

South Hills Spur Recreation Management Plan

The South Hills Spur recreation management plan describes priorities and management on the South Hill Spur Property to balance recreational impacts with conservation goals. This plan also describes the trail system, trail use designations, public access points, and signage locations. The South Hills Spur Property is a Conservation Land and broad land management goals for the Property are defined in the Conservation Lands Management Plan.

The South Hills Spur properties were acquired by the City through a series of property donations and land acquisitions facilitated by Five Valleys Land Trust (FVLT). There are several legal documents which direct management decisions on the South Hills Spur property. These include the following access easements: DeMarois driveway, Stone Mountain Access Road, the Barmeyer's driveway, and the City's administrative access across the Barmeyer's property; a management agreement to protect Missoula's viewshed of the scenic overlook; and a grazing lease on the Southwestern corner of the property (locations shown on Map 1). In 2016, an inventory of natural resources, natural history and human use was completed by the Missoula Parks and Recreation Department (MPR) and the Conservation Lands Advisory Committee ranked resource values on the Property. In February 2016, the Missoula Parks and Recreation Board designated the Property as a *Park Preserve* as defined in Missoula's Conservation Lands Management Plan. These legal documents, inventories and the management priorities described for a *Park Preserve* provided guidance for the development of this recreation management plan. Copies of all documents are available upon request.

1. Naming:

Assigning names to specific trailheads and trails is an important component of wayfinding on City Conservation Lands. The intent of the following recommendations are to supply basic place names for the Property and to recognize donations of land and access easements which made this project possible. Future naming rights on this Property should follow the official naming policy adopted by the MPR Department and Board.

The Barmeyer Family: For decades the Barmeyer family managed their property for wildlife habitat and have allowed adjacent neighbors to recreate on their property. This South Hills Spur conservation project began with the donation of 97 ac. from the Barmeyer family. It was this donation that encouraged adjacent landowners to also sell their properties for public Open Space. As part of this project the Barmeyer family also placed a conservation easement on the 43 ac. they retained adjacent to the South Hills Spur Property. The Barmeyer family currently has an easement across City property to access their residence (shown on Map 1).

To memorialize the Barmeyer's donation and long history of responsible land management and open public access the MPR recommends naming the trailhead on Pattee Canyon Drive the "Barmeyer Trailhead" and the main loop trail around the property they donated to the City as the "Barmeyer Loop Trail". See Map 1.

Mike Sousa: Many of the properties purchased as part of the South Hills Spur project were either slated for development or highly developable. This greatly increased the value of these properties and complicated fund-raising efforts. When FVLT purchased 40 acres from Mike Sousa as part of the project Mr. Sousa donated a significant amount of the appraised value of the property and sold the property below the appraised value. During negotiations, Mr. Sousa requested, through FVLT staff, something on the property be named after him in recognition of his donation.

To memorialize Mike Sousa's donation the MPR recommends naming the trailhead at the end of the DeMarois' driveway the "Sousa Trailhead". See Map 2.

The South Hills Spur Property: Between 2015 and 2017 as land conservation efforts in this area of the South Hills progressed the name "South Hills Spur" was created by FVLT and used to raise awareness and support for the project. FVLT is still actively working to preserve more land in this area as part of their "Mt. Dean Stone Project", as described in Map 2. An additional 73 acres due south of the South Hills Spur property have already been purchased with the intent to sell this land to the City if the City is able to secure additional Open Space bond funds in the near future.

Given the nature of land acquisition in this area and the potential for expansion of this Conservation Land system the MPR recommends that the Missoula Parks and Recreation Board explore options to rename the South Hills Spur property before it officially opens to the public.

