

DRAFT

South Hills Trails Plan

A Sub-plan of the Helena Open Lands Management Plan



**Prepared by the Prickly Pear Land Trust
For the
City of Helena Parks and Recreation Department and the
Helena National Forest**

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I. Introduction

Purpose and Need of the Plan

The Helena area is blessed with an extraordinary system of open space and trails directly adjacent to the downtown and residential neighborhoods. With more than 1,600 acres of City owned public open space and adjoining Helena National Forest lands, residents and visitors to Helena have access to thousands of acres of public land “just outside the backdoor”. Connected by a system of trails, this amenity is unique for a city of Helena’s size. It is an amenity that many Helenans cherish and use daily for a variety of activities.

Over the years, several planning efforts have considered open space planning and trails in the South Hills. In 1995, the City of Helena and the Helena National Forest prepared the *Mount Helena Management Plan*. This plan, inspired by concerns over trail conflicts on Mt. Helena focused on the lands within the park as well as the Forest Service Lands along the Mt. Helena Ridge Trail. Since 1995, over 200 acres of lands has been added to Mt. Helena City Park. The 1998 *Comprehensive Parks, Recreation and Open Space Plan* commissioned by the City of Helena and Lewis & Clark County focused mainly on public parks. The Helena Area Linked Open Space plan (HALOS) created by a group of interested trail advocates in 1997, envisioned a series of trails and linked open space corridors throughout the Helena Area. This plan never went through an adoption process. Up to now, however, there has never been a comprehensive plan specifically for the analysis, maintenance and development of trails in the South Hills.

The need for such a plan is clear. Only about 18 of the 75 miles of mapped trails in the South Hills planning area are currently designated as recognized trails. The majority of the trail system was never constructed to recognized standards and is not regularly maintained by land management agencies. As a result, some of the “unofficial” trails are in poor condition showing signs of erosion and unsustainable routing. Additionally, this system had not been inventoried or mapped until now. Trail users had little usable information regarding the trail system and management agencies had no data regarding the location and conditions of the routes on their respective lands. Moreover, some granting entities are reluctant to contribute to proposed projects without a comprehensive plan and corresponding public input process.

The desired result of this plan is to present a clear outline of steps that will help the City of Helena, the Helena National Forest and other groups and agencies create a unified network of trails that is understandable, maintainable and accessible. In addition, an adopted trail plan will demonstrate to granting agencies and organizations that the necessary planning and public outreach have been accomplished. A unified trail system in Helena’s South Hills is a key component to the health of the open space system and can be a “showcase” amenity for residents and visitors to the area.

To guide this process the plan contains both general and site specific recommendations for the overall improvement of the trail system. These recommendations include trail maintenance, locations for new trails and trailheads as well as the obliteration/rehabilitation of existing trails that will not be retained. This document should be considered a five-year plan.

Location and Character of the Planning Area

The area incorporated by this study is defined by:

East: the Donaldson open space property to the east of Saddle Drive

West: Mt. Helena Ridge Trail

South: Cox Lake area

North: Upper West Side, South Central and Upper East Side residential neighborhoods.

The study area is approximately 20 square miles in size.

The land within the study area is owned by the City of Helena, the Helena National Forest and private individuals. There are also several small tracts of Bureau of Land Management lands within the study area. While this plan focuses primarily on public lands, some trails cross private lands and this issue is addressed in the recommendations.

The terrain within the planning area consists of a series of rugged rolling hills dissected by dry gulches. Vegetative cover includes dense coniferous forest to open grassy meadows. The moist gulch bottoms are interspersed aspen and other deciduous trees and shrubs. The tops of many of the hills offer excellent views of the surrounding lands including spectacular views of the City, the Helena Valley and surrounding mountain ranges. The elevation of the study area ranges from about 4,100 feet above sea level in downtown Helena to nearly 6,000 feet in the southern end of the planning area.

A vast system of trails ties this mosaic of landscapes together. This trail network leads to hidden gulches, wildflower-filled meadows and scenic panoramas. In just minutes, a hiker or biker can be in what feels like a distant wilderness. The challenging nature of some of the trails is one element that makes Helena's trails unique and special.

Clues to Helena's history are scattered throughout the area including mine ruins, limestone kilns, city dumps and historic wagon roads. Many of these industrial ruins on public and private lands are currently on, or are eligible for listing in the National Register of Historic Places—a listing of significant heritage properties maintained by the Department of Interior. Protecting the integrity of these ruins from vandalism, destruction and natural degradation is important to many Helena area residents. At the same time, some of these ruins offer opportunities for interpretation along the trail system.

Several county roads radiate from downtown Helena into the South Hills serving the National Forest destinations as well as residential areas. These roads play an important role for access to the trail system.

Trail planning process and public input

In the spring of 2001 the City of Helena Parks Department hired the Prickly Pear Land Trust as its trails coordinator on a contract basis. This contract, funded by open space bond funds, entailed trail planning, organizing volunteer work events, grant writing and public outreach. In the process of grant writing and planning trail related events, the need for a comprehensive trail plan was apparent. There were no clear priorities for trail projects nor a publicly supported planning document to show potential grantors. As a result, PPLT recommended to the City that a trails planning effort for the South Hills be initiated. Because much of this trail system lies on

Helena National Forest land, forest officials were also asked to participate in this planning process.

The planning process was tailored to gain as much public input as possible. The Prickly Pear Land Trust contacted and interviewed user groups, stakeholders, private property owners and other interested parties to get a sense of what they would like to see in the trails plan. Some of these meetings were held in a public forum such as a group's monthly meeting. Others were one-on-one meetings with interested individuals. A summary of the themes heard at these meetings and interviews can be found in Appendix E. Additionally, information has been posted in the Helena City Parks' website at www.ci.helena.mt.us/parks. The website also provides contact information for comments and questions. The plan also was presented at several public meetings to gather additional comment. The South Hills Trail Plan was adopted by the Helena City Commission on _____, 2003.

OSBAC, HOLMAC and the Open Space Management Plan

In 1996, Helena voters approved a \$5 million bond to fund the acquisition and management of open space and the construction of parks. Guided by the Open Space Bond Advisory Committee (OSBAC), over 700 of the City's 1,600 acres of open space were purchased with open space bond funds. With its open space holdings nearly doubling in four years, the City decided to dedicate a portion of the remaining open space funds towards an Open Space Management Plan. In early 2001, a volunteer committee, named Helena Open Lands Management Advisory Committee (HOLMAC), agreed to hire and guide a consultant through the Management Plan effort. In March 2002 a consultant was chosen from four proposals submitted to HOLMAC. The Management Plan will study a broad variety of issues affecting open space in the South Hills including ecology, weeds and wildlife. This South Hills Trail Plan prepared by the Prickly Pear Land Trust will serve as a sub-plan to the Open Space Management Plan. There may be some overlap between the two plans on some issues, but generally this plan will address issues related directly to trails.

II. State of the Trails today

Non-motorized recreationists and outdoor enthusiasts are the primary users of the open space system in the South Hills. Trails in the planning area are popular for hiking, walking, jogging, mountain biking and if conditions allow, cross country skiing. In addition, horseback riding and hunting occur on HNF lands in the South Hills. Some use the trails for an intense physical work out, while others are simply out to observe nature. This diversity of opportunities is a great amenity.

According to preliminary mapping estimates, there are approximately 75 miles of trails within the study area. Yet only about 25% of the total trail mileage is officially designated by either the City of Helena or the HNF. On City owned lands in the South Hills, only the primary marked trails on Mt Helena have been officially designated. This plan will determine trail designation on newly acquired open space lands. On HNF lands officially designated trails are the Rodney Ridge Trail, the Waterline Trail and the Mt. Helena Ridge Trail. The remaining routes consist of old jeep and motorcycle trails, mining roads and other routes that have become established by continual recreational use. Of the 75 miles of the existing mapped trails approximately 33 miles

are on city owned open space, 27___ miles are on HNF lands, 1.5miles are on BLM lands and 13.5_ are on private land.

The most heavily used trail areas are adjacent to neighborhoods most of which is City owned open lands. Mt. Helena City Park, in particular, is the oldest open space park and has the highest observed use. As one moves away from the City center onto HNF lands, the trail system generally becomes less dense. Use is concentrated in a few areas due primarily to the fact that citizens are unfamiliar with the new open space acquisitions and there are no corresponding published maps, no sign system and few trailheads.

While the system is vast, some of the trails are in poor condition due mainly to erosion. Trail erosion is caused by several factors. First, the trails may not have been designed or planned with erosion control in mind. Many of the old jeep roads and trails run straight up hills parallel to the fall line (“fall line trails”) allowing water to flow directly down them creating ruts and gullies. Secondly, there has not been regular maintenance on most trails. Volunteers and other service groups have been great stewards of the trails but the system is too complex for small groups to handle over several days in a season. Simply put, there are too many trails for the current resources available to maintain them. Third, some areas close to neighborhoods have a dense, haphazard web of redundant user-created trails seemingly created to gain more direct access to a desired destination. Inadequate erosion control coupled with high usage promotes more rapid deterioration of these unplanned trails. Once damaged, users will step to the side of the rutted area and in the process create a new parallel track and the process repeats itself leading to a widened scar and more damage to the resource. In winter, poorly drained trails can become filled with ice again causing users to sidestep the hazards creating more trail damage. In many of these cases the trails will have to be eradicated, relocated or rebuilt to have adequate erosion control. In addition, user education on signs, at trailheads and on trail maps will help alleviate some of these problems.

