WASATCH COUNTY REGIONAL TRAILS MASTER PLAN

Submitted to:
Wasatch County

Mountainland Association of Governments (MAG)

Wasatch Mountain State Park (WMSP)

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PEC
PROJECT ENGINEERING CONSULTANTS

Executive Summary

Accessibility to a widespread and well connected trail network is a key component of vibrant, livable, healthy communities. Well planned trail networks are also an integral part of a complete transportation system. The integration of non-motorized active transportation in a community aids in reducing traffic congestion, air pollution, and energy consumption, while also helping to improve the health and quality for life of residents and communities.

An active lifestyle is a primary component in the allure of Wasatch County to many new residents. In recognition of these benefits and to provide support for active transportation and the related lifestyle, the Mountainland Association of Governments (MAG), Wasatch County, and Wasatch Mountain State Park (WMSP) contracted with Project Engineering Consultants (PEC) to create the first ever comprehensive Wasatch County Regional Trails Master Plan. The plan focuses specifically on the greater Heber Valley. The primary goal of the plan was to establish a comprehensive, collaborative approach to county-wide regional bicycle and pedestrian planning. The plan included coordination with municipalities, towns, and government agencies that manage the land surrounding the urban core.

Tasks completed by the project team during the development of the county-wide trails master plan include:

- Collection of existing trails data, including geographic information system (GIS) shapefiles, trail maps, city trail plans, etc;
- Compilation and organization of existing data into a single dataset;
- Coordination with local municipalities and supporting/contributing agencies;
- Completion of a public open house;
- Completion of a user attitudes and needs survey;
- Completion of various county-wide trail maps iterations with revisions and changes as directed by the project team;
- Preparation of a cost estimate for each trail classification per linear mile and linear foot;
- Preparation of a cost estimate for various portions of the trail master plan;
- Recommendations for project implementation, funding, and the updating of the comprehensive regional trails master plan; and
- Completion of this regional trails master plan document.

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1.0 Introduction

In March 2015, Wasatch County, the Mountainland Association of Governments (MAG), and Wasatch Mountain State Park (WMSP), contracted with Project Engineering Consultants Ltd. (PEC) to complete a trails master plan study for the greater Heber Valley portion of Wasatch County. The Wasatch County Regional Trails Master Plan was developed to provide a framework for creating a connected system of trails throughout Wasatch County. This non-motorized system is envisioned to serve a diverse range of users, providing safe and well-maintained linkages to important natural, recreational, cultural, and civic destinations and other points of interest within and outside of the county. The plan will also include important links to trail systems in surrounding counties, such as Summit and Utah counties.

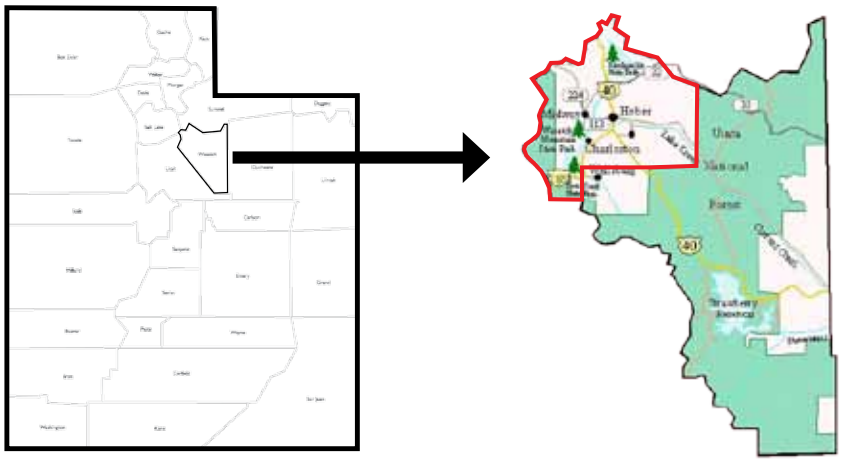
1.1 Project Setting

Wasatch County encompasses approximately 1,306 square miles of land, 30 square miles of which is water. The county has roughly 27,714 inhabitants, according U.S. Census Bureau, equating to a population density of about 21.20 inhabitants per square mile.

The county is bordered by Salt Lake County to the northwest, Utah County to the southwest, Summit County to the north, and Duchesne County to the east (see Figure 1). Heber City is the county seat. Other communities within the county consist of Midway, Charleston, Daniel, Hideout, Independence, Timberlakes, and Wallsburg.

Most of the county consists of public land owned by either the state or federal government (see Figure 2). Most of this public land is National Forest land with opportunities for outdoor recreation. Three major state parks make up most of the remaining public land in the county.

The proposed study area for the Wasatch County Regional Trails Master Plan focuses primarily on the Heber Valley and surrounding communities (see Figure 2), with emphasis on major connections to the valley and surrounding counties and/or open lands (see Appendix A:Trail Maps).



From left to right, Figure 1: This map of the state of Utah shows the location of Wasatch County; Figure 2: The Wasatch County map shows the defined project area.

1.2 Importance of Trail Planning

Good trail planning does more than create amenities for a community; a unified trail master plan does the following:

- Connects trail users into a regional network;
- Connects communities;
- Provides alternatives to driving by improving accesses for cyclists and pedestrians;
- Encourages integrated development planning;
- Connects the local trail network to public lands and recreation areas;
- Helps preserve open space;
- Fosters an active lifestyle (see Figure 3);
- Helps communities better prioritize the development and construction of trails; and
- Strengthens a community's ability to secure outside funding to build trail projects.

Figure 3: This Wasatch County resident enjoys a healthy lifestyle while mountain biking.

1.3 Purpose of the Master Plan

The county-wide trails master plan process began in the summer of 2015 as a joint effort of Wasatch County and MAG in association with other local governments and agencies. Due to an increasing interest in recreation throughout the county and an extensive network of backcountry trails, Wasatch County and MAG found it necessary to prioritize trail planning efforts and connect these backcountry trail nodes with an urban transportation trail network.

The county and MAG also considered the ever-growing population of communities along the Wasatch Front (E.G., Salt Lake County, Provo, Orem, Pleasant Grove, Lindon, etc.) and the likelihood of that population spilling over into the communities east of the mountain range and affecting the trails (see Figure 4). By establishing a comprehensive regional trails master plan now, the cities and towns affected by development can implement trail infrastructure seamlessly between municipal boundaries as allowed by funding and development in the area.

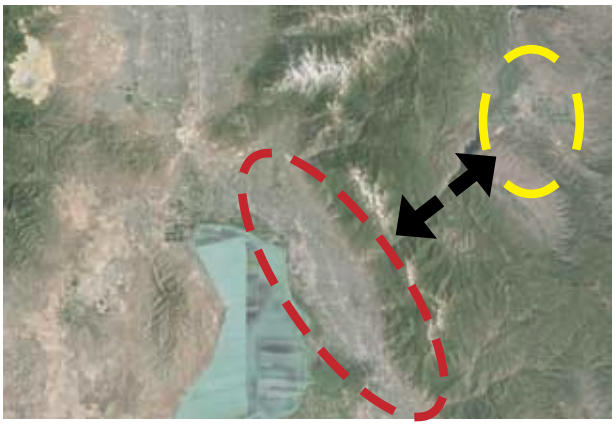


Figure 4: The yellow indicates Wasatch County, while the red indicates the growing population along the Wasatch Front and its effect on areas along the Wasatch back.

The purpose of the Wasatch County Regional Trails Master Plan project is to unify agencies and municipalities within the county to create a seamless trail network. To fulfill the purpose of the master plan, the following goals and objectives were outlined:

- Inventory existing trails from major communities and organizations within the study area;
- Revise existing trails, propose new trails where needed, and unify individual trail improvements between the affected entities into one single master plan;
- Classify existing and proposed trails, develop design standards, and recommend strategies for implementation of the proposed master plan; and
- Create a seamless network of trails that will require the cooperation of all municipalities and agencies in the greater Heber Valley to implement the strategies and goals of this regional trails master plan.