2. Trails, Trailheads and Signage:

Trails and Trail Use Designations: In the Fall of 2016, Conservation Lands Management staff mapped multiple potential trail routes across the South Hills Spur Properties. The trail routes depicted in Map 3 conform to trail construction guidelines adopted by MPR. In total, this plan recommends establishing a 3.64 mile trail system the South Hills Spur property. The 2016 Property inventory documented a significant amount of trails and roads already on the Property. Approximately, 2.64 miles of this trail system will require new construction and 1 mile of trail will require improvement of existing trails/roads. To reduce impacts to natural resources

1.8 miles of pre-existing trails and roads will be closed and restored. All trail construction and trail/road restoration is broken into rough phases and described on Table 1 and Map 3.

Table 1: A schedule for trail construction and closure/restoration of existing trails and roads. Works described in Phase 1 is planned for 2017 with Phase 2 in 2018. Implementation of Phase 3 is dependent on funding, needs and/or agreements with adjacent landowners.

PHASE 1		
ACTIVITY	INFRASTRUCTURE	LENGTH (miles)
Close & Rehab	Road	0.75
	Trail	0.47
	TOTAL:	1.22
Construct	Non-motor. Trail	1.08
	Ped.-only Trail	0.94
	TOTAL:	2.02
PHASE 2		
ACTIVITY	INFRASTRUCTURE	LENGTH (miles)
Close & Rehab	Road	0.04
	Trail	0.28
	TOTAL:	0.32
Construct	Non-motor. Trail	0.89
	Ped.-only Trail	0.06
	TOTAL:	0.96
PHASE 3		
ACTIVITY	INFRASTRUCTURE	LENGTH (miles)
Close & Rehab	Road	0.27
	Trail	0.00
	TOTAL:	0.27
Construct	road	0.09
	Non-motor. Trail	0.13
	Ped.-only Trail	0.45
	TOTAL:	0.67

Restoration of existing trails and roads will vary according to the level of natural regeneration. In most cases, covering the trail/road bed with wood slash to dissuade public use and planting bare soil with native plants to improve revegetation will be required. The road which wraps around the knoll (due south of the Scenic Overlook, Map 1) is an exception. This road is a scar on the landscape and provides an excessive and circuitous route for City

maintenance vehicles which will occasionally access the site. Re-contouring and replanting this road to match the existing landscape will be necessary to protect viewshed values, improve recreational experiences and reduce long-term road maintenance costs. Demolition and restoration of this road and construction of a replacement access road is scheduled for Phase 3 of trails plan implementation.

This property provides an important link between neighborhoods in Missoula's South Hills and Pattee Canyon road. Only a few acquisitions or easements would be required to expand this trail system further up the flanks of Mt. Dean Stone or connect it to existing public trails on Mt. Sentinel. This Plan includes a non-motorized thru-trail connecting the Sousa trailhead to the Barmeyer trailhead (Map 3). Completion of this thru-trail is anticipated to take two years (phase 1&2). To reduce the potential for usage of existing trails scheduled for closure and/or trespass onto adjacent private property public-non motorized trails scheduled for completion in Phase 1 will be designated as pedestrian-only until the thru-trail connecting the Sousa trailhead to the Barmeyer trailhead is complete. An additional non-motorized spur trail connects this thru-trail to road systems that climb south onto areas currently owned by FVLT. Construction of this spur trail is described in Phase 3 and it's construction would be dependent on agreements with FVLT or future property acquisitions by the City.

Pedestrian-only trails are described on the east side of the property, extending to the scenic overlook, and connecting to the road systems that climb south onto areas currently owned by FVLT (Map 3). The east side of this Property is the steepest part of the property and trail construction will be challenging. CLM Plan trail guidelines allow for ped-only trails to be constructed at a steeper grade, with narrower treads, and with switchbacks of tighter radii than what is required for non-motorized trails. Constructing ped-only trails on the east side of the Property will allow for construction of a more direct route with fewer disturbances, and will decrease trail construction costs. One of the most distinguishing characteristics of the South Hills Spur Property is the grassy knoll which provides a scenic overlook of the Missoula Valley. Managing recreational use to the scenic overlook may become especially challenging as this location will likely experience a high level of use. To reduce the potential for user conflict, trail widening and potential impacts to native flora this out-and-back trail has been designated as pedestrian only.