Some of the most popular trails in the South Hills lie across private property. However, very few of these trails are secured with trail easements or similar agreements. In many cases, the property owner simply allows access. In other cases the property owner may not know of the trail use. Some property owners know of the use but would like it to be controlled or rerouted so as not to impact the property or privacy. In any case, a primary goal of this plan is to work cooperatively with property owners to develop access solutions so these popular routes can remain open to non-motorized recreation.

The lack of user education is mainly due to the fact that there are few signs and trailheads in the South Hills Trail System. Additionally, there are no brochures or printed maps of trails except for an outdated map of Mt. Helena trails. The Mt. Helena trailhead at the top of Adams Street is the only official trailhead with signs, maps and parking. Some users park at informal pullouts to access the trail system but there are no signs at these areas to guide and educate users.

Currently, there is little pet control in the South Hills, yet the open space is a very popular for dog owners to run their pets. While not a major problem as yet, the issue was raised at some of the stakeholder meetings. Some remarked that dog waste must be controlled and that pets should not be allowed to chase wildlife. Again, there is no clear message posted at most access points.

There have not been many recently reported instances of conflicts between trail user groups. One of the primary reasons for this is that mountain bikers have good access to the more remote trails leaving the closer trails to hikers and walkers. Additionally, horseback riding is not allowed on City owned property and is not common on South Hills HNF lands greatly reducing the potential for horse-bike and horse-hiker conflict.

III. Challenges and Opportunities

As with any plan and any area there are challenges to planning and implementation as well as opportunities. In Helena's South Hills, the challenges are not insurmountable and the opportunities are many. Unlike many towns and cities throughout the country, Helena is very fortunate to have abundant open space and trails so close to downtown.

1. Challenges:

- a) Many miles of trail to maintain: Helena has many miles of trail but very few resources to maintain this vast network. Some of these trails are "personal trails" that are created by people gaining access to the trail system from their back yards or unauthorized locations.
- b) Wildlife habitat to protect: The South Hills are home to a number of animal species that depend on this habitat to survive. Any plans for new trail development must consider the project's effects on wildlife habitat. (This topic will be addressed further in the Open Space Management Plan.)
- c) Uncontrolled access: Access to the trail system occurs at a variety of points including directly from private property. There are few formal entry points with posted information, regulations and maps.
- d) Few maps or directional signs: There are few maps or signs to help guide and educate users especially on newly acquired City open space lands leading to a concentration of use on Mt. Helena.
- e) Private property issues: Some of the existing trails cross private property without formal agreements with the property owners. Without easements or agreements, these trails could be closed to public access at any time.
- f) Multiple public ownerships: Public ownership in the study area is the City of Helena, the Helena National Forest and some small Bureau of Land Management tracts sprinkled throughout. Additionally, there is a parcel of State Land on the west side of the study area. Each agency has its own trail standards and management requirements.
- g) Growing user base: Trails in the South Hills are becoming more popular as people discover them. This creates more pressure to construct trailheads and provide directional signage as well as to maintain trails. This could also be considered a potential opportunity.

- h) Need for Funding: In 1996, the citizens of Helena approved a \$5million open space bond to help fund parks, open space and trails. While this funding was vital for the acquisition of open space, the funding has nearly all been allocated, forcing City officials to seek alternative sources of funding to pay for open space properties.
- i) Noxious weeds: While weeds are a separate management issue, trail building, usage and maintenance has implications on the proliferation of weeds in the South Hills. (This issue is addressed in the Open Lands Management Plan)
- j) Potential incompatible uses: At the time of writing, there is little control over the types of uses on trails in the planning area. In addition to biking, hiking and skiing (mostly forest service) trails are also used for 4-wheeling, ATV use and hunting and may not all be compatible.
- k) Preservation of historic resources: In the face of growing recreational use and proposed recreational development in the south Hills it is important that historic resources are documented and potentially preserved. Some recreation uses may not be compatible with actively protecting heritage resources.
- l) Safety on roads: Some of the trails documented for this plan cross over roads causing potential safety problems and conflicts with motor vehicles.

2. Opportunities

- a) Abundant nearby open space and trails: Having many acres of public land and miles of trail so close to the downtown area is an amazing resource that Helena can be proud of. The potential for looped trails can reduce the potential for conflicts between user groups.
- b) Good volunteer participation: Volunteers have been the lifeblood on trail maintenance in Helena. Non-profit organizations and user groups have been vital to mobilizing volunteers for trail workdays.
- c) Willing and cooperating agencies: Both the City and HNF have committed financial resources towards trails in the South Hills. They have also agreed to work together to implement the findings in this plan.
- d) Good access: Access to public lands and trails is relatively easy. There are numerous points to access the trail system throughout the City.
- e) Open Space Bond: This shows the commitment of the citizens to protect open space and trails in the area. While the portion of these funds designated for acquisition has been allocated, there are still resources remaining in the maintenance budget. Thought should be given to initiating a future bond effort.

- f) **Historic Resources:** There are numerous opportunities for interpretation at trailheads and along the system of trails including scenic vistas and landmarks, wildlife and unique flora.

IV. Goals and Objectives of the Trail Plan

These goals were derived from the input of trail enthusiasts and stakeholders and from the trail coordinator's observations.

Overall Goal: To develop a comprehensive trail system that is maintainable, accessible and that provides a fun and interesting and diverse recreational experience while protecting the area's natural and cultural resources.

Goal 1: The City of Helena should work with the Helena National Forest and other user groups and organizations to create, fund and sustain a routine maintenance program that dedicates resources specifically to open space and trail management, maintenance and construction.

Goal 2: Ensure that the wildlife habitat and other natural resources are protected and enhanced through sustainable trail projects, education and enforcement of rules and regulations.

Goal 3: Reclaim or reroute trails that are in poor condition, are unsustainable and/or are redundant.

Goal 4: Create new sustainable trails in appropriate areas that provide access to key destinations and other popular trails.

Goal 5: Develop sections of universally accessible trails for wheelchair users, elderly, young children, and others with disabilities.

Goals 6: Engage private property owners to ensure continued trail access across their property. Agencies and user groups should accept responsibility for education, maintenance and posting signs.

Goal 7: Create trailheads that give the trail system a unique identity and that can be used for all Helena trails. These trailheads should provide information regarding safety, natural resources and trail etiquette. They should also provide maps and trail information. Some trailheads will provide parking and other amenities.

Goal 8: Create a durable and attractive sign system that clearly marks trail directions and features without being obtrusive.

Goal 9: Develop a funding strategy that maximizes and leverages local funds. Work with Prickly Pear Land Trust and other organizations to prepare grant applications and solicit contributions for trail projects.

Goal 10: Continue to develop a volunteer assistance program for trail and trailhead maintenance and construction. Work with local user groups, businesses and service organizations to expand and improve the program.

Goal 11: Prioritize projects that help to disperse use away from heavily used areas such as the “front side” of Mt. Helena. Education and a comprehensive trail map and guide is a vital to this effort.

V. Plan Recommendations

This section lays out the recommendations for action regarding the South Hills Trail System. They were developed from user comments and field observations. The first section describes recommendations and policies that can be applied to the overall South Hills Trail system. The second section contains recommendations for specific elements on the system.

A. Overall recommendations (non-site specific):

The following recommendations are policies that will guide the overall development of the South Hills Trail system.

Oversight

- a) The City, in cooperation with the Helena National Forest should consider hiring or contracting with an open space and trail coordinator that can oversee trail and trailhead maintenance and construction including the implementation of the recommendations contained in this plan. Major projects should be reviewed by a citizen committee such as HOLMAC and approved by City Commission with adequate public comment before work commences.

Maintenance

- a) City, County and the Helena National Forest officials should consider creating a dedicated crew charged with maintenance of the area’s trail system. This seasonal crew could be patterned after the Montana Conservation Corps where students earn a stipend and work as a team. To accomplish this, a long-term funding source must be identified, perhaps in the form of a trail maintenance endowment.
- b) Consolidate redundant trails—multiple trails that access the same destination.
- c) Reclaim unsustainable trails such as those that are too erosion prone to maintain.

Trail Design and Character (experience)

- a) Use the existing trail system to create a series of looped trail routes that allow trips of varying lengths and provide opportunities for trail users of varying abilities and fitness levels. This may require building sections of new trail to make key connections.
- b) Ensure trail connections to existing and future urban trails, neighborhoods and downtown destinations.
- c) Trails should be built to consistent trail standards by which all future trails are designed, built and maintained. (Suggested Standards appear in Appendix A of this document.)
- d) New and existing trails should be designed to:
 1. minimize erosion and visual scarring.

