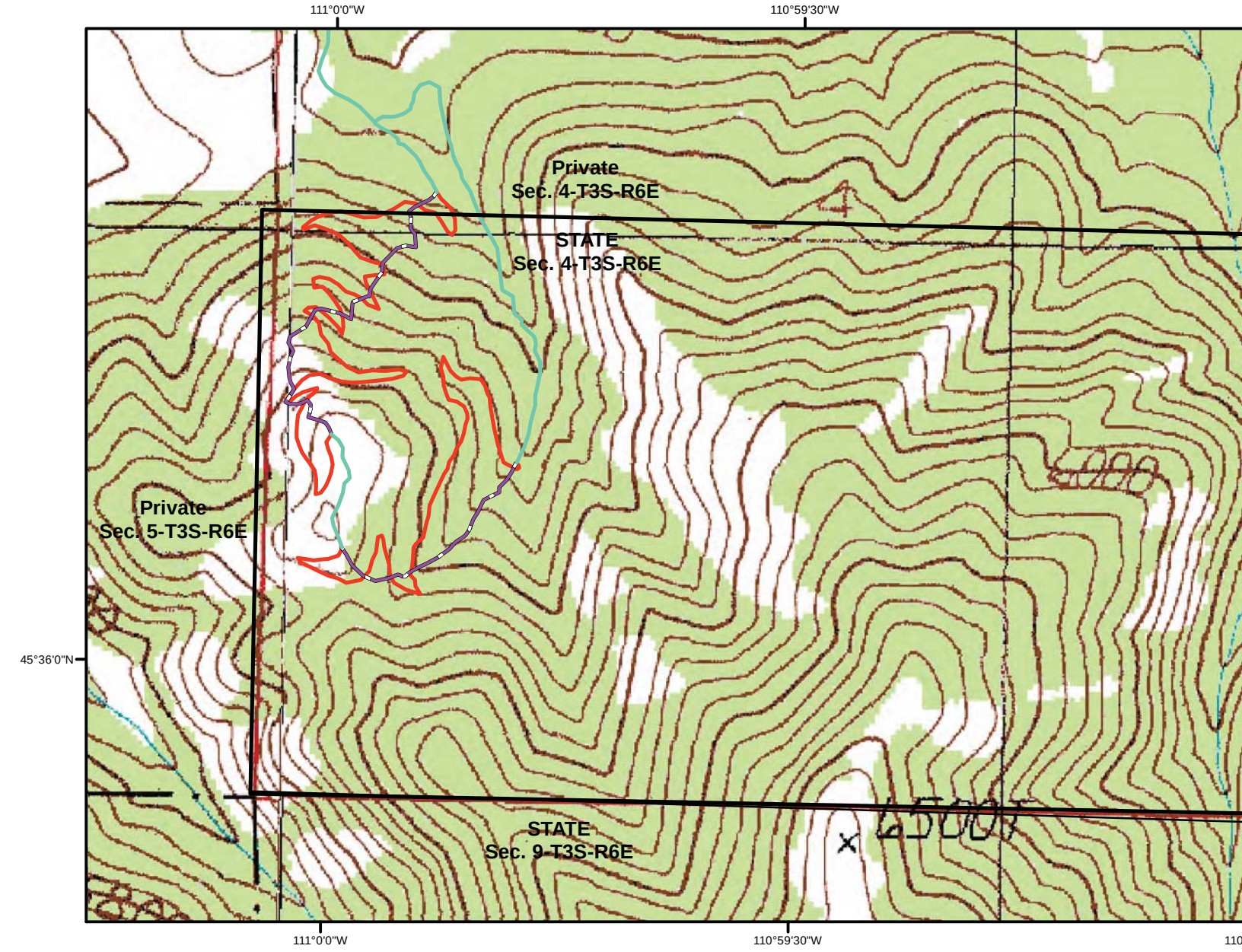
[ ] EIS [ ] More Detailed EA [X] No Further Analysis

EA Checklist Approved By:	Name: Craig Campbell Title: Bozeman Unit Manager	
Signature: Craig Campbell/s/		**Date**: 9/12/2012

ATTACHMENTS

Attachment A - Vicinity Map/Site Specific Map
Attachment B - Trail Maintenance Plan
Attachment E - CLO Checklist for Endangered, Threatened and Sensitive species

ATTACHMENT A
Proposed Triple Tree Trail Easement
S2 Sec. 4-T3S-R6E, Gallatin County



0 100 200 400 600 800 Feet

1 inch = 667 feet

Existing Trail to Remain Open

Proposed Exiting Trail Closure/Rehabilitation

ATTACHMENT A - Vicinity Map
Triple Tree Trail Easement
S1/2 Section 4-T3S-R6E, Gallatin County

ATTACHMENT B

Trail Maintenance Plan
Triple Tree Trail
State of Montana Section 4-T3S-R6W, Gallatin County

The Proponent will incorporate the trail specifications and best practices identified in the US Forest Service "Trail Construction and Maintenance Notebook" and "Standard Specifications for Construction and Maintenance of Trails" and the International Mountain Bicycling Association "Trail Solutions: IMBA's Guide to Building Sweet Singletrack" for all trail maintenance/repair, construction and rehabilitation.