Trailheads and Signage: Locations for all trailheads and approximate placement of signage is depicted on Map 4. Trailhead construction and sign placement schedules coincide with the trails they serve as outlined in Map 3.

This plan recommends development of two Secondary Trailheads and one Neighborhood Access point (Map 4). As defined in the CLM Plan, the development of Secondary Trailheads include standard MPR trailhead information signs, parking for 2-8 vehicles, a trail

map, bike rack, trash cans and a mutt-mitt dispenser. Neighborhood Access Trailheads contain basic informational signage but additional infrastructure is dependent on need.

Directional signs across the property will be constructed of wood routed with place names, directional arrows, and mileage to match MPR standard directional signs already installed across other Missoula's Conservation Lands. At intersections of non-motorized & Pedestrian-only trails additional trail use signs will be posted with directional signage. In order to limit trespass onto private property and to comply with legal access easements additional signs to restrict public access are necessary at three locations: along the City's administrative access; on the Stone Mountain Access Road; and on the Barmeyer's Driveway. The purpose of trail closure signage is to notify the public of trail closures and restoration efforts. This signage is temporary and will be removed following successful restoration of closed trails. The development of interpretative signage on the Scenic Overlook is discussed in subsequent sections.

3. Additional Considerations:

Inventories conducted by CLM employees and resource values documented in the Conservation Lands Advisory Committee's "New Parcel Score Sheets" identified multiple natural and social resources which should be considered in management of this parcel. Information from these inventories was critical in the development of the recreation management strategies described in sections 1 & 2 of this document and documented additional site-specific considerations are necessary to balance potential recreational impacts with conservation values outlined in Missoula's CLM Plan.

Development of the Scenic Overlook: As documented by the Conservation Lands Advisory Committee and based on current public use patterns on the Property the scenic overlook is a potential destination for future recreationists. To protect scenic values around the Scenic overlook special protection zones limiting the construction of certain infrastructure (eg. shelters, statues, restrooms, trash receptacles, some trails) were documented in a management agreement between FVLT and the City. According to City inventories the knoll surrounding the scenic overlook contains some of the most intact rough fescue grasslands and crypto-biotic crusts on the property. Unfortunately, road building, the installation of multiple power boxes to prepare the property for development, and damage from decades of unauthorized vehicular use have degraded grasslands on top of the knoll. Site-specific plans to remove road and utility infrastructure and restore native plant communities must be developed.

Construction of the Scenic overlook trail should include placement of unobtrusive physical barriers (eg. small-boulders, wooden rails etc.); and include signage to limit the potential for trail braiding and/or off-trail traffic by recreationists (and their dogs). As an out &

back trail this trail should be sufficiently wide to allow for two pedestrians to pass without stepping off trail. At the Northern terminus of the trail unobtrusive physical barriers should be placed to denote the end of the trail. The placement of interpretative signage at this location will also help define the “end of the trail” while educating the public about the area. The MPR department should work with local non-profits to develop content and funding for interpretative signs at this location, with content to be approved by the MPR Board. Rock boulders that double as benches, blend into the landscape (versus constructed wooden benches) and require no maintenance will provide a place for quiet reflection. Final placement of all signage, benches and trails in this area must minimize impacts on scenic and natural resource values and should not violate the FVLT/City management agreement. To further limit potential for disturbances to this location the Parks and Recreation Department will on permit special events on the trail to the Scenic overlook.

Protection of Important Habitats: Several of the habitats documented in our inventory will require additional measures to limit damage from construction of recreational infrastructure and/or protect them from future recreational impacts. A natural seep with unique plants and potential habitat for native herptiles is located where the main trail crosses the Barmeyer’s driveway. Trail construction should be located as far from the seep as possible. Site surveys for rein orchids will be conducted within the trail corridor and these plants will either be avoided or transplanted outside the trail corridor. All trail construction directly uphill from the seep should implement temporary erosion controls to prevent sedimentation into the collection pool adjacent to the road. Use of rock-underdrains, French drains, rock-burritos or culverts may be necessary if trail construction crosses “seepy” ground.