1.4 Project Team Members

Representatives from multiple towns, cities, and local agencies and groups were involved in the planning and development of the regional trails master plan; they are listed below:

Project Engineering Consultants (PEC)
Lars Anderson, Project Manager
Geoff Dupaix, Public Involvement Specialist
Senta Beyer, Trail Planner
Zachary Scott, Trail Designer

Wasatch County
Doug Smith, Planning Director

Mountainland Association of Governments (MAG)
Jim Price, Active Transportation Planner

Wasatch Mountain State Parks
Tracy See, Park Manager

Heber City
Tony Kohler, Planning Director
Heidi Franco, City Council
Kelleen Potter, City Council

Midway City
Michael Henke, Planning Director

Wasatch Trails Alliance
Don Taylor, President

Jordanelle State Park
Laurie Backus, Park Manager

Utah Department of Transportation
Matt Parker, Project Manager

Area Expert
Courtland Nelson

Charleston
Renee Green, Charleston Planning Commission
Bob Kowallis, Mayor

Team members were individually consulted when the project was initiated to gather existing information and input regarding trails in the study area. Following these consultations, various team meetings were held to determine solutions and manage efforts.

1.5 Public Involvement

Wasatch County has an active population with a passion for outdoor recreation. The project team determined that public opinion and support for the master plan would be essential in its development and implementation. It also became apparent that due to the geographic nature of the county and the neighboring land uses, that coordination between various state agencies and local municipalities would be crucial for success. The project team used the following tactics to involve the general public and coordinate between agencies:

- Conducted a public open house;
- Conducted an online user survey;
- Conducted individual meetings with agencies/municipalities;
- Provided a project website;
- Created presentations and informational materials; and
- Collected comments at the public open house and organized them into a matrix.

1.6 Goals, Objectives, and Policies

PEC originally identified a basis for the goals, objectives, and policies in the project proposal. This basis was then tailored through interactions with stakeholders. The goals, objectives, and policies for the Wasatch County Regional Trails Master Plan consist of the following:

- Build upon existing and proposed trails to create a comprehensive regional trails master plan for the Wasatch County region;
- Identify, review, and present the vision and goals of stakeholders;
- Create and maintain a working database of key destinations essential in the trail network;
- Examine existing infrastructure and design precedents to develop standards that are safe for cyclists and pedestrians;
- Gather data regarding the use of existing trails and the implementation of new trails through a needs and attitudes survey;
- Estimate costs for trail construction and right-of-way acquisition;
- Research maintenance requirements for a variety of trail types;
- Develop a trail classification system, including new trail standards to be adopted throughout the county;
- Make suggestions for implementation or phasing as it relates to the trails master plan;

- Compile data collected during the above listed objectives; and
- Produce trail maps and a written trails master plan document.

1.7 Benefits of Trails

Trails have tremendous benefits for local communities. Not only do they connect cities and towns to surrounding lands, but they also enhance the local quality of life through positive impacts to health, economy, and environment. Wasatch County recognized this importance and has taken the steps to prepare a regional trails master plan so the community can benefit from a unified trail system. Examples of benefits from trails are listed below.

- **Improving Health:** Trails reduce medical costs by encouraging exercise and other healthy outdoor activities at low to no cost relative to other recreational services.
- **Improving Economy:** The costs of land acquisition for trails, trail construction, and maintenance are far outweighed by the economic benefits generated by trails, which can include increased property values, increased spending at local businesses, and increased business development. A healthy trails system fosters a desirable destination for travel.
- **Increasing Active Transportation:** Trails provide non-vehicular transportation options that help reduce traffic and congestion on roads. Where feasible, designated pedestrian and bicycle paths improve safety by providing opportunities to separate trail users from motorized vehicles.
- **Improving Air Quality:** When trails are used for commuting, fewer vehicles are on the roads, reducing fuel consumption and its associated air pollution.

2.0 Project Approach

Although Wasatch County consists of 1,306 square miles of land, most of that land is undeveloped forest land managed by the U.S. Forest Service. Since the purpose of the master plan study was to improve the urban trail system and establish strong connections to the backcountry system, the study area for the project was narrowed to the Heber Valley with minor extensions north to Jordanelle State Park (JDSP) and south to the mouth of Provo Canyon.

2.1 Study Areas

Multiple towns, cities, and public lands exist within the proposed study area for the Wasatch County Regional Trails Master Plan. Each of these areas was examined separately to gain a better understanding of how each one functions and how each part could be integrated into the collaborative effort of the master plan.

Wasatch County

Wasatch County has an estimated population of 27,714, according to the U.S. Census Bureau. Wasatch County is one of the fastest growing municipal areas in the United States for a

population under 50,000. Since 2010, the population has increased by nearly 18%, with many residents settling in the greater Heber Valley. The majority of residents (57.7%) fall between the ages of 18 and 64. The median household income of the county is slightly above $65,000.

Heber City

Heber City has an estimated population of 13,599, according to the U.S. Census Bureau. The city encompasses 8.7 square miles of land and has an elevation of 5,600 feet. It was settled in the late 1850s. Heber City is the county seat of Wasatch County and the central business and economic hub of the Heber Valley. The city center is bisected by US Highway 40.

Midway City

Midway City has an estimated population of 4,436, according to the U.S. Census Bureau. The city encompasses 3.5 square miles of land and has an elevation of 5,600 feet. It was settled in the late 1850s, along with Heber City. Midway City shares boundaries with Deer Creek State Park and Wasatch Mountain State Park, home of Soldier Hollow. Midway is notable for its annual Swiss Days celebration.

Daniel

Daniel has an estimated population of 938, according to the U.S. Census Bureau. The city encompasses 3.8 square miles of land and has an elevation of 5,700 feet. It was settled in the late 1850s. Daniel borders a large portion of U.S. Forest Service land and offers access to recreational opportunities in this area.

Charleston

Charleston has a population of 451, according to the 2010 U.S. Demographic Profile. The city encompasses 1.7 square miles of land and has an elevation of 5,400 feet. It was settled in the late 1850s. A large portion of the Provo River and Deer Creek Reservoir are located in Charleston.

Wasatch Mountain State Park

Wasatch Mountain State Park was established in 1961. The park spans 21,592 acres and has a base elevation of 5,900 feet. Wasatch mountain state park offers recreational opportunities, including hiking, mountain biking, hunting, 4x4 roads, ATV trails, cross country skiing, and golf. The state park shares its western border with the National Forest Service.

Jordanelle State Park

Jordanelle State Park was established in 1995, and its primary feature is the Jordanelle Reservoir. It is located in the northern most portion of Wasatch County and includes opportunities for camping, boating, and hiking. Rock Cliff Nature Center is located at the eastern tip of the reservoir and state park, acting as a hub between Wasatch and Summit counties. The Hailstone portion of the park also acts as a hub along US Highway 40, west of the reservoir, near the boundary with Park City.

2.2 Existing Infrastructure

Wasatch County has ample opportunities for trails and a supportive group of trail users. Many trails, trailheads, and backcountry systems exist. The following systems are key components of the existing trail infrastructure in the project area (see Figure 5).

- **Coyote Canyon System**: The Coyote Canyon Trail System is located at the north end of the Heber Valley just east of State Road 32. The system includes an extensive network of backcountry trails that are constantly under expansion. The system connects to other systems to the east, such as Red Ledges, Victory Ranch, and the National Forest land near the headwaters of Wolf Creek and the West Fork of the Duchesne River. Three designated trailheads and various other non-designated access points exist here.
- **Provo River Restoration**: In 1999, the Utah Reclamation and Mitigation Commission began restoring the Provo River corridor from Jordanelle Dam to Deer Creek Reservoir. The effort included reconstruction of the river as well as improved access for recreational users and fisherman. Multiple fisherman's access points were implemented along the river and serve the purpose of trailheads for those hiking along the river corridor.
- **Wasatch Mountain State Park**: WMSP includes numerous trails systems. The Dutch Hollow trail system at the north end of Midway is a favorite among locals. The system includes backcountry trails that connect to a larger system within the Wasatch Mountain State Park, including the new Wasatch Over Wasatch (WOW) trail. The system includes a large trailhead at Dutch Hollow and multiple improved multi-use trails that connect into the urban interface through Interlaken, the Dutch Fields Development, River Road, and Cari Lane. The Pine Canyon network and visitor's center trail network are also key trail networks within the WMSP.
- **Soldier Hollow System**: Famous for its role in the 2002 Olympics, the Soldier Hollow area remains a destination for cyclists, hikers, and pedestrians in the summer, while also catering to snowshoers and cross country skiers in the winter. The system also includes a primary trailhead that connects the Soldier Hollow trail system to the Deer Creek Trail, which follows the shoreline of Deer Creek Reservoir around to just below the dam in Provo Canyon.
- **Midway Lane**: The valley's two most prominent cities (Heber and Midway) are linked by an improved multi-use trail. This trail connects to multiple other trails within Midway and provides connections to key locations such as the Southfield Park in Heber City.