Trail information/etiquette/safety/wildfire – The Proponent will install and maintain signage as needed to keep people on the trail, identify public/private land boundaries, and educate trail users. The Proponent will monitor and work to minimize any side trails or short cuts created by users. If side trails develop and are identified during annual inspections, the Proponent will scarify the trail surface, rake in seed, and cover it with brush and other debris to deter use. If necessary, the Proponent will install signs indicating that users should stay on the main trail. The trail will be posted as closed if public safety issues arose or if wildfire danger warrants a closure.

Trail user education – An information kiosk with map and etiquette information will be installed at the trailhead. Additional signs will be added as management needs change over time.

Signage (Info/education/notices/property boundaries) – Public notices will be posted at the trailhead and at major junctions along the trail. Private property boundaries near the trail corridor will be marked with no trespassing signs as needed. One State Land boundary sign presently exists and a second State Lands boundary sign will be added where the loop trail crosses the State Boundary.

Annual inspection/monitoring/maintenance log/reporting/periodic plan update - Annually in the spring, the Proponent will inspect the trail and clear it of downed vegetation and other debris. The Proponent will survey the current condition of the trail to identify erosion issues, noxious weed infestations, signage needs, and other problems that should be addressed. Throughout the summer months, GVLT staff and/or GVLT-led volunteer crews will complete the necessary work identified in the spring inspection, as well as clean up any garbage or other nuisance issues that may arise. A yearly maintenance report will be produced by the Proponent and its contents will be open to public review. The trail maintenance plan will be reviewed on an annual basis and updated as needed.

Noxious weed control – An inventory of noxious weed infestations will be mapped prior to construction. All construction equipment will be washed and inspected prior to working on the Triple Tree reroute. Weed infestations will be monitored each season and action taken to control their spread. These actions include: hand pulling, mechanical removal, and/or spraying. A certified chemical applicator will be employed for any spraying that is done on State Land and

approval from the Department of Natural resources and Conservation will be acquired prior to application.

Erosion control - (grade breaks/waterbars/rolling dips) Grade Reversals or rolling dips will be installed every 150 feet on 5-8% grade, every 100 feet on 9% grade or greater. The Proponent will repair the trail using current best practices.

Sediment control (slash filters) – Slash filters will be placed below rolling dips or grade breaks where streams or draws are adjacent to the trail.

Riparian Areas – These areas have been avoided in trail layout where ever possible. In areas where the old trail and/or the new trail may pass through riparian areas, disturbance to the ground and vegetation will be kept to a minimum.

Slash abatement – The Proponent will lop and scatter all slash from trees and shrubs that are removed during trail construction/maintenance to a depth of eighteen inches or less. Excess slash accumulations may require piling and burning by the Proponent.

Trail clearing (brush/limbs/stumps, etc)/Hazard Tree removal - No live trees over 4 inches in diameter will be removed. Dead trees over 4 inches in diameter may be removed within 4 feet of trail. All logs will be cut and all brush trimmed to 4 feet from centerline of trail. Branches will be cut flush to trunk 10 feet above ground and 4 feet from centerline of trail. Stump height will be 6 inches.

All hazard trees that are identified within falling distance of the trail will be removed during construction. Hazard trees that occur along the trail corridor after the trail construction is complete will be removed as part of the annual maintenance duties.

Trail debris removal – Soil that is excavated during trail construction will be used to build the foundation of the trail tread. Roots, rocks, and debris will be cleared from the tread and scattered in a 20 foot zone on either side of the trail.

Trail repair – Repairs will be based on problems found during the annual inspection, or reported by users during the year. If drainage or erosion issues arise, the Proponent will repair the trail using current best practices. The Proponent will work with partners and volunteers to take care of problems in a timely manner. Trail repairs that constitute immediate safety concerns will have the highest priority and be taken care of as soon as possible.

Trail construction specifications –

- **Grade**: 5% - 10% (max 12% on turns).
- **Outslope**: 5% on all sections.
- **Trailbed** width: 30 inches with side slopes up to 45%, 36 inches with side slopes greater than 45%.
- **Grade Reversals**: every 150 feet on 5-8% grade, every 100 feet on 9% grade or greater.
- **Turns**: sloped climbing turns with 6-8 foot radius, maximum grade of 12% grade. Grade reversals above and below every turn.