Approximately, .7 miles of new trail construction on site is located within intact, near pristine rough fescue grasslands. Native plants will be salvaged from the trail corridor during trail construction and transplanted into trail edges; onto adjacent trail closure/restoration areas; or held-over in the MPR greenhouse for future use on the Property. All bare ground generated from trail construction will be repeatedly seeded with a site-specific native seed mix until native plants establish. New trails will be walked annually for a minimum of 2 years and non-native invasive plants within the trail corridor will be chemically treated or mechanically removed per, best practices and the CLM Plan.

The Barmemyer Trailhead is located adjacent to but roughly 20 ft. above Pattee Creek. During construction of the trailhead it may be necessary to implement temporary erosion controls to reduce the potential for run-off into the Creek. A parking area is already constructed at this location. Regrading this parking area may be necessary to ensure it drains away from the Creek. In general, there are no good locations for the public to access Pattee Creek on City Property and access to the creek should be discouraged. A new post and rail fence will need to be built around the parking areas/trailhead to limit public access to Pattee Creek. Additionally,

if vehicular trespass up the Barmeyer's driveway repeatedly occurs a new access gate may need to be installed at Pattee Canyon Drive.

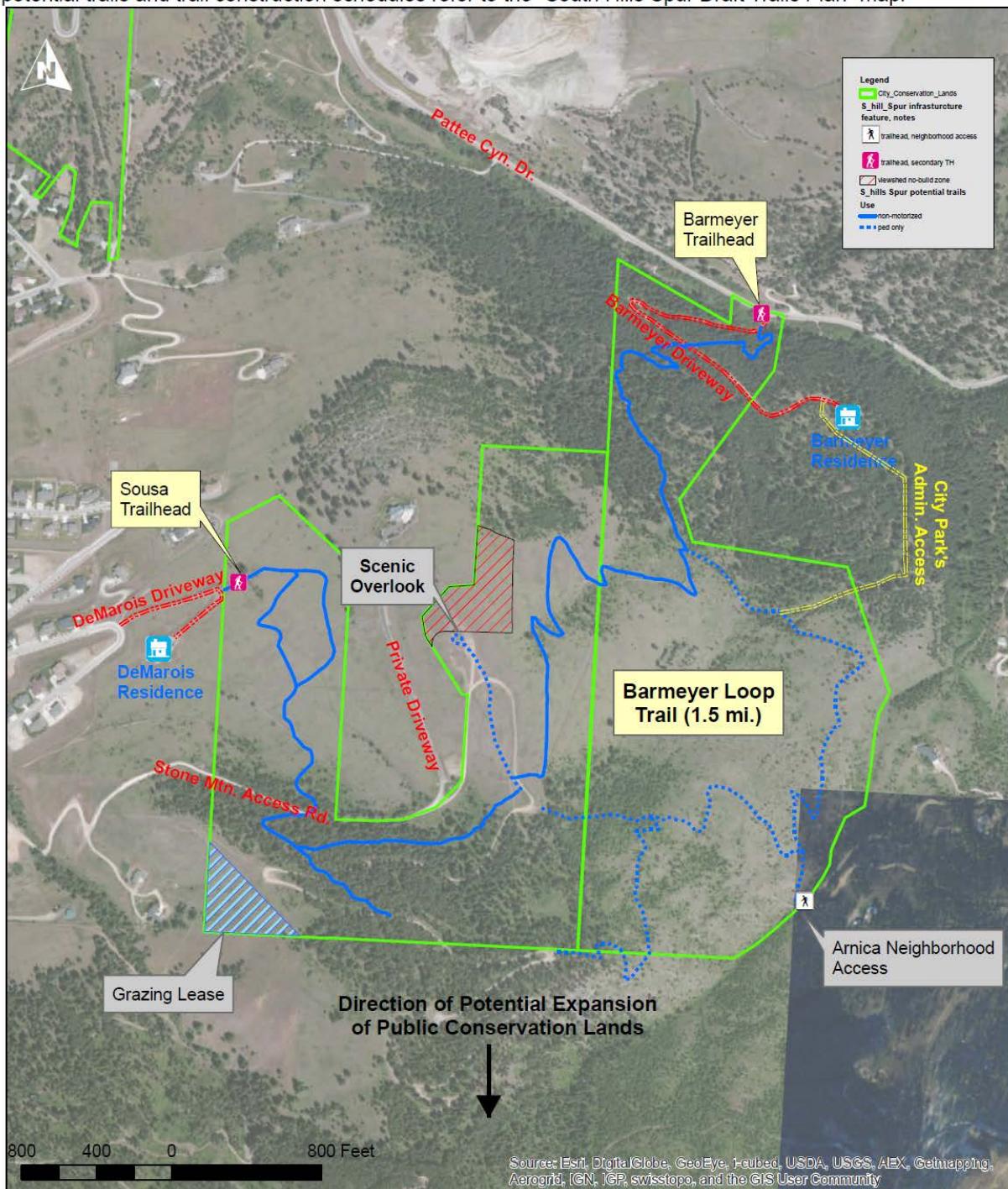
Domestic Dog Restrictions: The MPR inventory of natural resources on the Property documented only two wildlife species of concern present on the property, the Cassins Finch and Olive-sided flycatcher. Both of these birds prefer open woodlands and forest edges and nest in coniferous trees. It is unlikely that either species would be impacted by domestic dogs (or public use) on the Property. While off-leash dogs can cause impacts to vegetation along trails this is most often associated with trails on open-flat terrain with high levels of dogs use. With the exception of the Scenic Overlook trail no trails on the Property are located on flat ground. Currently, the Property is located outside the City limits where no leash laws exist for domestic dogs, but eventually the property will be annexed into the City Limits. Unless future monitoring efforts document a valid reason for dogs to remain on-leash the MPR department recommends designating the South Hills Spur Property as an "on-voice restraint" area as defined in Missoula City Ordinance 6.07.020.