2.3 Data Collection

Because Wasatch County encompasses so many municipalities and includes lands from various agencies, the collection of existing data was essential to the creation of a universal data set from which future decisions could be made. Data for the project was collected in the form of ESRI shapefiles and hardcopy maps from the agencies and municipalities involved in the project. PEC contacted MAG, the Utah Department of Transportation (UDOT), Wasatch County, Heber

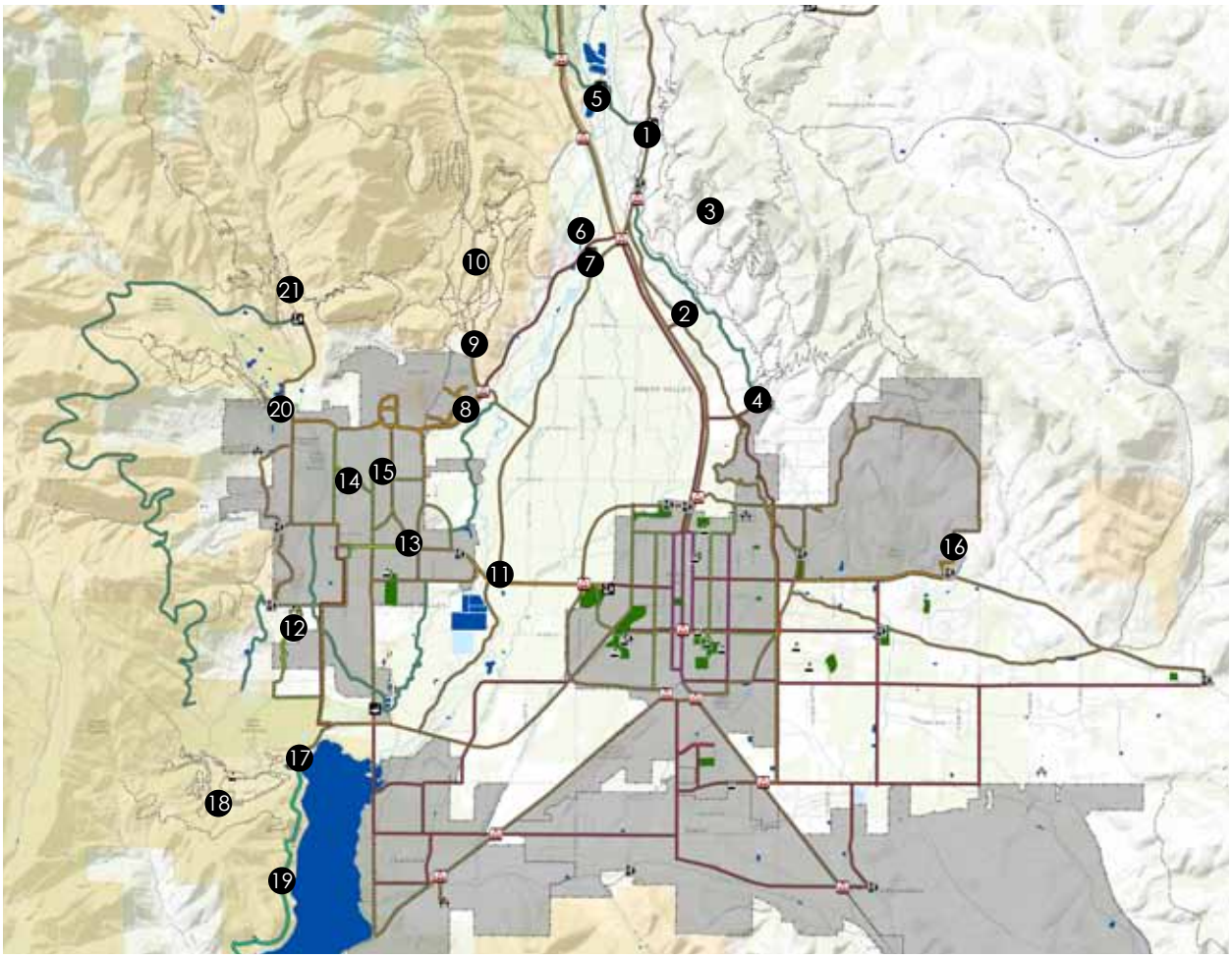


Figure 5: This map shows the existing trails, trailheads, and backcountry trail systems.

Coyote Canyon

1. Coyote Canyon Trailhead at Riverview Development
2. Coyote Canyon Trailhead at Utah Valley University Campus
3. Coyote Canyon Back Country Trail Network
4. Coyote Canyon Trailhead at Coyote Lane

Provo River Restoration

5. Provo River Restoration Fisherman's Access at Cottonwood Canyon
6. Provo River Restoration Fisherman's Access at River Road North
7. Provo River Restoration Fisherman's Access at River Road South

WMSP

8. River Road Improved Pedestrian Trail at Dutch Fields
9. Dutch Hollow Trailhead

WMSP

10. Dutch Hollow Back Country Trail Network

Midway Lane

11. Midway Lane Improved Multi-use Trail
12. Midway Trail South
13. Midway Main Street Trail 2
14. Midway Trail North
15. Cari Lane Trail
16. Red Ledges Trail

Soldier Hollow

17. Soldier Hollow Trailhead
18. Soldier Hollow Trail Network
19. Deer Creek Trail

WMSP

20. Visitor's Center Trail Network
21. Pine Canyon Trail Network

City, Midway City, WMSP, JDSP, Charleston, the Town of Hideout, and the Wasatch Trails Alliance to request data applicable to the study area.

2.4 Data Compilation

Any available ESRI shapefiles were merged into one single shapefile. The new universal shapefile was evaluated to determine missing components. Hard copy maps were used to cross check data, and any missing or incorrect parts of the data were added to the new shapefile using geographic information system (GIS) software. PEC cross checked digital data with trail maps for Wasatch Mountain State Park, including the Dutch Hollow, Pine Canyon, WMSP Visitor's Center, Soldier Hollow, and Cascade Springs areas. In the urban areas, digital data was verified using current aerial imagery, ground truthing, and work sessions with municipal planners and agency representatives. When all data had been compiled and verified, a universal set of base maps was created and used in planning and mapping workshops with the project team.

2.5 Mapping

The team used the universal set of basemaps in various stakeholder and public meetings. In addition, the maps were used in workshops with managing agencies and municipal planners. Full size scaled maps were used to draw conceptual trail alignments, outline existing trails, and define proposed trails for the master plan (See Figures 6-7). Following each work session, PEC digitized the content drawn onto hard copy maps and implemented the changes into the next set of hard copy maps. This process was repeated on a number of occasions to refine the final maps for the master plan. During the creation of these maps, PEC and team members determined that due to the large number of trails being created and the large study area, developing a core network of primary trails would be necessary.

Figures 6-7: Examples of work sessions completed during the data collection and mapping efforts.

2.6 Core Network

The Wasatch County Regional Trails Master Plan is a network of the primary trails in the study area that provide connections to key landmarks, points of interest, and backcountry trail hubs.

The core network was developed in the beginning of the mapping process with the project team. After identifying key destinations in the study area, the team began to draw conceptual alignments between these locations. Through revision and refinement, a core network was developed.

The project team found that connections between the backcountry trail hubs at Soldier Hollow, Dutch Hollow, Wasatch Mountain State Park, Coyote Canyon, and Red Ledges were essential. In addition, key connections needed to be made between the city centers of Heber and Midway. Finally, the team determined that providing access to communities on either side of US Highway 40 and US Highway 189 was necessary to complete a full circuit. By proposing solutions to these basic needs, the core network was developed.