Trail rehabilitation specifications - Abandoned segments of existing trail will be scarified with drainage features installed every 100 feet, and closed with downed forest materials. Seed will be gathered on site and raked into scarified sections of the reclaimed trail. The abandoned trail will be monitored for 2 years after reclamation to assure revegetation is successful. If needed, additional native grass seed will be spread to facilitate revegetation.

Unauthorized side trails – Will be blocked with logs and limbs to prevent use. Educational signs may also be employed if unauthorized trail use continues.

Garbage cleanup – A pack in pack out policy will be utilized for this trail and information pertaining to this issue will be posted at the entry kiosk. The trail will be patrolled by the Proponent and volunteers on a regular basis and any garbage that is found will be removed.

Trespass onto adjacent landowners – The Proponent will post "no trespassing" signs along private/State boundaries where this issue may arise. More signs will be installed if trespass becomes a problem at any location. Social trails may be blocked with logs and branches to help prevent trespass. Law enforcement may be notified if additional assistance is needed. The Proponent will work closely with any affected private land owners to determine additional solutions.

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ATTACHMENT E

TRIPLE TREE TRAIL EASEMENT
CHECKLIST FOR ENDANGERED, THREATENED AND SENSITIVE SPEICES

Pertains to Section II. 9. of the DS-252 DNRC Environmental Checklist
(Rev. August 1, 2007)
CENTRAL LAND OFFICE

Prepared by Chuck Barone August 5, 2012

Threatened and Endangered Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
Grizzly Bear (*Ursus arctos*) Habitat: recovery areas, security from human activity	[N] The project area lies approximately 21 miles due north of the GYE grizzly bear recovery zone, and occurs at the northerly edge of the occupied habitat boundary described by Wittinger (2002). There have been a number of confirmed grizzly bear sightings in the Bear Canyon/Mount Ellis area during the last 34 years, 4 of which have occurred during the last 10 years (Kevin Frey, R-3, FWP Biologist, pers. comm., 5/02/11). Given the frequency and types of observations, it is possible that a few grizzly bears may periodically use the general area as part of their home ranges during the non-denning seasons (Kevin Frey, R-3, FWP Biologist, pers. comm., 5/02/11). There are currently high levels of recreational use that occur within the project area. The project area encompasses approximately 70 acres within the State parcel. Cover and habitat connectivity associated with riparian areas would not be altered. Ample amounts of hiding cover and connected mature forest patches would remain in the project area, which would maintain suitable cover conditions for grizzly bears, should they occasionally use the area. During trail construction and rehabilitation, disturbance from motorized equipment could disturb and displace bears, and habitat in the project area and nearby vicinity may temporarily be unusable due to the level of noise and activity. However, this disturbance would be short-term (<1 month) and minimal. The trail would be open to foot, horse and bicycle traffic. No public motorized access would be allowed in the project area. Adverse direct, indirect and cumulative impacts to grizzly bears as a result of this project are expected to be minimal.

Lynx (*Felis lynx*) Habitat: mosaics--dense sapling and old forest >5,000 ft. elev.	[N] The project area occurs outside of the Critical Habitat boundary, federal measures required under the Critical Habitat designation would not be applicable to this project. While many of the current forest cover types within the project area are considered suitable for use by lynx, most typically do not contain high horizontal cover comprised of subalpine and spruce bows described by Squires et al. (2010). Thus, even considering the common presence of several habitat attributes within the project area that are known to be important for lynx and snowshoe hares (eg. dense overstory canopy, dense shrubs and downed logs), habitat in this area is likely best suited as travel habitat or matrix habitat (USFWS 2009) that would facilitate movement, linkage, and provide habitat for secondary prey species such as red squirrels. The existing trail and project area receive heavy levels of human disturbance attributable to dispersed recreational activities during all seasons of the year. The project area encompasses approximately 70 acres within the State parcel. During trail construction and rehabilitation, disturbance from motorized equipment could disturb and displace bears, and habitat in the project area and nearby vicinity may temporarily be unusable due to the level of noise and activity. However, this disturbance would be short-term (<1 month) and minimal. The trail would be open to foot, horse and bicycle traffic. No public motorized access would be allowed in the project area. The amount of habitat that would be affected is a relatively small amount in the context of an average lynx home range size; associated habitat effects (if any) would be temporary; present amounts of suitable habitat would remain in the project area and surrounding area and habitat connectivity and linkage would not be altered by project. Adverse direct, indirect or cumulative impacts to lynx as a result of this project are expected to be minimal.