Potential for Seasonal Closures: The MPR resource inventory on the South Hills Spur Property documented no critical habitats or essential resources for native plants and wildlife which would necessitate a seasonal closure. City staff, CLAC members and Fish Wildlife and Parks biologists did document occasional use of the Property by wintering elk but the overall use of this property for winter range is not well understood. Efforts to better understand the importance of the flanks of Mt. Dean Stone as elk winter range are underway. MPR staffs do not recommend placing any seasonal closures on the South Hills Spur Property. However, if public acquisition of Open Space up the flanks of Mt. Dean Stone continues there may be a need to impose seasonal closures if these future acquisitions include areas critical for winter range.

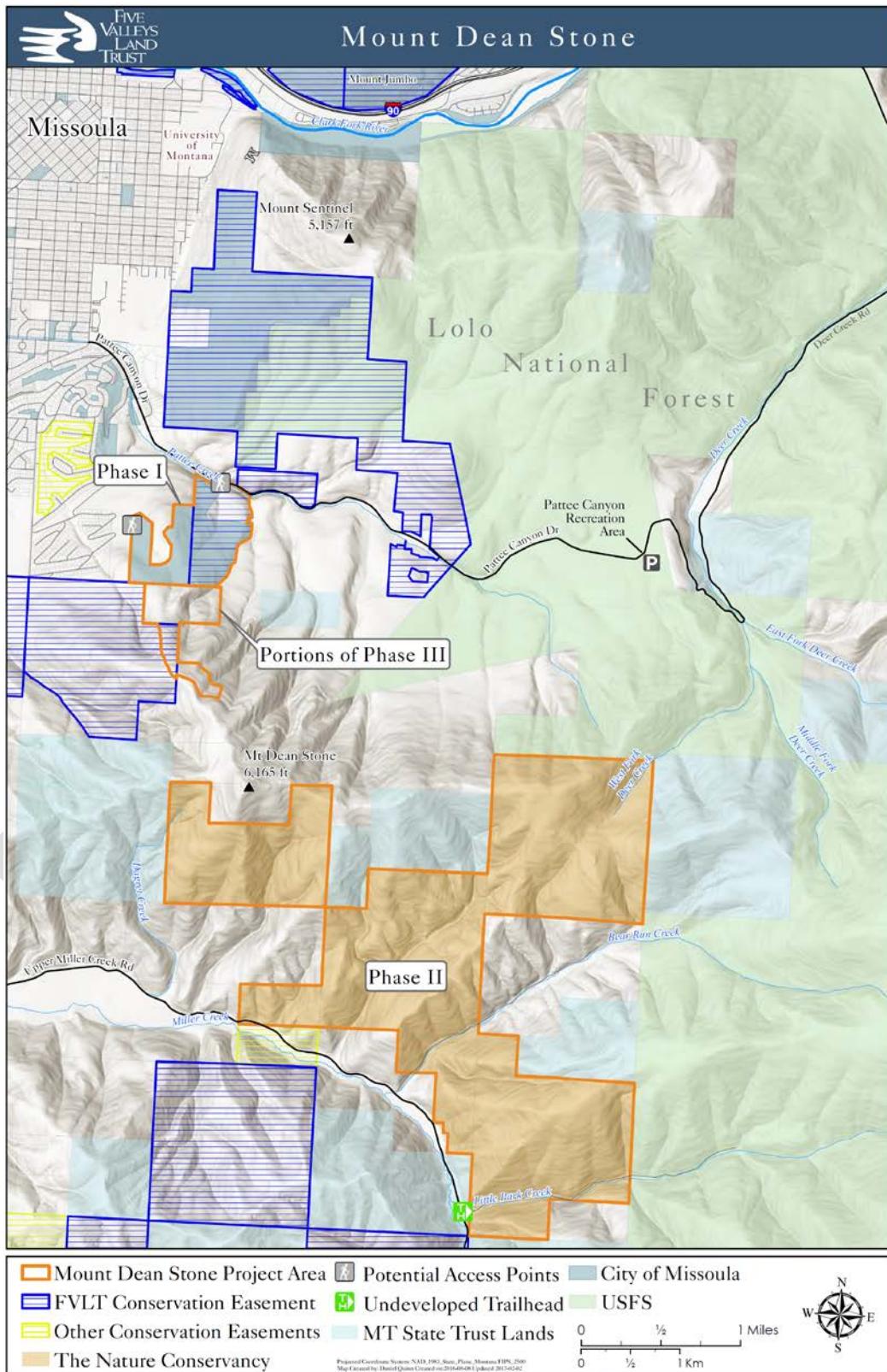
MAP 1:

SOUTH HILLS SPUR RECREATION PLAN ORIENTATION MAP

This map depicts landmarks, potential place names and potential trails on the South Hills Spur Property. All place names in yellow text boxes are proposed for adoption by the Missoula Parks & Rec. Board. Only one of the two potential routes adjacent to the Sousa Trailhead will be constructed. For a full description of potential trails and trail construction schedules refer to the "South Hills Spur Draft Trails Plan" map.