2. incorporate views, user experience and natural design elements.
- e) If new trails over and above those recommended in this plan are proposed, a formal approval process should be followed. That process must consider: the intended type of use, replacement of an existing trail, maintenance responsibilities, and connectivity.

Special Trails

- a) Provide at least 1 km of trail that is accessible to people with disabilities, the elderly and those seeking a less rigorous trail experience.
- b) Develop a trail that educates users about the natural and cultural history of the South Hills.

Volunteers and User Groups

- a) User groups and volunteer organizations should be encouraged and empowered to create a volunteer “culture” and develop a regular volunteer program that focuses on trail maintenance and construction.
- b) Explore the implementation of an adopt-a-trail program in which groups, companies and other organizations would assume annual maintenance responsibilities for a trail or trails.

Agency Cooperation

- a) The Helena Parks Department and the Helena National Forest should work cooperatively to plan, develop and maintain the trail system in the South Hills. A revised memorandum of understanding or similar mechanism would establish specific responsibilities as to which trail segments fall under each agencies’ jurisdiction.
- b) The implementation of this plan should also consider the recommendations of the Helena Non-motorized Transportation Plan where the two plans interface.

Private property issues

- a) Continue to identify those trails that cross private property and the owners of those properties.
- b) Work with private property owners to ensure long-term non-motorized access across their property through trail easements or permission. User groups and/or public agencies should provide property owners signs and other means of control.

Enforcement and patrol

- a) Limit the implementation of new rules and regulations to those necessary for safety and that can be enforced. Consistent signage and user education at trailheads and on maps and brochures is vital to this effort.

Trailheads

- a) Develop a series of trailheads at key identified trail system access points. These trailheads will have different levels of development as determined by their location, existing or desired usage. Trailheads can help disperse use of the trail system away from the currently heavily used areas. The hierarchy of trailheads should be as follows:
 1. Major Trailhead: Located in areas where a number of trails or trail systems originate and have adequate space to accommodate vehicles. Include sign kiosk,

parking for 8 to 10 vehicles, access gate, dog waste mitts and, possibly, sanitary and picnic facilities.

2. Minor Trailhead: Located in areas that provide access to trail systems where less developed character is desired and have adequate space for several vehicles. Include information sign and map, parking for 2 –8 cars (pullout), access gate, dog-waste mitts.
 3. Neighborhood access point: Located in areas where primarily local residents gain access to trails. No parking is desired in these areas. Include information sign, access gate, dog waste mitts.
- b) Trailhead signs should contain the following information:
1. Major trailhead sign kiosk: Detailed map of trail system, agency logo(s), trail etiquette, wildlife, natural resource, cultural resource information, names of sponsors and volunteers that helped build/maintain the trailhead and/or trail.
 2. Minor Trailhead and Neighborhood access: Sign with simple map of local trails and trail rules, Agency logo.

Trail Signs

- a) Develop and construct a trail sign system that provides: trail name, directional information, and agency logo.
- b) Trail signs should be discreet, unobtrusive and vandal resistant.
- c) If a trail is closed or rerouted, provide signs that give reason for closure and direction to new or alternate route.

Map/Brochure

- a) Once this plan is adopted, trail maps will be made available to the general public. These maps will show major trails, connections to urban trails and important destinations, trail rules, and other important information.

Pets

- a) Abide by recommendations for pet control outlined in the Open Space Management Plan when adopted.
- b) Trailheads and neighborhood access points should have clearly stated rules regarding pet control and picking up pet waste. Dog waste mitts should be provided. Pets chasing wildlife should not be tolerated.
- c) Consider revising leash law to keep pets on leash within 100 yards of the trailhead to allow for better control of picking up pet waste.

Wildlife

- a) The protection of wildlife habitat should be a priority in the development of this trail system.
- b) Work with wildlife experts when planning major new trail construction. Planning of new trails must consider trail density and location so as not to adversely effect wildlife habitat.

Protection and Interpretation of Historic Resources

- a) Work with the Helena National Forest to identify and catalogue important historical resources in the South Hills planning area. Develop a strategy to protect these resources and identify potential interpretive opportunities.

Weeds

- a) An assessment of weeds should be completed prior to every major trail construction project.
- b) All trail construction projects will be in accordance with the weed control plan set forth in the Helena Open Land Management Plan.

New Subdivisions

- a) When a new subdivision is proposed, the City and/or County should work with the developer to determine if there is a viable trail opportunity and if so, that that trail access is secured. Trails can be considered as an alternative in parkland dedication requirements.

Trail User Conflicts

- a) Segregation of user types is not recommended at this time. However downhill bicycle use should be discouraged on the 1906 Trail and the Powerline Trail on Mt. Helena.
- b) Mountain bikers should be encouraged, through education, signs and brochures, to gain access to more remote trails that lie beyond heavily used areas such as the north and east sides of Mt. Helena, especially at peak times such as on weekends and afternoons.
- c) Equestrian use is not encouraged on city open space especially closer to the urban area.

B. Specific area recommendations (site specific).

This section refers to specific recommended trail projects. The study area has been broken down into the following five sub-areas:

- Mt. Helena including the Mt. Helena City Park and the Mt. Helena Ridge National Recreation Trail (MHRT)
- Wakina Sky Gulch Area between Grizzly Gulch and Orofino Gulch Roads
- Rodney Ridge between Orofino Gulch and Davis Gulch/Tucker Gulch including the Cox Lake area
- Mount Ascension including the Davis Gulch Greenway and Meatloaf Hill, Sugarloaf Hill, Quarry Hill and Bompert Hill.
- East Side from the Mount Ascension area to Donaldson Property near the new water tank.

NOTE #1: Some of these recommendations are purposefully less detailed to allow flexibility to plan and adjust routes in the field. Some of the proposed routes are shown to cross private property. THIS IS FOR ILLUSTRATIVE PURPOSES ONLY. ANY TRAILS INVOLVING PRIVATE PROPERTY WILL ONLY PROCEED IF A LAND OWNER IS WILLING TO ALLOW ACCESS OR THE PROPERTY OR TRAIL EASEMENT IS ACQUIRED TO ALLOW TRAIL ACCESS.

NOTE #2: Trails that appear on the final South Hills Trails Plan map that are recommended to remain or be constructed will be prioritized for maintenance and/or construction and should not be considered designated trails until those standards are met. Trail segments located on the National Forest System lands will not be officially designated until they have been evaluated in compliance with NEPA regulations and approved in a NEPA document.

NOTE #3: Although not specifically stated below, all approved trails in this system should be incorporated into a routine maintenance regime. Weed control will be considered an integral part of this maintenance program.

NOTE #4: Most of the trails in the South Hills do not have official names. Many of the names used below are nick names used by local users or created for this document. These names are in italics. An effort should be made establish an official naming process to identify these trails on maps, etc.

1. Mt. Helena

a) Ownership and private property

1. Work with property owner to develop a trail access from west end of LeGrande Cannon Boulevard (near the top of Silverette Street) to Mt. Helena Park. This access would be established in cooperation with the property owner to prevent wholesale trespass on their property.
2. Acquire 14-acre private inholding on the east side of Mt. Helena Park. The popular Prospect Shafts Trail crosses this property and has been used by the public for decades.
3. Pursue a trail easement where the proposed *Lower North Side Trail* crosses the edge of several lots in the Forrest Estates Subdivision.

b) Trails to be reclaimed, rerouted and/or rebuilt:

1. Consolidate dense web of trails in northeast/Quarry Area to reduce redundancies and resource damage. Survey local neighbors to determine most desirable, sustainable routes. Trail to the tops of hills should be rebuilt or rerouted to more sustainable locations.
2. Consolidate trails on the recently acquired property on the west side of Mt. Helena Park creating a sustainable approach to the Mt. Helena Ridge Trail and trail loops in this area.
3. Work with trail advocates to determine the fate of the switchbacks on the North Access Trail which are poorly constructed and unusable in slippery conditions. Consider closing and replacing with an alternate route or rebuilding portions of this section of the trail.
4. Clear small trees and limbs from lower North Access Trail corridor.
5. Reroute existing access on east end of the paved section of LeGrande Cannon Blvd. off of private lot to City right-of- way just west of present location.
6. Eradicate and reclaim web of eroding trails around the "H". Work with High School Groups to prevent further damage to this area.
7. Rebuild *Powerline Trail* to control erosion and reclaim disturbed soils using a "step" like system to stabilize the tread and keep users from stepping off the trail. The *Powerline Trail* should be considered a hiking only trail.
8. Rebuild and stabilize West End Trail between and 1906 Trail and the Backside Trail to control erosion and widening.