3.0 Trail Classification

To plan for proposed trails and improve existing trails, a trail classification system was developed as part of the master planning process. Five different categories were proposed and adopted to serve as a guide for developing a functional, sustainable trail system: Safety, accessibility, connectivity, function, and economics. These categories will help planners and professionals find creative solutions when providing for trail connectivity within a variety of conditions.

The design concepts and attributes presented were derived from both current bikeway and trail design guidelines provided in the American Association of State Highway and Transportation Officials' (AASHTOs') Guide for Development of Bicycle Facilities (1999), as well as guidelines set forth by the International Mountain Biking Association (IMBA) for sustainable, backcountry trail construction and design standards. These standards, combined with the collective interests from the steering committee, were instrumental in developing the classification system and design standards specific to the needs of the Wasatch County Regional Trails Master Plan.

3.1 Bike Routes

Bike routes include a variety of cyclist based infrastructure. Increased awareness signs, roadway striping, fewer traffic signals, and lower speed limits are common features. Bike routes include but are not limited to bike lanes, sharrows, or separated cycle tracks (See Figure 8-10).



Figures 8-10: Examples of different types of bike routes. Images courtesy of Google.

3.2 Improved Multi-Use Trail

Multi-use trails are major community arterial routes that are independent of vehicular routes and provide adequate separation from vehicles. They may bisect parks and open space, as well as parallel natural features, such as rivers and streams. These trails are both transportation and recreation oriented and should provide connections to cities, towns, backcountry trails and trailheads, parks, points of interest, and other transportation nodes. Where possible, these trails should comply with AASHTO standards (See Figures 11-13).



Figures 11-13: Examples of improved multi-use trails. Images courtesy of Google and Deseret News.

3.3 Urban Soft Surface Trail

Urban soft surface multi-use trails are major community arterial routes independent of vehicular routes (see Figures 14-15). They may bisect parks and open space, as well as parallel natural features, such as rivers and streams. These trails are both transportation and recreation oriented and should provide connections to cities, towns, backcountry trails and trailheads, parks, points of interest, and other transportation nodes. These trails may differ from other multi-use trails in surface material and width. Soft surface trails are constructed of compacted road base, preferably a 6-inch depth of 3/4-inch material that allows for firm compaction. Soft surface trails provide a suitable surface for all user types (e.g., walkers, runners, mountain bikers, and equestrian users).


Figures 14–15: Examples of urban soft surface trails. Images courtesy of Google and PEC.

3.4 Improved Pedestrian Trail

Improved pedestrian trails are collector trails (including sidewalks) that connect users to community trails (see Figures 16-17). They may bisect neighborhoods, open spaces, commercial developments, parks, schools, etc., and parallel rivers and streams. Many existing pedestrian trails were designed and constructed prior to the regional trails master plan. Where possible, trails less than 8 feet wide should be widened and brought into current standards to improve access to more users.

Figures 16–17: Examples of improved pedestrian trails. Images courtesy of Google and PEC.

Future construction of major sidewalks that connect to the core trail network should be adapted to meet the standards of improved pedestrian trails, which will include an 8-foot wide tread surface. Efforts should be made to maintain a consistent width and for residential sidewalks to remain between 4 to 6 feet. Primary sidewalks should be constructed to a minimum width of 8 feet.

3.5 Backcountry Trail

For the purposes of the master plan, backcountry trails (single-track type) are defined as trails that provide access for users to explore areas outside of the urban trail network. These non-motorized trails are typically designed and constructed for a variety of recreational users, such as hikers, trail runners, mountain bikers, and equestrians (see Figures 18-20).

Figures 18-20: Examples of backcountry trails. Images courtesy of Google and PEC.

Because they are located outside of the urban network, the surface typically consists of natural dirt, creating an undeveloped feel for users. In some rare cases, other materials, such as gravel, may be implemented to aid in erosion control or stabilization. Backcountry trails accommodate a variety of uses, such as hiking, running, mountain biking, equestrians, and snowshoeing. Backcountry trails range from 2- to 4-feet wide.

In some cases, bridges, and boardwalks may be necessary to traverse through or over natural features in the backcountry. These structures should be designed and constructed to be compatible with all backcountry uses.

4.0 Trailhead Classification

Access to a trail system is one of the primary elements for a successful trail network. Trailheads serve the local and regional population who access the trail network by car, transit, bicycle, foot, and/or other modes of travel. These access points provide essential connections to the system and serve as an information hub to educate and provide users with directions, maps, rules and regulations of the trails and area, closures, events, etc. Where appropriate, support facilities, such as resting areas, interpretive signs specific to the area, public art, restrooms, fountains, and bike racks, may be provided. To plan proposed trailheads and improve existing ones, a trail classification standard was developed. Three different classes are proposed based on capacity, location, trail access, and amenities.

4.1 Class 1

Class 1 trailheads are classified as major developed parking hubs for both community and regional trails where heavy use is anticipated. Class 1 trailheads should include, but are not limited to, a minimum of 25 paved parking stalls, direct and safe trail access, restrooms, information kiosks, with maps and educational information, drinking fountains, bike racks, security lighting, public art, and monument signs, as determined at the time of approval, evaluation, and development. Class 1 trailheads should address good circulation patterns, site distances, proper drainage and storm water run off, and landscaping, as required (See Figures 21-23).



Figures 21-23: Class 1 trailheads have a minimum of 25 total parking stalls, major amenities, and direct access to trails. Images courtesy of Google and the City of Phoenix.

4.2 Class 2

Class 2 trailheads are classified as trail parking areas that include less than 25 parking stalls but more than six. Parking surfaces may be improved with road base, gravel, or pavement (see Figures 24-26). Amenities may include, but are not limited to, restrooms, map kiosks, signs, safe and direct trail access, and other items, as determined at the time of approval, evaluation, and development. These trailheads should address good circulation patterns, site distances, and proper drainage and storm water run off, if necessary.



Figures 24-26: Class 2 trailheads include six to 25 total parking stalls, minor amenities, and direct access to trails. Images courtesy of Google.

4.3 Class 3

Class 3 trailheads are classified as small, undeveloped, legal trail parking areas that provide six or less parking stalls and accommodate off-street parking (see Figures 27-29). There are typically no trailhead amenities, such as restrooms, bike racks, etc. They do provide direct access to trails and often provide a map kiosk with trail information.



Figures 27-29: Class 3 Trailheads include less than six parking stalls, no major amenities, direct access to trails, and trail information or kiosk. Images courtesy of Google.

5.0 Design Standards

Trails can be formal or informal, paved or unpaved, and designated for a variety of users, such as cyclists, pedestrians, or equestrians. The classification or standard of each route depends on the intended user group, the project setting, and the requirements of the funding or approving agencies. Trails designed for Wasatch County should address the goals, objectives, and policies in this document. Trails should also cater to the needs of a range of users, including equestrian users, pedestrians (including joggers), disabled persons, and bicyclists (both road and mountain bikes).

The design standards section summarizes standards and guidelines for equestrian, pedestrian, and bicycle facilities that may become a part of the proposed trail network. The intent of these standards is that all new trails constructed in the county will adopt these standards and existing trails will be retrofitted to current design guidelines. This will help to create uniformity throughout the county and blur the boundaries between municipalities. As Wasatch County expands and its municipalities grow, these standards and guidelines should be revisited and adapted to better serve future needs. The following agency design standards for trail and bike facilities were researched and consulted during the compilation of the Wasatch County Regional Trails Master Plan (See Table 1).