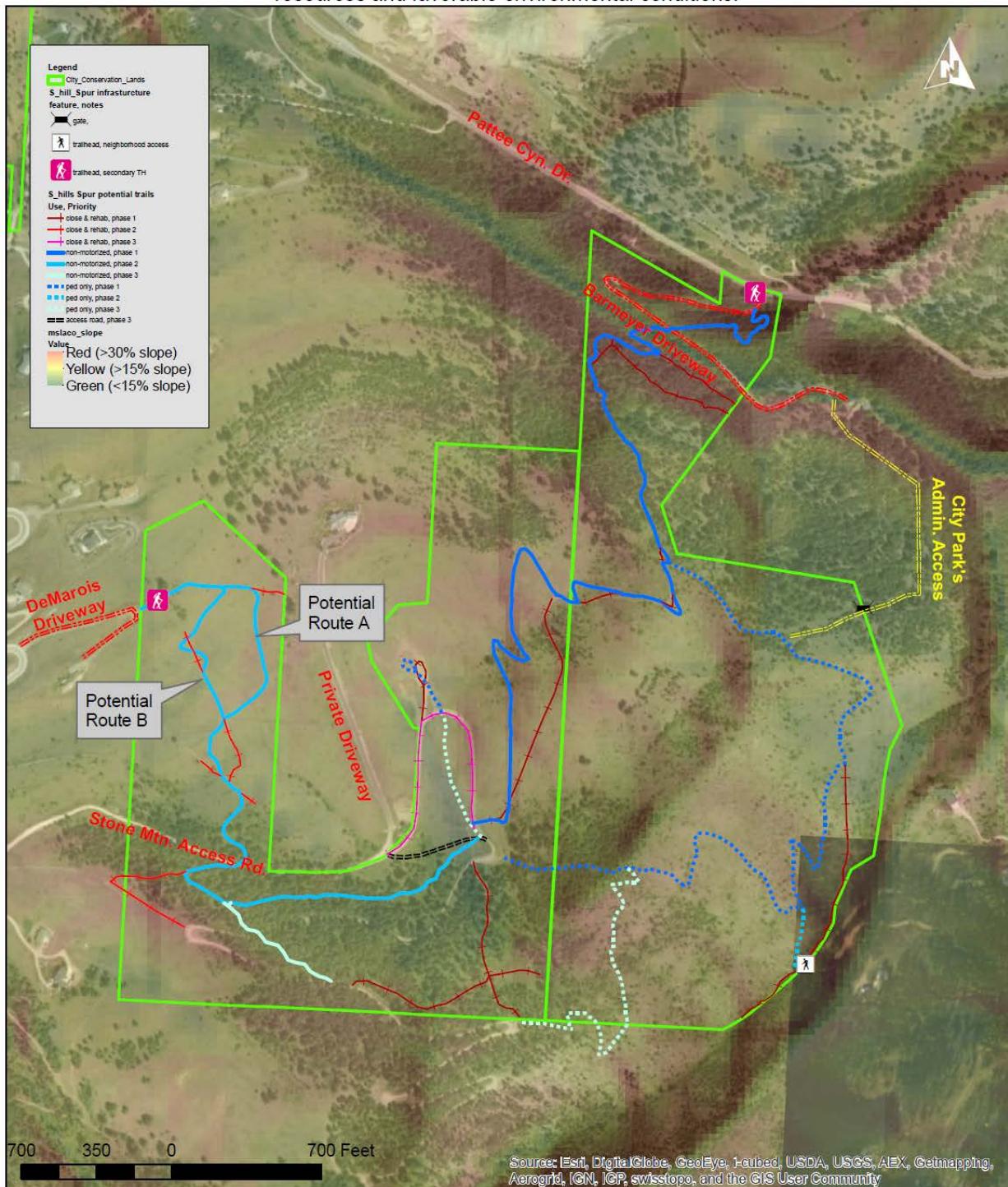
MAP 2:



MAP 3:

SOUTH HILLS SPUR RECREATION PLAN TRAILS MAP

This map depicts trail routes, trail-use designation, and trailheads. Phase 1 work will be conducted in 2017 with Phase 2 in 2018. Phase 3 is dependent on funding, needs, and/or agreements with adjacent landowners. Only one of the two potential routes adjacent to the Sousa Trailhead will be constructed. Both route options need to be walked and assessed to determine suitability. Completion of all work is dependent on available resources and favorable environmental conditions.



MAP 4:

SOUTH HILLS SPUR RECREATION PLAN SIGNAGE MAP

This map depicts trailhead type, sign type and locations of this infrastructure. Level of development for Secondary Trailheads and Neighborhood Access Trailheads is defined in the Conservation Lands Management Plan. The majority of this signage will be posted in Phase 1&2 of trail construction. Closure signage is not permanent and will be removed when closed trails are sufficiently recovered.