9. Attempt to control erosion and widening of Prospect Shafts Trail.
10. Reclaim fall line trails and consolidate unofficial trails west and south of Reeder's Village subdivision and create a sustainable trail connection in this area.
11. Close and/or reclaim or all other steep fall line trails.

c) *New trails*

1. Designate the *Lower North Side Trail*, an existing path that contours along the lower slopes of the north face of Mt. Helena above LeGrande Cannon Blvd. This trail allows for a less strenuous hike or bike ride and connects the Swaney property and the west end of Mt. Helena with the Adams Street Parking Lot/Trailhead.
2. When the City acquires Swaney parcel, construct a trail that links it to the North Access Trail.
3. Explore possibility of a trail link between Spring Meadow Lake State Park and Le Grande Cannon Blvd. Trail. This will bring users directly to the foot of Mt. Helena and its trail system.
4. Investigate potential of trail across state land (Section 27) west of Mt. Helena connecting the west end of LeGrande Cannon Blvd. to the Mt. Helena Ridge Trail.
5. Explore a trail link between Park City/Mt. Helena Ridge Trail and Highway 12 via Nelson Gulch on HNF and BLM lands. Before constructing, ensure that wildlife security can be maintained.

d) *Trailheads and signs*

1. Major trailhead at Dump Gulch
2. Minor trailhead at Swaney Property
3. Neighborhood accesses: west side of Mt. Helena, from LeGrande Cannon east of Grant Street, Top of Holter Street and top of Clarke Street
4. Sign at the south trailhead of the Mt. Helena Ridge Trail at Park City
5. Place closure markers at all undesired trails
6. Provide street directional sign to Dump Gulch Trailhead on Park Avenue.

2. Wakina Sky Area

a) *Ownership and private property:*

1. Support the Helena National Forest's effort to acquire the 457-acre Spring Hill parcel which encompasses an important trail connection between Grizzly Gulch and Orofino Gulch.
2. Secure access on popular trail between Wakina Sky Meadow and Unionville that lies on private property. Bike clubs and other user groups should work with the property owners in this area to develop a cooperative access plan that ensures that users close gates and patrol the area's use to prevent trespass or vandalism problems.
3. Continue to investigate ownership of the land between the Orofino Gulch road and the National Forest boundaries and secure the appropriate easements allowing adequate access between the Waterline Trail and Wakina Sky Gulch.

4. Acquire the 19-acre property directly east of the Dump Gulch Trailhead allowing access to public lands in the Wakina Sky area and the *Black Forest Trail* as well as a possible connection to the Waterline Trail.

b) Trails to be reclaimed, rerouted and/or rebuilt

1. Reclaim the two trails on the east side of Wakina Sky connecting to Orofino Gulch Road due to erosion and private property issues. Replace with new sustainable trail be built to allow access between Orofino Gulch and Wakina Sky Gulch. This new access should align with access to the Waterline trail across Orofino Gulch Road.
2. Reroute lower portion of *Barking Dog Trail* away from residence at bottom of trail. Provide a safe access point off of Orofino Gulch Road.

c) New trails

1. Provide a sustainable trail connection between the Wakina Sky area and Orofino Gulch (Waterline Trail).
2. Provide a trail connection between Wakina Sky Meadow and Grizzly Gulch Road.

d) Trailheads and signs

1. The Dump Gulch trailhead allows access to both Wakina Sky and the Mt. Helena Ridge Trail.
2. Minor trailhead along Orofino Gulch Road that could also serve the Waterline Trail and Rodney Ridge.

3. Rodney Ridge, Cox Lake and Davis Gulch

a) Ownership and private property

1. Work with private property owners to establish trail from Dale Harris Park to Acropolis Hill and Hale Reservoir area across the city-owned Congress parcel.
2. Work with private property owner to reestablish access to the north segment of the Waterline Trail to Hale Reservoir.
3. Work with private property owner to establish a connection between Cox Lake and Rodney Ridge that ensures residents' privacy.

b) Trails to be reclaimed, rerouted and/or rebuilt

1. Eradicate eroding jeep roads and fall line trails and replace with sustainable trails if necessary including main connecting trail from Old Shooting Range to the Waterline trail
2. Consolidate the trails on the west side of Rodney Ridge.

c) New trails

1. Construct a trail extension of the Waterline Trail to the Rodney Street area and Dale Harris Park linking the Waterline Trail directly to Downtown Helena and the Walking Mall.
2. Establish a trail connection from the north end of the accessible portion of the Waterline Trail to the Rodney Ridge Trail.
3. Work with private landowner to establish trail from Cox Lake to Rodney Ridge.

4. Extend the Waterline trail to the south across Dry Gulch to the *Barking Dog Trail* and the Wakina Sky Meadow.
5. Extend Davis Gulch Greenway Trail through the old shooting range south to the intersection with Dry Gulch Road and potentially up Tucker Gulch.

d) Trailheads and signs

1. Major trailhead at the Old Shooting Range to provide access to both Mt. Ascension and Rodney Ridge trails.
2. Minor trailhead to access the Waterline Trail and Rodney Ridge on Orofino Gulch Road adjacent to property owned by the Prickly Pear Land Trust.
3. Neighborhood access on north end of Waterline Trail when it is reestablished.

4. Mt. Ascension (including Quarry Hill, Meatloaf Hill, Sugarloaf Hill and Bompert Hill)

a) Ownership and private property

1. Establish a designated trail to the City owned parcel at the top of Mt. Ascension by acquiring a trail easement on or fee title to a 21 acre property that lies between two City owned parcels on the north face of Mt. Ascension.
2. Identify and work with property owners to secure existing trail from the top of Mt. Ascension south to the *Entertainment Trail* connecting City property and Forest Service Lands. This trail crosses about nine lots in the Alpine Meadows subdivision in Jefferson County, which currently has little residential development.
3. Identify owners and secure access across private property adjacent to existing neighborhoods on Quarry Hill, Sugarloaf Hill and the western half of Meatloaf Hill.
4. Work with property owners at the top of Tucker Gulch to secure access to the Brooklyn Bridge Trail and the *Flume Trail*. Ensure that landowner privacy is maintained.

b) Trails to be reclaimed, rerouted and/or rebuilt

1. Eradicate steep and eroding old roads fall line trails on Mt. Ascension some of which lie on private property.
2. Consolidate trails on Meatloaf Hill, Sugarloaf Hill and Quarry Hill creating fewer, more sustainable trails that connect to neighborhoods. Work with private property owners on these projects.
3. Continue to work with Lewis and Clark Archers to ensure that the *Archery Range Trail* is completely safe and buffered from any errant arrows.

c) New trails

1. Plan and construct a looped trail through within the newly acquired Bompert property. This trail will connect Mt. Ascension Park with Lime Kiln Road and the east side neighborhoods.
2. Extend the *Archery Range Trail* along the west flank of Mt. Ascension to upper Tucker Gulch Road. This trail would be almost completely on Forest Service land and will allow an off-road trail connection to the *Flume Trail* and the Brooklyn Bridge Trail.

3. A portion of the Davis Gulch Greenway is currently on Davis Gulch road creating an unsafe trail situation. The City of Helena should work to ensure this trail is on a continuous and safe corridor away from auto traffic.
4. Establish a trail for people with disabilities older trails users and those with children using old road grades on Mt. Ascension. This trail may not be built to the specifications of the American Disabilities Act (ADA) but it should accommodate wheelchairs by having adequate width, relatively low grades and maintainable natural surfacing.
5. Ensure that trails on both east and west side of the Crest View Subdivision are built and maintained to allow access to Mt. Ascension around the subdivision
6. Ensure trail access from Brooklyn Bridge Trail and Skihi Peak to upper Tucker Gulch

d) Trailheads and signs

1. Minor trailhead at the end of Beattie Street where it adjoins the Beattie Street Park.
2. Minor trailhead along the Davis Gulch Greenway near the intersection of the Eagle Scout Trail. (A turn out already exists here.)
3. Neighborhood access points should be located at key points in the south central neighborhoods such as Lime Kiln Road, 2nd Street (west), State Street and the Touchstone area.
4. Work with developers of Crestview Subdivision to establish a trailhead at South End of Phase II to allow access to some Mt. Ascension trails for wheelchair users and others with disabilities.

5. East side area

a) Ownership and private property

1. Identify public and private lands for trail opportunities to make connection to east side neighborhoods and other key destinations such as the Donaldson Property and St. Peters Hospital area. Explore the feasibility of establishing trails in strips of public lands that lie between these neighborhoods.
2. Explore the potential of designating a trail between Mt. Ascension and South Hill Road. This trail could include existing trail easements and subdivision roads.
3. Work with the developer of the Red Letter subdivision near to establish a trail connecting Gold Rush Avenue and South Hills Drive.

b) Trails to be eradicated, rerouted and/or rebuilt

1. No designated trails exist in this area as yet. As new trails are built, they will be incorporated into the trail maintenance system.

c) New trails

1. Once property ownership has been verified, plan and construct a formal trail system in this area.
2. Ensure there is a trail connection to the Donaldson Property open space area from Saddle Drive.
3. Explore a trail connection from Mt. Ascension to South Hills Road some of which will be on existing subdivision roads.

4. Work with Jefferson County officials and Montana City residents to establish a trail connection to Montana City and beyond.

d) Trailheads and signs

1. When trail system is established, a major trailhead should be located at the Saddle Drive area near the Donaldson Property.
2. Neighborhood access points should be located at key points in the east side such as Beltview. These points will be identified as trail planning in this area progresses.