Trail Type	Tread Width	Pavement Section/ Material	Maximum Grade	Notes
Buffered Bike Lane	5-foot wide lane, 5-foot wide minimum buffer	Same as roadway	Match roadway	4-inch wide solid white striping for lanes and buffer zone; bright green paint may also be used between lane lines for emphasis; solid white cyclist stamp to be used at 500-foot intervals.
Bike Lane	5-foot lane	Same as roadway	Match roadway	4-inch wide solid white striping for lanes; bright green paint may also be used between lane lines for emphasis; solid white cyclist stamp to be used at 500-foot intervals
Sharrow	Same width as travel lane	Same as roadway	Match roadway	Solid white cyclist stamp at 500-foot intervals; 6-foot wide bright green stripe can be used for extra emphasis
Signed Bike Route	N/A	Same as roadway	Match roadway	Signs only
Improved Multi-Use Trail	10-14 feet	3-inch depth of hot mix asphalt over a 6-inch deep compacted road base	8%	Surface treatment may vary to include pavers, brick, or concrete.
Urban Soft Surface Trail	10-12 feet	6-inch depth of compacted roadbase or stone fines.	8%	
Improved Pedestrian Trail	8 feet	4-inch depth of concrete over 6 inches of 3/4 inch gravel	8%	Surface treatment may vary to include pavers, brick, or stamped/ stained concrete
Backcountry Trail	1-4 feet	Natural surface	10-20% (17-20% for short distances only)	Refer to IMBA standards

Table 1: Table of trail standards.

5.1 Bicycle Routes

Bicycle routes and their design standards are nearly as vast as trails themselves. Varying street configurations and transportation standards throughout the state and country have led to the development of numerous options for safe, effective, bicycle routes.

Buffered Bicycle Lanes

Buffered bicycle lanes are preferred above all other bicycle facilities but are often not possible due to space limitations. Buffered bicycle lanes should consist of a striped bike lane with a soft or hard buffer between the bicycle and vehicular travel lane. All striped bike lanes should be a minimum of 5-feet wide and will have at minimum a 4-inch wide solid white line on either side. Solid white bicycle stamps should be included within the 5-foot bicycle lane at 500-foot intervals. In areas where high vehicular traffic is present, bright green paint may be used within the solid white lines of the bicycle lane to clearly distinguish the bike lane. Buffer zones should be a minimum of 5-feet wide and can consist of a number of different hatch patterns using solid white 4-inch wide stripes.

Striped Bicycle Lanes

Striped bicycle lanes are characterized by a designated bike lane adjacent to the vehicular travel lane that is separated or distinguished from the travel lane by durable roadway striping or paint. All striped bike lanes will be a minimum of 5 feet and will have at minimum a 4-inch wide solid white line on either side. Solid white bicycle stamps should be included within the 5-foot bicycle lane at 100-foot intervals. In areas where high vehicular traffic is present, bright green paint may be used within the solid white lines of the bicycle lane to clearly distinguish the bike lane from the vehicle lane (See Figure 30).

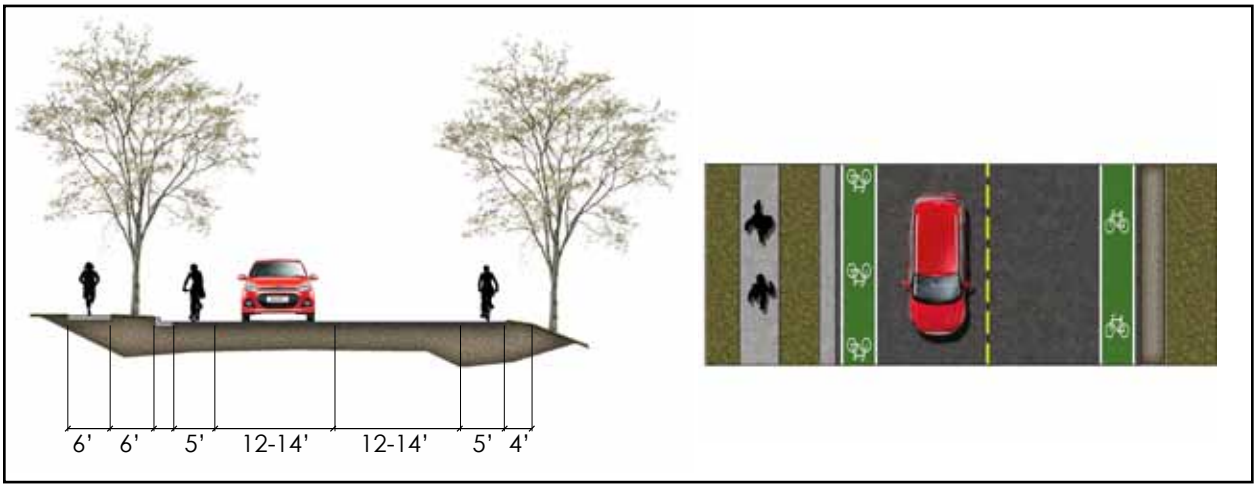


Figure 30: Typical cross section (left) and plan view (right) of a striped bike lane.

Sharrows or Shared Bicycle Lanes

Sharrows are used where the roadway right-of-way does not allow for a designated bike lane; so in turn, the cyclists and motorists share the travel lane. The width of the sharrow will depend on the width of the travel lane, but usually it will range from 12 to 14 feet. Sharrows are marked

with durable roadway paint in the travel lane to indicate a shared route. Markers should be a solid white stamp at 500-foot intervals. In some cases where heavy vehicular traffic is common, a 5-foot wide bright green strip down the center of the travel lane can be incorporated in conjunction with the solid white bicycle stamps (See Figure 31).

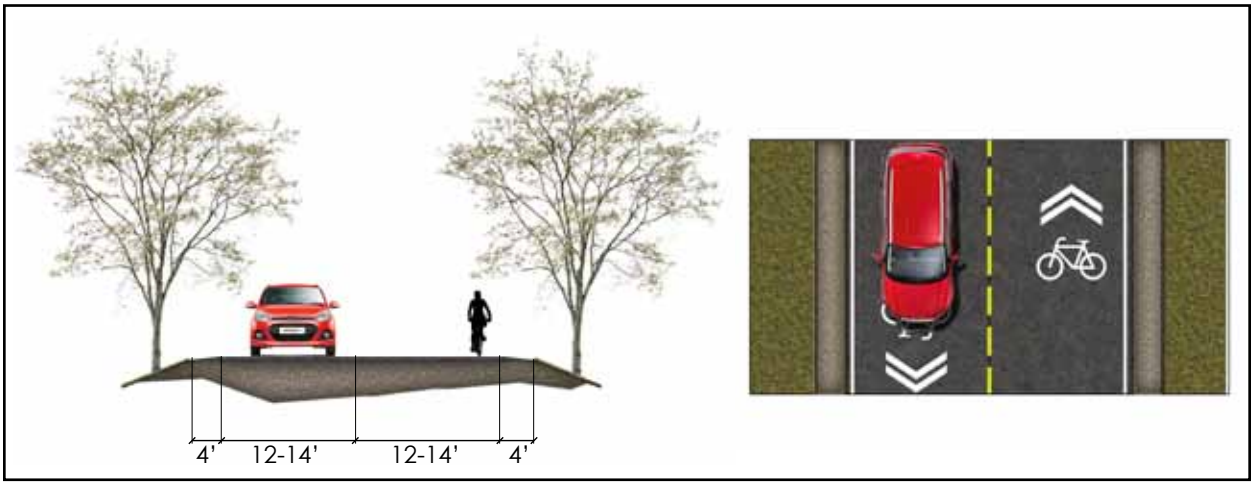


Figure 31: Typical cross section (left) and plan view (right) of a sharrow.

Signed Route

Signed routes are the least expensive option for designated bicycle paths but also are the most unsafe due to lack of clear, obvious markings for motorists. They should be used only as an interim option while funds are being gathered to construct one of the other three prior mentioned bicycle routes. Signed routes can be used as a planning tool to layout routes for potential bike lanes and sharrows. Signs can be places for routes; then once funds are available for full construction, the signs can be left in place as auxiliary markers and wayfinding tools for cyclists. Signs should be uniform throughout the county.

5.2 Improved Multi-Use Trail

Improved multi-use trails are major community arterial routes within the urban network. Because improved multi-use trails are designed for large volumes of users with varying uses, the surface materials should be a durable pavement. Asphalt is the preferred pavement type due to cost, ease of maintenance, and surface smoothness.

Typical pavement cross sections for an asphalt multi-use trail should consist of the following:

- a properly graded and compacted subgrade that has been stripped of all organics and lined with a structural weed barrier fabric;
- a 6-inch depth of compacted road base material; and
- a 3-inch depth of hot mix asphalt (HMA) pavement.

In some circumstances, concrete or concrete masonry unit (CMU) pavers may be used to create a unique look or feel. These surfaces should be avoided in most areas due to the uneven joints and score lines that cause undesirable riding experiences for cyclists.