DNRC Sensitive Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
Gray Wolf (*Canis lupus*) Habitat: ample big game pops., security from human activity	[N] No known denning or rendezvous sites occur within 1 mile of the project area. However, wolves may occasionally use the project area and occasional sightings have been noted in the area (J. Cunningham, R-3 FWP Biologist, pers. comm. 4/13/11). Minimal risk of direct, indirect or cumulative effects that would result in harm to wolves would be anticipated. If wolves or an active den site were detected in the immediate area, operations would cease, and a DNRC biologist would be consulted. Appropriate mitigations would be developed and applied prior to resuming activities.
Bald Eagle (*Haliaeetus leucocephalus*) Habitat: late-successional forest <1 mile from open water	[N] No bald eagle nests, feeding areas, roosting areas or suitable nesting habitat occur within 1 mile of the project area. Thus, no direct, indirect or cumulative effects to bald eagles would be anticipated.
Black-Backed Woodpecker (*Picoides arcticus*) Habitat: mature to old burned or beetle-infested forest	[N] Black-backed woodpeckers have been documented within the QQLL (39A3) that encompasses the proposed project area MNHP 2012). Stands found within the proposed project area are presently experiencing moderate insect activity and could attract birds. Foraging and nesting opportunities are likely to increase in the area due to present increase in insect activity. No recent burns (≤5 years old) have occurred within the State tracts or adjoining sections. Due to the small size of the proposed project only a minor potential for direct, indirect or cumulative effects to black-backed woodpeckers would be expected to occur.
Black-tailed Prairie Dog (*Cynomys ludoviscianus*) Habitat: Prairie, shortgrass prairie, badlands	[N] Black-tailed prairie dogs have not been documented in the project area or surrounding vicinity (MNHP/FWP Montana Field Guide -- search 6/24/2012). No grassland habitat suitable for use by black-tailed prairie dogs occurs in or near the project area. Thus, no direct, indirect or cumulative effects to prairie dogs would be anticipated.
Flammulated Owl (*Otus flammeolus*) Habitat: late-successional ponderosa pine and Doug.-fir forest	[N] The project area occurs on the fringe of the distribution of flammulated owls in Montana, and warm forest types suitable for use by flammulated owls do not occur in or near the project area. No direct, indirect or cumulative effects to flammulated owls would be anticipated.
Greater Sage-grouse (*Centrocercus urophasianus*) Habitat: sagebrush semi-desert	[N] No occurrence records for greater sage grouse exist for the QQLL (39A3) containing the project area since 1991 (Skaar 2003, MNHP/FWP Montana Field Guide -- search 6/24/2012, and MNHP 2012). Also, extensive stands of sagebrush community types do not occur within or near the project area. No direct, indirect or cumulative effects to greater sage grouse would be anticipated.

Harlequin Duck (*Histrionicus histrionicus*) Habitat: white-water streams, boulder and cobble substrates	[N] No known streams supporting harlequin ducks occur within or near the project area, and no recent observations (within the last 15 years) have been reported for the general area (MNHP/FWP Montana Field Guide -- search 6/24/2012, and MNHP 2012). No direct, indirect or cumulative effects to harlequin ducks would be anticipated.
Mountain Plover (*Charadrius montanus*) Habitat: short-grass prairie, alkaline flats, prairie dog towns	[N] No grassland habitat suitable for use by mountain plovers occurs within or near the project area. No direct, indirect or cumulative effects to mountain plovers would be anticipated.
Northern Bog Lemming (*Synaptomys borealis*) Habitat: sphagnum meadows, bogs, fens with thick moss mats	[N] No sphagnum meadows, bogs or fens occur within or near the project area, and the project area occurs outside of the known distribution of northern bog lemmings in Montana (MNHP/FWP Montana Field Guide -- search 6/24/2012). Thus, no direct, indirect or cumulative effects to bog lemmings would be anticipated.
Peregrine Falcon (*Falco peregrinus*) Habitat: cliff features near open foraging areas and/or wetlands	[N] Cliff features or suitable foraging areas do occur within 0.75 miles of the project area, but no known nest sites occur within or near the project area. No direct, indirect or cumulative effects to peregrine falcons would be anticipated.
Pileated Woodpecker (*Dryocopus pileatus*) Habitat: late-successional ponderosa pine and larch-fir forest	[N] Although the project area occurs outside of the normal distribution of pileated woodpeckers in Montana, one observation has been recorded within the QQLL (39A3) that encompasses the proposed project area. No direct, indirect or cumulative effects to pileated woodpeckers would be anticipated.
Townsend's Big-Eared Bat (*Plecotus townsendii*) Habitat: caves, caverns, old mines	[N] No caves, caverns, or old mines suitable for use by bats occur within 1 mile of the project area. Thus, no direct, indirect or cumulative effects to Townsend's big-eared bats would be anticipated.

* MNHP/FWP Montana Field Guide 2012. Montana National Heritage Program 2012. National Heritage Tracker 2012. Baty, R. 2011. Bear Canyon Timber Sale Wildlife Analysis.