Appendix A: Trail Standards

This plan focuses primarily on the mountain trail system on rugged terrain in the South Hills. The primary users of these trails are hikers and mountain bikers. On Forest Service lands horseback riders occasionally use the trails but equestrian use is prohibited on City open space. The plan also calls for segments of trails that can accommodate persons with disabilities including wheelchair users, the elderly, and people that want a less rigorous trail experience.

With this in mind, trails in the South Hills should be constructed and maintained for accommodate all intended users. In addition trails must be sustainable to reduce maintenance costs and to protect the natural resource. Sustainable trail design incorporates standards for grade, tread and erosion control. Many of the existing undesignated trails that will become part of the official trail system will need to be rebuilt and/or rerouted over time to incorporate these elements.

Before constructing a trail it is important that the trail be thoroughly laid out by knowledgeable trail planners. Grades should be calculated using a clinometer. Flagging and/or paint can be used to mark the trail route. Use paint if trail is not to be built immediately as vandals will remove flagging. If volunteer labor is used to build the trails, they should be educated in the philosophy of sustainable trail building and the safe use of trail building tools.

Mountain trails

One of the best resources for sustainable trail building is *Building Better Trails* published by the International Mountain Biking Association. Although IMBA represents the sport of mountain biking, this book considers all intended users. (This book is also available on-line at <http://www.imba.com/resources>). Although these guidelines call for less steep trails then we are generally used to in Helena, trails can still be designed to be fun and challenging.

The following are the design guidelines for mountain trails. (Consult the *Building Better Trails* Book for more in depth information on designing and building sustainable trails.)

Trail grade:

The Half Rule: “Trail tread grade should not exceed half the grade of the hillside or side slope the trail is traversing”. For example if a hillside has a 20 percent grade, the trail across it should not have more than a 10 percent grade. This will allow water to flow over a trail rather than down it. Of course there are caveats to this rule including instances when steeper grades are unavoidable. Short sections of trail with grades up to 15% are acceptable.

The 10% rule: Try and keep overall rail grade to 10 percent or less. If soil conditions allow sections of trail can be steeper than this.

Tread width: Helena trail users are used to single track trails. Generally the tread need only to be wide enough for a person walking or riding their bike. However, in certain areas near popular trailheads the trail may be wider to accommodate passing in these potentially congested areas.

The lower 1906 Trail is a good example of a wider trail near a trailhead. In other cases, it may be desired to convert old roads into a narrower trail corridor. This can be done by placing rocks and debris in the corridor to create a more twisting trail that drains water more effectively.

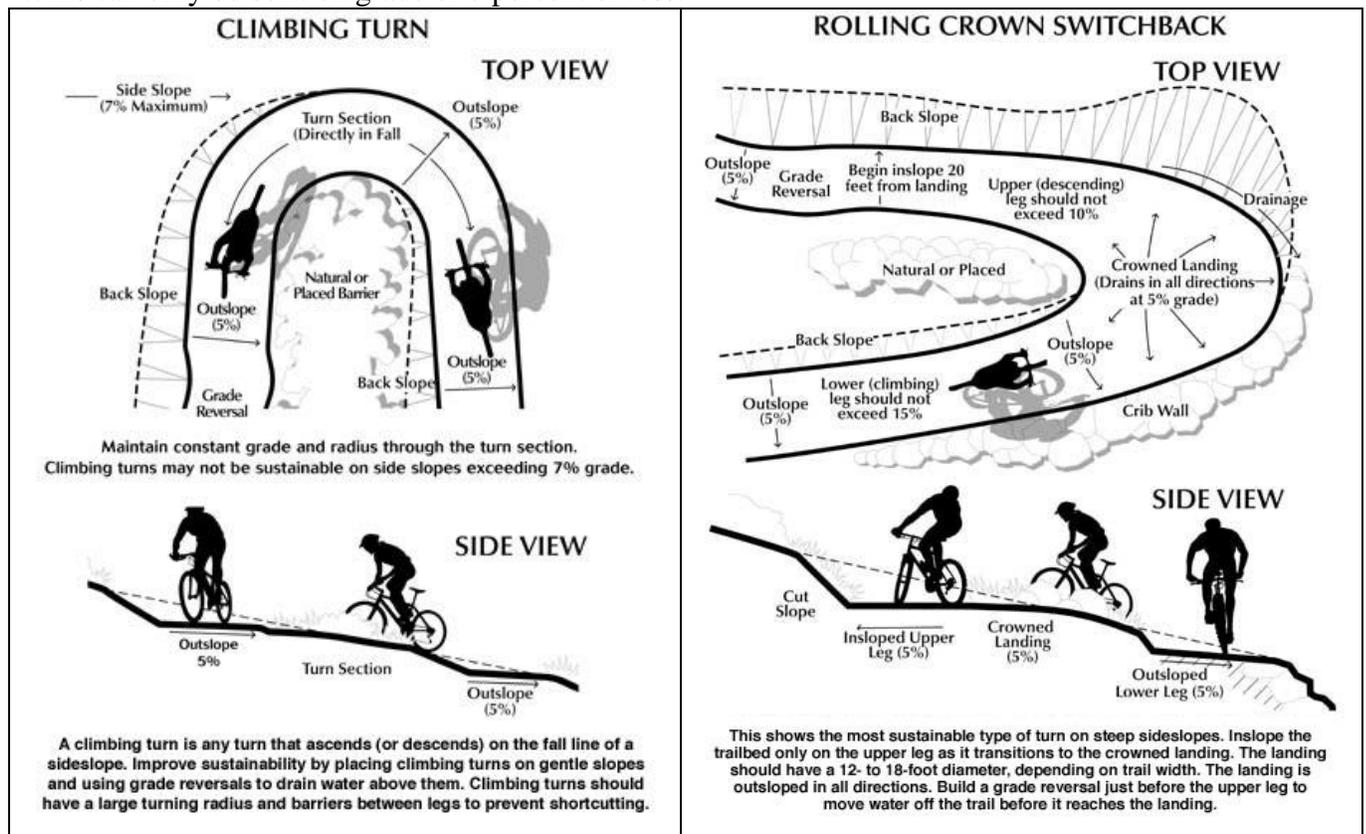
Outslope: Trail treads should be built with a slight “tilt” towards the downhill side approximately 5 percent. Outslope allows water to easily drain off the side of the trail and not collect on the tread.

Grade reversals: Gentle rolls or undulations in a trail provide areas that divert water off of a trail. Building grade reversals into a trail initially prevents the need to place erosion control structures (i.e. water bars) in the trail tread.

Clearing vegetation: Generally the trail corridor should be twice as wide as the tread width. Clear tree limbs and small trees that may be a hazard to mountain bikers (i.e. catching handlebars) and the eyes of hikers.

Turns:

Climbing Turn: a climbing turn is more desirable because it allows a more gradual direction change. The radius of a climbing turn is generally about 30 feet. However, climbing turns can only be built on grade of 7 percent or less.

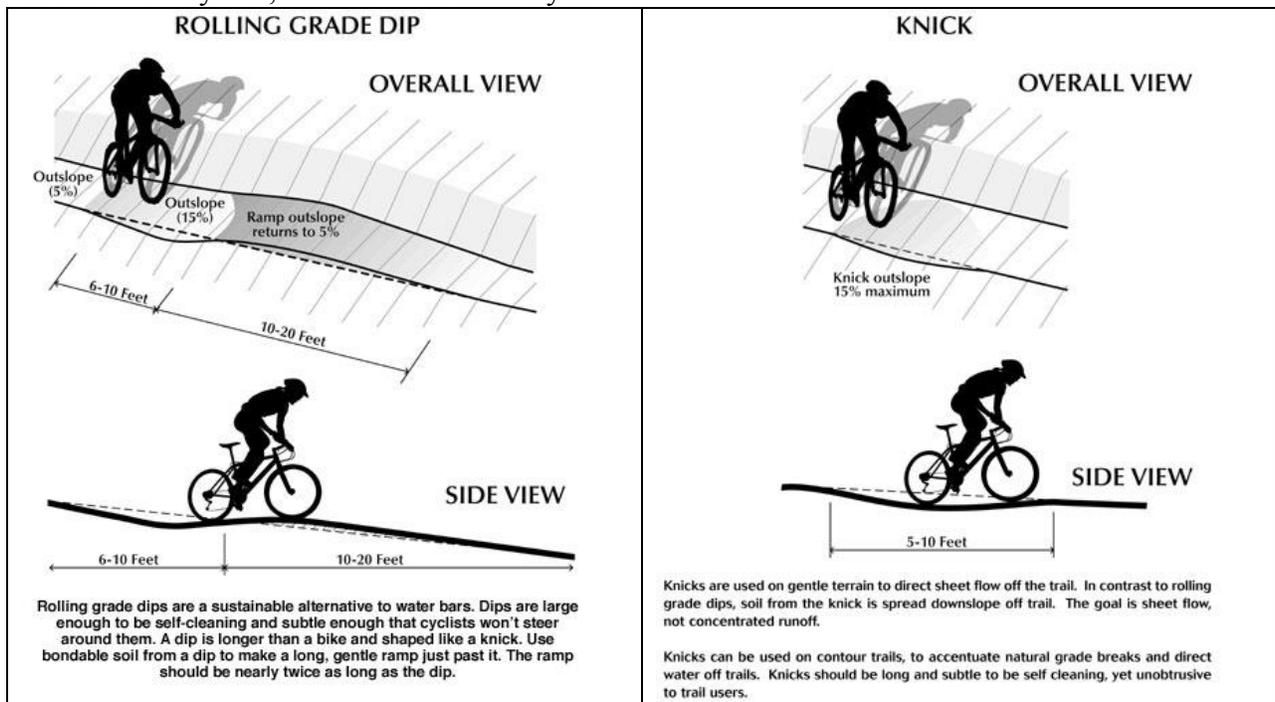


Switchback: Switchbacks are necessary for making turns on steeper terrain and are much “tighter” than climbing turn. The South Hills trail system has many examples of switchbacks both good and bad. See the IMBA manual for a good description of switchback construction.