The Federal Highway Administration (FHWA) requires a minimum 10-foot wide tread width with 2-foot wide shoulders for a trail to be considered multi-use. For improved multi-use trails

in Wasatch County, a tread width between 10 and 14 feet is recommended. Trails with a 14-foot tread width should be actively pursued where cost and space permit. By constructing wider trails initially, the county, cities, and other agencies will have made preparations for a growing population in the area. Wider trails will also accommodate larger trail specific competitions and events (see Figure 32). Maximum slope should not exceed 8%. All improved multi use trails should be constructed within a 20 foot easement with a 50 foot temporary construction easement where terrain requires it.

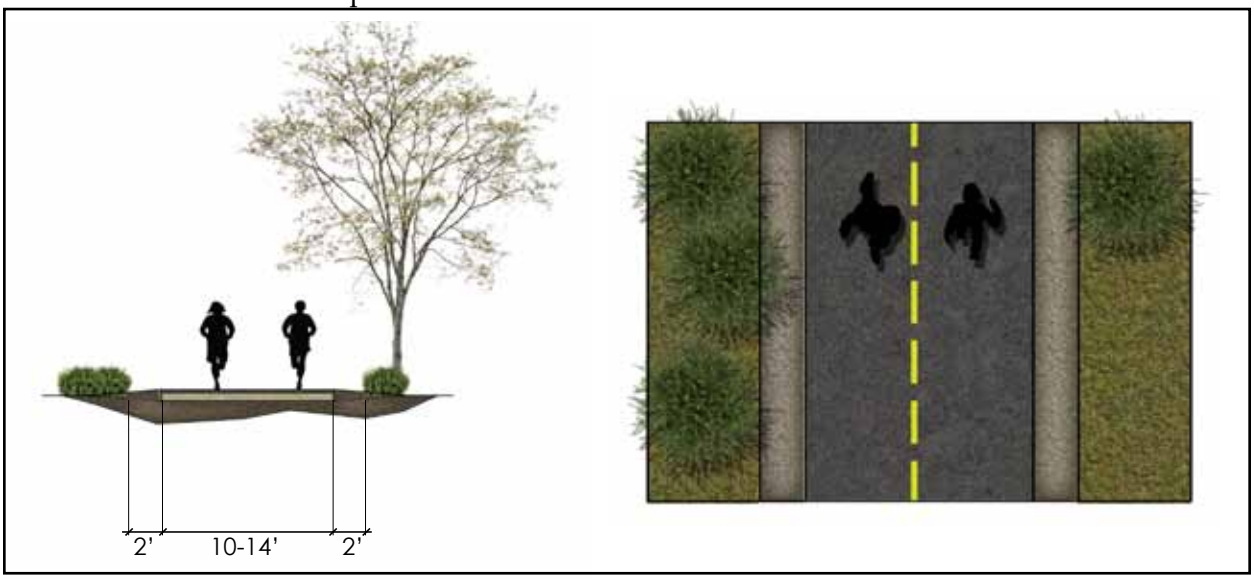


Figure 32: Typical cross section (left) and plan view (right) of an improved multi-use trail.

5.3 Urban Soft Surface Trail

Urban soft surface trails are major community arterial routes within the urban network but are located in more natural settings. Soft surface trails are targeted toward recreational use and should be implemented in equal proportions with improved multi-use trails to meet the needs of various users. These trails are constructed of compacted road base or fine stone materials and provide a more suitable surface for runners and equestrian users. The typical cross section for these types of trails should consist of the following:

- a properly graded and compacted subgrade that has been stripped of all organics and lined with a structural weed barrier fabric; and
- a 6-inch depth of compacted ¾ inch road base; color of the road base should match the surrounding materials to provide a natural appearance (see Figure 33).

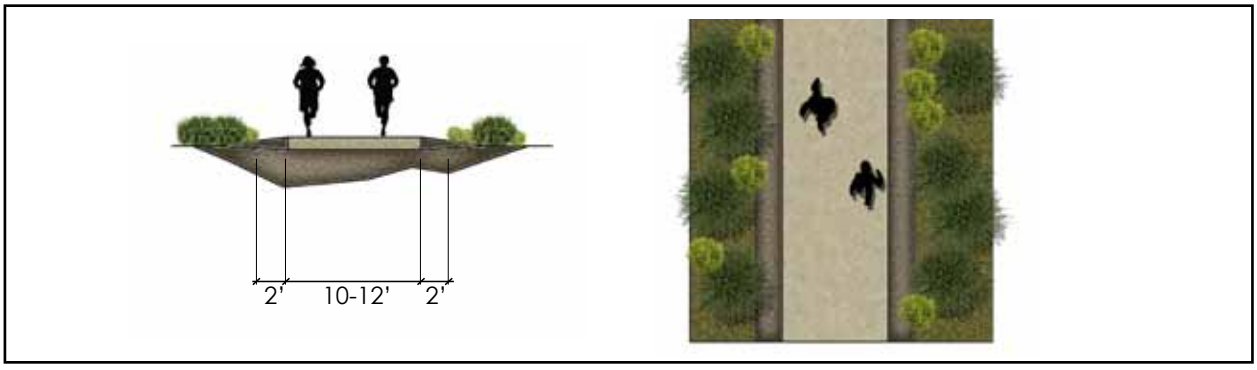


Figure 33: Typical cross section (left) and plan view (right) of an urban soft surface trail.

FHWA requires a minimum 10-foot wide tread with 2-foot wide shoulders for a trail to be considered multi-use. For improved multi-use trails in Wasatch County, a tread width between 10 and 12 feet is recommended. Trails with a 12-foot tread width should be actively pursued where cost and space permit. Maximum slope should not exceed 8%. By constructing wider trails initially, the county, cities, and other agencies will have made preparations for a growing population in the area. Wider trails will also accommodate larger trail specific competitions and events. Trails in Wasatch County should consist of a properly graded and compacted subgrade, lined with a structural weed barrier fabric, followed by a 6-inch depth of compacted ¾ inch minus road base material. All urban soft surface trails should be constructed within a 20 foot easement with a 50 foot temporary construction easement where terrain requires it.

5.4 Improved Pedestrian Trail

Improved pedestrian trails are more commonly referred to as sidewalks. The objective of the master plan is that future construction of major sidewalks will be adapted to meet the standards of improved pedestrian trails. The typical cross section of an improved pedestrian trail in Wasatch County should include an 8-foot wide tread surface. Trail construction should consist of a properly graded and compacted subgrade that has been stripped of all organics and lined with a structural weed barrier fabric followed by a 4-inch thick concrete pavement on top of a 6-inch depth of ¾ inch gravel (see Figure 34).

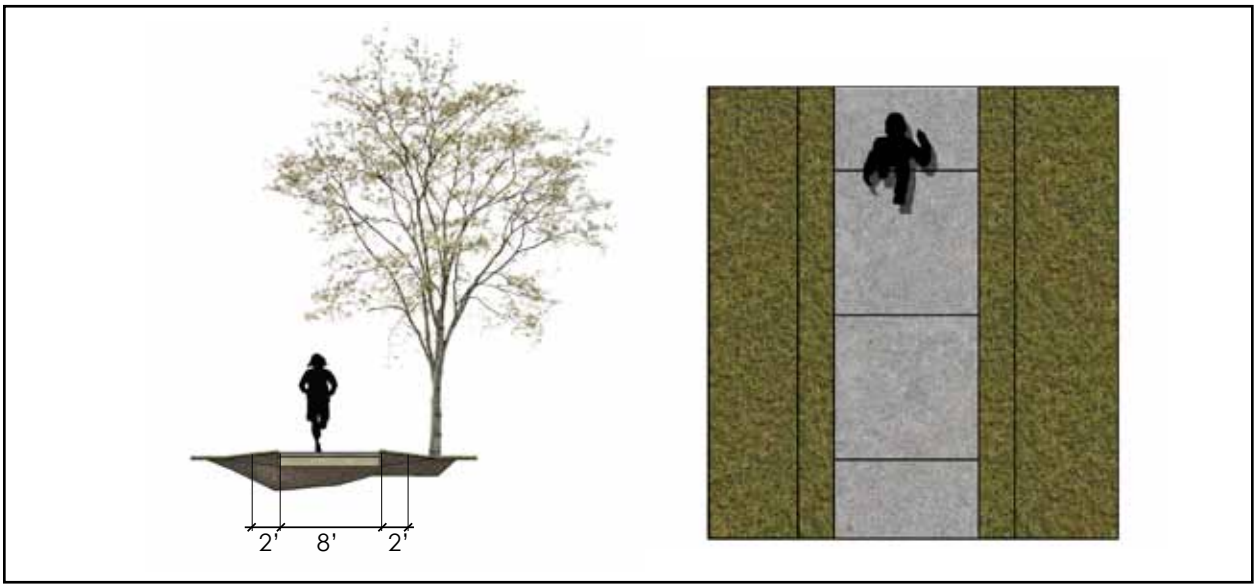


Figure 34: Typical cross section (left) and plan view (right) of an improved pedestrian trail.