Natural features: In some cases it may be necessary to remove obstacles, such as rocks and trees, from a trail corridor to make it safer and usable for the desired user. However if these natural features do not affect the overall safety of the trail user, they should be left in place. They can add character to a trail as well as making the trail experience more interesting.

Drainage Features: If an existing trail has drainage problems the following features can be added to help alleviate the problem. If at all possible foreign structures such as water bars should be avoided. They can interfere with the “flow” of the trail and require more maintenance and replacement. In addition, water bars encourage trail users to walk or ride around them creating more trail maintenance problems.

Rolling Grade Dip: A RGD is generally a long (6-10 feet), shallow depression built into the trail with a gentle rise built on one end (10-20 feet long). If built correctly, these structures are difficult to detect, yet allow efficient drainage of water. RGD may be difficult to build in Helena’s rocky soil, but can work in many instances.



Knick: Knicks are gentle fanned shaped depressions about five to ten feet in diameter built into the trail that open towards the downhill side of the trail. These features are easy to build and are effective at shedding water from flatter sections of trail.

“Accessible” Trails:

There are opportunities to create trails that are more accessible for wheelchair users, the elderly or others that want a more leisurely trail experience. Although there are not many places in the South Hills that can accommodate this type of trail, the old roads along the base of Mt. Ascension may be well suited for this use. It is recommended that these trail be designed in cooperation with those knowledgeable in accessible trail and intended users.

A moderately accessible trail should be at least 36 inches wide, have a maximum running slope of 8.3 percent and a cross slope not to exceed 5 percent. Sections of such a trail may be up to 14 percent for distances not to exceed 50 feet. (Source: _____)

Accessible trails will require trailheads that provide accessibility with designated parking spaces and access gates that will allow wheelchair access to the trails.

Closing, Reclaiming and Rerouting Damaged Trails

Sometimes the best solution for eroded trails isn't aggressive maintenance. Instead, it may be more effective to close the trail and if appropriate, replace it with a new, sustainable, re-route. Designing and building a re-route may be time-consuming and hard work, but in the long run closing a poorly functioning trail is better for the environment. A critical aspect of any re-route project is closing and reclaiming the old route. The following eight elements are important to trail restoration.

(Source: IMBA Trail News Fall 2002 Volume 15, Issue 4 p.9)

1. Create an outstanding new route.

A key component of any trail closure plan is creating a fun and sustainable alternative. It is vital to provide a new trail that is more appealing than the old route. Otherwise, some will continue to use the original trail.

2. Design a smooth intersection.

Create a natural, seamless transition onto the new section. Trail users shouldn't be able to recognize where the re-route begins.

3. Educate trail users.

Most conflict surrounding trail closures can be avoided if people understand why a route must be closed. Make sure to spread the word about what you are doing and why. Post signs to let people know what changes will be taking place. Ask for public feedback and recruit volunteers for the trail work. Once work is complete, consider posting maps showing the new trail and explaining why the old trail is closed. Be positive and focus on the benefits of the re-route.

4. Break up the old tread.

Completely break up, or scarify, the compacted soil in the old trail tread to allow the seeds and roots of new plants to penetrate. Don't skimp on this key step. Use pulaskis, pick-mattocks, or even a rototiller.

5. Control erosion.

It is essential to stop water flowing down the route. Check dams are easy-to-build structures, typically made of logs, rocks or straw bales fixed across the trail to trap soil. Be sure check dams are tall to trap the soil, and well secured so that they won't wash away. A wide range of manufactured erosion control materials are available that are designed to absorb and retain water while providing an ideal microclimate for the growth of vegetation. These include straw wattles, erosion control blankets and commercial mulches that combine fiber, seed, fertilizer and bonding agents. If the trail you're closing is especially rocky and little soil remains on the surface, try using burlap bags filled with dirt as your check dams. Cut an "X" into the top of a moist bag and transplant a local shrub.

6. Transplant vegetation.

Starting plants on the old trail is the best way to restore the landscape. Disturbed soil often provides an opportunity for invasive plant species to take hold. Combat these invasives by planting only native species. Transplant shrubs and small trees from your re-route construction. Use proper transplanting techniques, fertilizer and a portable drip irrigation system to reduce transplant shock.

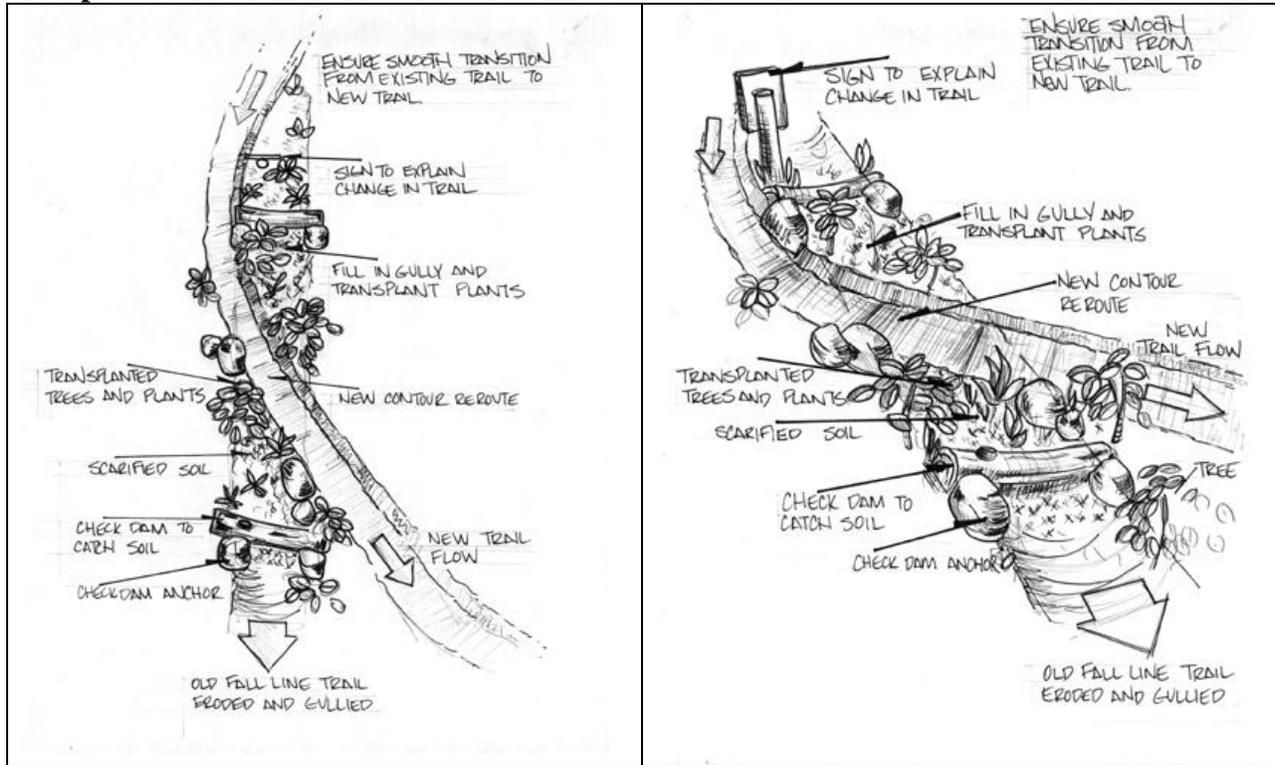
7. Disguise the corridor.

The best way to keep people off the closed trail is to make it look like it was never there. The goal is to eliminate the visual corridor, including the airspace above the old trail tread. Drag logs and branches across the tread. Plant deadfall in the ground vertically to block the corridor at eye level. Rake leaves and other organic matter over the tread as the final step to complete the disguise and aid new plants.

8. Block the corridor.

As a last resort you can block the beginning and end of the trail with a fence and signs. The fence will look out of place, and could draw more attention to the closure, which may cause controversy. Answer expected questions by posting signage explaining the closure on, or near, the fence. When the trail has been closed for a while the fence can be removed.

Sample Reroute Plan



Drawings by Mark Schmidt, IMBA

Appendix B: Project Responsibility and Timeline

This section is derived from the recommendations contained in Section V. Insert Project Responsibility file

Appendix C: Potential Project Funding Sources

A long-term commitment to funding is essential to ensuring that the South Hills Trail system can be improved and maintained into the future. Without funding the system will continue to suffer from neglect. As stated above, volunteers contribute a great deal to trails in Helena but can only address a fraction of the work to be done. A primary goal of a funding program should be create an endowment or account that will sustain a regular seasonal work crew year after year.

Funding can come from a number of different sources as listed below. As with any fundraising endeavor, it is important that this is a professional and coordinated effort. The City may want to consider contracting out for grant writing and other fundraising activities.

1. Grants: There are several private foundations and organizations that fund trail related projects. Usually these grant opportunities are very competitive. Granting cycles and requirements change frequently so the organizations should be contacted directly for this information. Below is a partial list of potential granting organizations.

- The Tuner Foundation
- The Kodak American Greenways
- Patagonia, Inc.
- International Mountain Biking Association
- The Conservation Fund
- L.L. Bean Inc.
- The Bikes Belong Coalition

2. Government sources: The City of Helena has been very successful in securing grant through the Recreational Trails Program (RTP) and the Land and Water Conservation Fund (LWCF). Both of these federal programs are administered by the Montana Department of Fish, Wildlife & Parks. RTP offers funding for projects related to all types of recreational trails. These grants require matching funds which can include both cash and in-kind labor. LWCF is more stringent as what types of trails are funded. Usually this means that the trail must meet the Americans With Disabilities Act standards for accessibility. LWCF funds can also fund acquisition of key properties such as those needed for open space or a key trail connection.

Another important potential funding source is the Helena National Forest. The majority of land area covered by this plan is on the HNF. Many of the trails that originate on City open space lands provide access National Forest lands The HNF and The City of Helena should continue to work cooperatively to on trail and trailhead projects.

3. Open Space Bond funds: As of this writing, most of the open space bond funds earmarked for acquisition from the 1996 bond initiative have been appropriated. However, approximately \$260,000 remains in the maintenance budget. A portion of these funds may be set aside in an endowment that could fund long-term maintenance of trails and open space. As these are government funds the structure of such an endowment should be clarified. Potentially this fund may be set up through a qualified non-profit organization.

4. Corporate: It has been shown in other areas that access to trails and open space can improve the quality of life in a community. Many times corporations and businesses see an investment in open space as an investment into the health and well being of their employees. A good quality open space and trail system also helps businesses attract employees looking for a healthy environment. In return for press and recognition businesses may be willing to fund trail projects in the Helena area.

5. Volunteers and In-kind: Volunteers have been the backbone of the trail program in Helena. Through the coordination of organizations like the Prickly Pear Land Trust, volunteers have contributed thousands of hours to build, maintain and reroute trails. While the trail system cannot be sustained entirely by volunteers alone, a consistent volunteer program should be maintained every year. Volunteer projects garner community investment into the trail program and allow trail users an opportunity to give back to the areas that they love. The City should consider hiring or contracting with a volunteer coordinator to organize projects and workdays. The volunteer program should seek out user groups, businesses and service organizations to sponsor their own workdays with supervision of the coordinator.

A fundamental element to volunteerism is adequately thanking all participants and this should be included in the volunteer coordinator's duties.

For specific projects, in-kind labor and donated materials should be pursued. Local businesses may be able to provide goods and services at no cost or a reduced rate. This can be especially valuable when there is a need for work that is too complex or specialized for volunteers or city employees. For example grading for parking areas or reclamation of steep jeep roads that require heavy equipment and qualified operators.

6. Adopt-a-trail: Another option for routine maintenance of certain trails is an Adopt-a-trail program in which a group, service club or business would chooses a trail segment and dedicate one or more days every year to perform routine maintenance on it. This work may include improving drainage, clearing debris, and pruning branches. These groups should be recognized at the trailhead.

Appendix D: Cost Estimates

Labor:

Just as every trail is different so are the requirements for its maintenance. Some trails are in excellent condition while others should be closed due to severe erosion. As part of the trail inventory for this plan, GPS mappers were responsible recording a maintenance recommendation for each trail segment. This information will assist in roughly determining maintenance needs. However, each trail will have different needs requiring varying amounts of time and resources.

The following cost estimates are based on the costs associated with the hiring a Montana Conservation Corps crew to do the work. This basis is most appropriate because MCC has been paid to do work on Helena's trail over the past several years and provides the most accurate benchmark of the time required for different types of projects. An MCC crew is usually composed of five to eight people and costs \$2,000 per week. That figure breaks down to \$400 per day. Costs for each recommendation were derived from estimating the number of days it would take to complete one mile of trail. This figure is then multiplied by the number of miles within that category of maintenance. These costs do not account for volunteer labor which can lower project expenses.

The trail maintenance recommendation categories are as follows:

- No Immediate Action: routine maintenance only
- Needs Maintenance: trail is beginning to show signs of erosion and needs repair
- Reroute or Rebuild Trail: Section are severely eroded and need to be rebuilt or rerouted to a more sustainable location
- Close Trail: because trail is, a) redundant, b) a fall line trail b) eroding severely and causing resource damage, d) impacts private property.

The following table of cost estimates was derived from the Geographic Information System data compiled by GPS mapping process described in Appendix F. Each trail project is different and

volunteer labor may help decrease costs. Some of the land identified as “private” is actually in City ownership due to lack of accurate GIS data for property ownership in this area.

Item	Distance (miles)	Unit cost	Subtotal
Trail Closure/Reclamation ¹			
City of Helena	6.0	2,000.00 per mile	\$11,968.85
Helena National Forest	4.3	2,000.00 per mile	\$8,654.46
BLM	0.2	2,000.00 per mile	\$477.21
Private/other	5.9	2,000.00 per mile	\$11,743.92
TOTAL	16.4 Miles	2,000.00 per mile	\$32,844.44
Priority Trail Maintenance			
City of Helena	7.9	666.00 per mile	\$5,270.58
Helena National Forest	6.6	666.00 per mile	\$4,398.22
BLM	0.0	666.00 per mile	\$0.00
Private/other	1.8	666.00 per mile	\$1,212.12
TOTAL	16.3 Miles	666.00 per mile	\$10,880.92
Reroute/Rebuild			
City of Helena	2.2	2,000.00 per mile	\$4,365.75
Helena National Forest	0.8	2,000.00 per mile	\$1,621.78
BLM	0.0	2,000.00 per mile	\$0.00
Private/other	2.0	2,000.00 per mile	\$3,981.75
TOTAL	5.0 Miles	2,000.00 per mile	\$9,969.28
Routine Maintenance			
City of Helena	12.6	400.00 per mile	\$5,046.53
Helena National Forest	17.3	400.00 per mile	\$6,903.52
BLM	0.5	400.00 per mile	\$193.62
Private/other	9.0	400.00 per mile	\$3,601.38
TOTAL	39.4 Miles	400.00 per mile	\$15,745.05
Subtotal Maintenance/Reclamation			
City of Helena	28.7		\$26,651.71
Helena National Forest	29.0		\$21,577.98
BLM	0.7		\$670.83
Private/other	18.7		\$20,539.16
TOTAL	77.1 Miles		\$69,439.68
New Trail			
City of Helena	3.5	3,200 per mile	\$11,224.45
Helena National Forest	4.4	3,200 per mile	\$14,089.72
BLM	1.6	3,200 per mile	\$4,963.02
Private/other	8.9	3,200 per mile	\$28,435.93
TOTAL	18.3 Miles		\$58,713.12
New Trailheads			
major ²			

	City of Helena		4,000.00 per site	
	Helena National Forest		4,000.00 per site	
	TOTAL	3 sites	4,000.00 per site	\$12,000.00
minor ³				
	City of Helena		1,500 per site	
	Helena National Forest		1,500 per site	
	TOTAL	4 sites	1,500 per site	\$6,000.00
neighborhood access ⁴				
	City of Helena	11 sites	\$500 per site	\$5,500.00
	Subtotal Trailheads			\$23,500.00
Trail Signage	Approximately	75 signs	\$30 per sign ⁵	\$2,250
Trail Map/brochure				\$3,000
				GRAND TOTAL TRAIL IMPROVEMENTS \$156,903

(1) This assumes that the entire trail will be reclaimed which may not be necessary all cases.