Efforts should be made to update all existing improved pedestrian routes in the urban system to meet these standards. Residential and collector sidewalks can remain at 4- to 6-foot widths, but primary sidewalks should be constructed at 8-feet wide. All improved pedestrian trails should be constructed within a 20 foot easement with a 50 foot temporary construction easement where terrain requires it.

5.5 Backcountry Trail

Backcountry trails, as classified in this document, are recreational trails outside of the urban network. Because they are located outside the urban network, tread material is often created from the natural sub-grade. In some cases other materials such as gravel my be implemented to aid in erosion control and/or stabilization. In all cases, these materials should be derived from adjacent areas to match the surroundings. Any imported materials should complement the features in the area and maintain a natural look and feel. Tread width of backcountry trails will vary based on vegetation, obstacles, and use. In most cases, backcountry trails should not exceed 48 inches wide. Most backcountry trails will have a tread width of 12 to 24 inches, depending on the use. In situations where backcountry trails share corridors with forest access roads or all terrain vehicle (ATV) routes, the tread width may be wider (see Figure 35). Maximum slope should not exceed 20%, and slope should only exceed 17% for short distances, with ideal slopes ranging from 10 to 16%. All backcountry trails should be built within a 10 foot easement with a 25 foot temporary construction easement where terrain requires it.

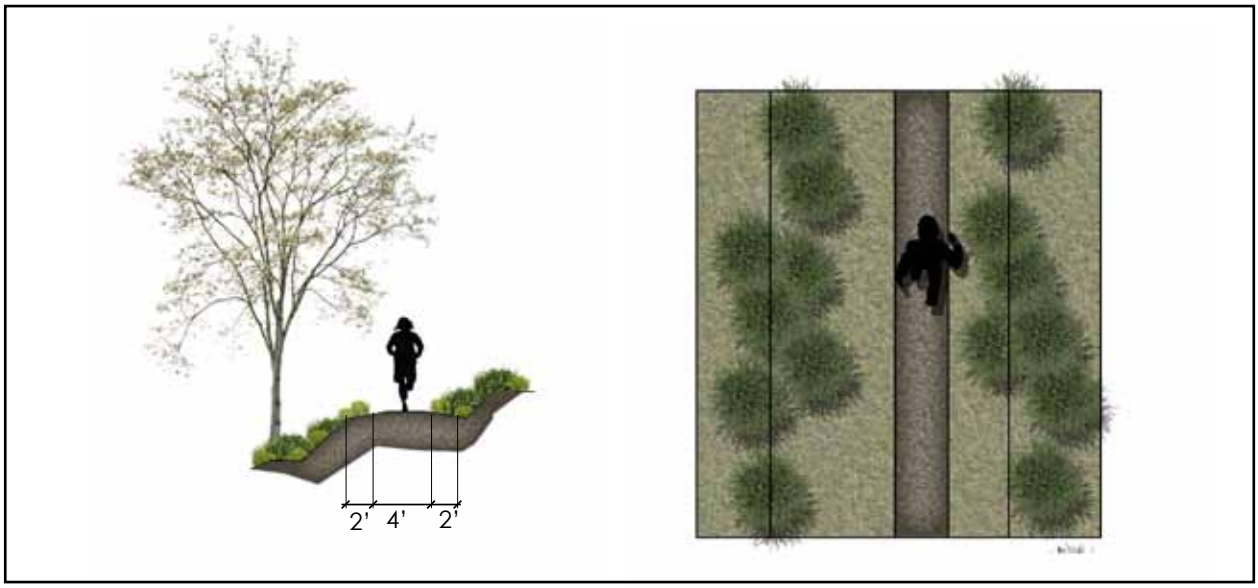


Figure 35: Typical cross section (left) and plan view (right) of a backcountry trail.

All backcountry trails should be designated with a rating to allow potential riders to make safe and informed decisions. The IMBA has developed a standard trail difficulty rating system applicable to mountain bike trails. By providing ratings on trail signs in accordance with IMBA's standards and by providing general trail characteristics such as total length, elevation change, and projected trip times at trailheads, all potential users can make educated decisions about the trails they use.

Backcountry trails should be built to IMBA standards. Surface treatment shall be a natural surface constructed with a bench width of 2 to 4 feet, which ensures environmental stewardship and allows for long-term sustainability by (see Figure 36-38):

- Incorporating bench-cut construction with a tread surface that has an outward slope to the outer edge from a grade of 2 to 8% in the downhill direction; and