(2) Includes sign kiosk (large map with trail rules and regs.), parking, fencing

(3) Includes smaller map/sign fencing and parking

(4) Includes rules and regs sign and walk-through gate

(5) Includes labor

Appendix E: Summary of Stakeholder Comments

Stakeholder Comments by Category as of 2/14/02

1. New trails and trail connections

a. More loops

b. Connect to urban trails

c. Use sustainable and natural design in new trails

d. Attempt to provide a universally accessible trail

e. East/west trail connection

f. Specific suggestions

i. Restore access to Waterline Trail and Top of Rodney Ridge

ii. Connect Mt. Helena Ridge Trail with Wakina Sky, LeGrande Cannon, Rodney Ridge, etc.

iii. Improved connections to Wakina Sky from Grizzly and Orofino Gulches

iv. Connect Rodney Ridge to Cox Lake

v. Connect to Montana City

- vi. Connections to other USFS trails: Brooklyn Bridge, Blackhall Meadow, Colorado Mtn., Rimini
- vii. Connection to Spring Meadow

2. Maintenance

- a. Close eroding, low use, and redundant trails (i.e. Mt. Ascension)**
- b. Need better and ongoing maintenance of trails**
- c. Need to identify specific trail maintenance responsibility
- d. Necessity for volunteers and user groups
- e. Need specific trail standards

3. Trailheads, Signs and Amenities

- a. Develop new trailheads in unserved areas: LeGrande, Dump gulch, Grizzly gulch, Waterline, Beattie St., East Side
- b. Show rating system for difficulty, time, etc
- c. Education regarding wildlife, cultural, etiquette, etc.
- d. Good maps for signs and brochures**
- e. Coordinate sign and trailhead design with HNF

4. Trail use issues

- a. Separating uses: is it needed or appropriate in some areas
- b. Develop system that caters to all abilities including sections for disabled, elderly, etc.**
- c. Dogs: control, waste, designated off-leash areas, waste, enforcement**
- d. Work with various user groups and clubs
- e. Prohibit off-road vehicles
- f. Consider banning bikes when trails are wet
- g. Archery Range: conflicts and safety
- h. Horses on HNF trails
- i. Avoid cultural sites for safety and vandalism purposes
- j. Hunting, shooting and camping on HNF

5. Private property issues

- a. Acquire easements across private property**
- b. Acquire private inholdings, and critical parcels including Mt. Ascension
- c. Engage private landowners early
- d. Post signs that respect private property
- e. HNF will assist on easements to their trails

6. Management and Planning

- a. Archery Range:
 - i. Need to deal with vandalism and interruptions
 - ii. Lease should allow them to control access
 - iii. Can't do improvements without long term lease
 - iv. Possible move Archery Range Trail away from range
- b. Impacts to wildlife (trail density)**

- c. Weeds:
 - i. Who will deal with them
 - ii. How trails effect problem
- d. Pets control and effects on wildlife
- e. Enforcement**
- f. Work with Jeff Co. and other agencies
- g. Look at plans from other areas such as Bozeman and Missoula
- h. Before building new trail determine use and experience desired
- i. Create specific approval process for new trails
- j. Coordinate with zoning and subdivision regs
- k. Determine economic advantage to trails
- l. Create better trails not necessarily new ones
- m. Prohibit unauthorized trail building
- n. HOLMAC and HNF should agree on standards
- o. HNF trails in this plan projects may be able be done under categorical exclusion. Future projects go through NEPA.
- p. Look at creative ways to sponsor trail building and maintenance.

Appendix F: Trail Mapping and Inventory

From the outset of this planning process it was apparent that there was a great need to inventory every trail within the planning area. In the summer and early fall of 2001, a group of volunteers set out to map the trail system using a global positioning system (GPS) on loan from the city/county GIS Department. The GPS system was programmed so that the mapper could assign each trail segment with a series of characteristics by choosing from a menu of pre-selected attributes. Point features such as signs and trailheads could be mapped as well. This customized GPS trail menu appears below.

This trail inventory accomplishes two things: First, it allows the trails to be accurately mapped to a geographic information system (GIS) format. Trails can then be displayed and analyzed in relation to other spatial data including topography, roads, orthographic photos and any other information contained in the city/county GIS system. Secondly, the GPS information provides a database of trails that will allow the managing agencies to identify and track the status of each trail including maintenance, improvements, and other trail management information.

Menu of Trail Characteristics Used by the GPS Mappers

"Name", (If any)

"Trail Type": Improved Mountain, Unimproved Mountain, Urban multi-use, Bike route, Street or sidewalk

"Condition": Good, Fair, Poor

"Recommendation": None, Maintenance Needed, Reroute, Close

"Status": Existing, Proposed

“Comments” (If any)

"Sign Type": Kiosk, Directional, Locator, Other

"Sign Status": Existing, Proposed, Other,

"Condition": Good, Needs Replacement

"Comments" (If any)

"Trailhead"

"Name"

"Status": Existing, Proposed

"Type of Trailhead": Major, Minor

"Special Features"

"Type": Bench, View point, Exercise Station, Picnic table, Point of Interest, Gate, Stile, Other

"Comments" (If any)

Appendix G: Trailhead and Trail Sign Concepts and Standards

Trailheads

There is currently only one trailhead with parking, a map and trail information on the entire South Hills trail system – the Adams Street Trailhead at Mt. Helena. Street signs on Park Avenue point to this trailhead as access to Mt. Helena Park. Most people wishing to visit the trail system and find information on the trails go to this trailhead. As a result, the trails radiating from this site are the most heavily used in the entire South Hills trail system leading to increased erosions and maintenance needs. In turn the remainder of the trail system both on City and National Forest lands, is relatively underutilized. A key goal of the trailhead system is to disperse use throughout the system and introduce users to other parts of the system. This will also help reduce pressure off of the front side of Mt. Helena. The accompanying trail recommendation map shows the potential locations of future trailheads.

Three levels of trailheads are envisioned in this plan: Major Trailhead, Minor Trailhead and Neighborhood Access Point. The features of each are outlined in Chapter V of this plan. The following list outlines the recommended character of trailheads when they are being planned and developed.

Trailheads should:

- be consistent in layout and design
- be easily identifiable yet remain unobtrusive
- be relatively informal
- have no paving (unless necessary to control erosion)
- have no defined parking spaces even if parking is permitted.
- have minimal signs so as not to confuse the important messages to be conveyed.
- have a simple map at Major and Minor trailheads
- be vandal resistant
- have attractive fencing and gates if necessary to control unauthorized vehicle use

Trail signs

With the significant open space acquisitions through the Open Space Bond, there have been miles of additional trails added to the trails system. In addition, The Helena National Forest, through this plan, now has an inventory of existing trails on its lands in the South Hills. Many of these trails, however, are known only to local trail users and are difficult to locate for the uninitiated. The adoption of this plan by the City of Helena and the subsequent approval by the Helena National Forest will essentially authorize a new designated trail system. This plan also identifies trails that will be closed to further use. In order to meet the plans goals of making this trail system usable and identifiable a clear system of on-trail signs is recommended.

A clear and consistent sign program will:

- direct users to appropriate trails and away from closed trails
- reduce trespass
- help disperse use and avert overuse of certain areas and potential conflicts (i.e. the front side of Mt. Helena)
- provide a clear message of the appropriate use of the trails and open space system
- create a distinctive identity of Helena's trail system
- be modest, simple and fit into natural surroundings
- be made of inexpensive material such as Carsonite markers
- contain logo and directional info
- be easily modified, changed or moved
- be vandal resistant

Types of Trail Signs

Directional/Identification Signs

- Placed at trail intersections to give users a sense of location and direction

Advisory Signs

- Used to provide information regarding trail use.
- Placed at trail closures
- Mark property boundaries to avert trespass
- Identify hazards or safety issues
- Provide recommended route for mountain bikers to avoid potential conflicts

Sign Design and Planning

When this plan is adopted, planning the trailhead and trail sign systems should be initiated immediately including identification of funding sources. Potential sign concepts sign designs and materials should be presented to HOLMAC for approval. If necessary, the City Commission could also be asked to approve these concepts.

Identity: A name and a logo

It would be very advantageous to give the South Hills trail system an identity. Giving the system a name and a logo will allow the trails to be identified and marked easily. Naming the system also identifies it as a community amenity. In addition, it shows potential funders that our community takes pride in this amazing resource. The trail system name could also be used to name the trails identified in the Non-motorized Transportation Plan. Again this identity concept should be presented to HOLMAC and possibly the City Commission for approval.

Possible Trailhead and Neighborhood Access Sample Sign Language

This language was adapted from the 1995 Mt. Helena Management Plan, p12.

WELCOME TO HELENA OPEN LANDS [or chosen name]

Helena Open Lands are a unique and fragile resource that provides a wide variety of recreational opportunities. To ensure and enjoyable recreational experience by all, and to maintain these land's natural condition, the City of Helena asks that you observe the following rules of etiquette.

Prohibited Uses:

Recreational fires

Horses

Camping

Motor Vehicles

No littering. All trash must be packed out

Please:

Use common courtesy. Be aware that we all share these trails.

All trail users yield to uphill users, faster users yield to slower users until it is safe to pass

Stay on marked and off any trails marked closed

Do not disturb wildlife

Avoid use when trails are wet

Dog Owners:

Dogs must be within sight of the owner and under control

Remove dog waste

Bikes:

Always ride under control, yield to uphill and all slower users

Stay on trails

Slow or walk bike when approaching blind corners and narrow trails

Do not lock brakes or skid tires when descending

Recommended Bikes Routes:

[list trails]

Recommended Dog Routes:

[list trails]