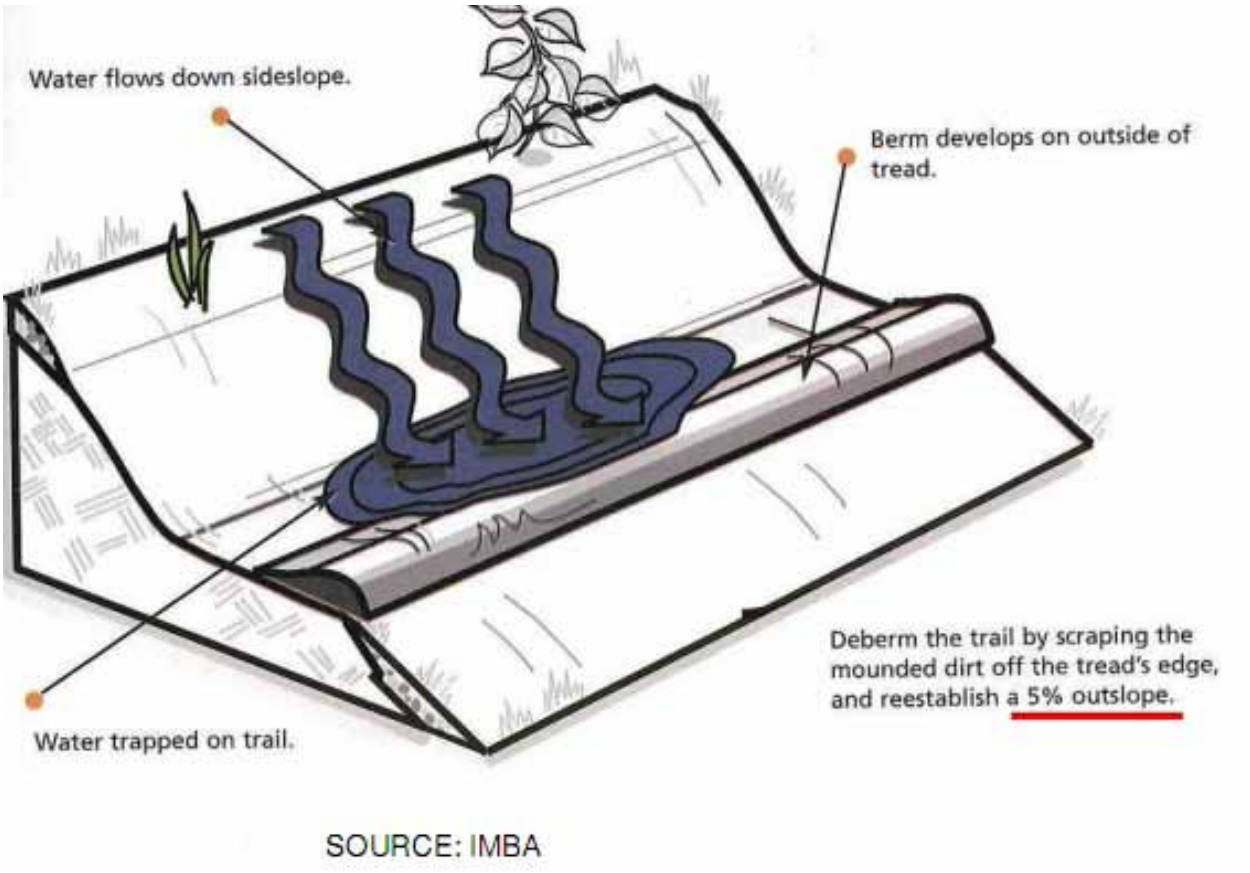
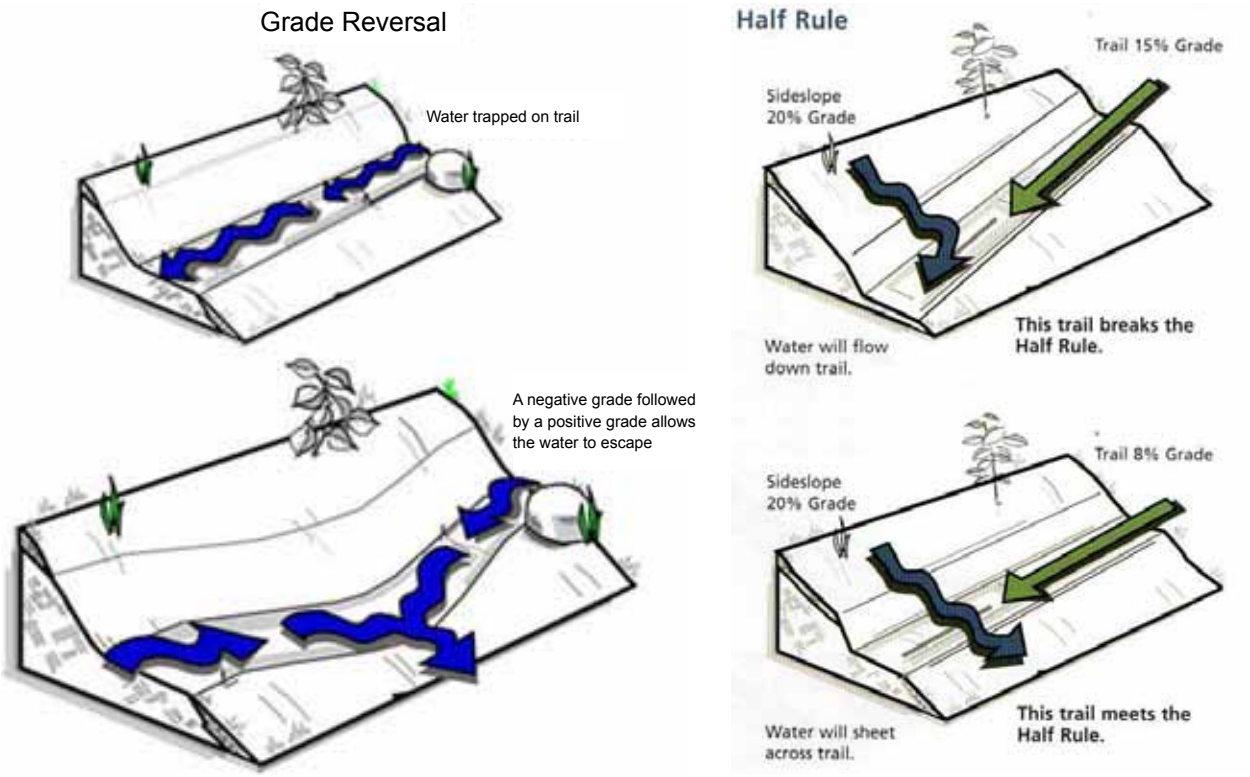


Figure 36: Image showing the problems from trails constructed without proper cross slope.



Figures 37-38: Images illustrating proper grade reversal and bench cut construction.

- Incorporating grade reversals and dips to reduce water erosion; these grades should average between 8 and 10%, with a maximum grade of no more than 15%, into the trail design and construction specifications.

Adding these features will help minimize tread erosion by allowing water to drain in a gentle, non-erosive manner and ensuring the soil stays on the trail where it belongs.

5.6 Signage and Wayfinding Standards

Successful trail systems require appropriate and adequate signage that informs the trail users about route attributes, distances, or regulations. Placement and design of trail signage is essential in creating an enjoyable experience for users. Three types of signage are typical in trail systems: regulatory signs, informational signs, and interpretive signage. These types of signs are used in different locations based on the information they display. Signage can be themed based on the region or area in which the trail is located and may be built from a variety of materials based on cost and the climatic demands of the region.

Regulatory Signs

Requirements for the use and placement of signs, including regulatory signs at intersections, should follow the standards set forth in the Manual on Uniform Traffic Control Devices (MUTCD), specific to the section on traffic control devices for bicycle facilities, and will apply to all improved multi-use trails.

Information concerning specific rules and regulations can also be depicted within regulatory signage. All signs should have engineer grade reflective coating and be graffiti proof.

- *Stop Signs*—Shall be installed wherever paved multiple use trails cross public streets, unless traffic is required to stop at trail intersections or at other potentially hazardous locations.
- *Speed Limit, Steep Grade, Danger Warning, and Slow Signs*—These signs should be installed where trails approach maximum slopes, areas with limited sight distance, and areas with dangerous conditions ahead. Signs indicating warnings should appear at least 50 feet before the hazard.
- *Sharp Curve Signs*—Signs should be posted when a curve has a smaller than recommended travel radius or limited sight distance. Signs indicating warnings should appear at least 50 feet before the hazard.
- *Dismount Sign*—Such signs should be posted in areas where slope exceeds recommended standards and where trail width or vertical clearance is less than the recommended standards.
- *School Zone Signs*—For the safety of schoolchildren and trail users, school signs should be posted on the trails in school areas.
- *Private Property*—Signs identifying private property should be posted where needed.

Informational Signs

Informational signs include signs indicating distances, destinations, and trail conditions. Dimensions for destination/distance signs vary from community to community. However, to create some level of uniformity for the core network, sign standards should be created for the types of signs to be used. These signs need to conform to standards and guidelines established in chapter 9B of the MUTCD (see Figures 39-41).

Figures 39-41: Various directional and distance signs. From left to right, photo courtesy FHWA, Deseret News, and Trails Utah.

For destination/distance signs, FHWA is experimenting with sign dimension standards of 30-inch tall signs that vary in width to allow space for the destination names and distance. These signs would be placed where different routes intersect and would provide useful information to the trail user. Examples of similar signs can be found along the Murdock Canal Trail in Utah County.

Mile markers can use the standard signs found in chapter 9B of the MUTCD, or communities have the flexibility to create their own standard. For example, several trail mile markers may use a specific trail logo or logo from a municipality with the mile posting placed underneath. What is important is that the markings are consistent throughout the network (see Figures 42-44).

Figures 42-44: Various types of mile marking posts are available. To maintain consistency along the core tail network, posts and markings should be standardized. From left to right, photos courtesy Santa Clara, americantrails.org, and Provo City.

Interpretive Signs

These signs benefit the users by explaining some feature available on the trail route. The features may include historical, biological, natural resources, or cultural facts about an area. Often these signs are educational and will serve to relay management goals of an area. These must be located in appropriate areas. These signs will be required to follow MUTCD guidelines.

Sign Construction Features

There are many design solutions to signage along a trail. One commonly used design that functions well is a post that ranges in size from 4 to 6 inches square, and may consist of pressure treated wood or recycled plastic that requires less maintenance. These posts are not visually obtrusive, provide a barrier to motorized use that can be removed for emergency and maintenance in select locations, and would be in a style that denotes a seamless network while allowing for individual jurisdictions to display information specific to their areas.

Post locations will conform to the standards set forth in the MUTCD Traffic Control Devices for Bicycle Facilities. Posts should be embedded into the ground a minimum of 24-inches, unless other materials are specifically approved. Depending on the size of the posts, square reflective decals should be mounted on heavy gauge aluminum plates that are placed into the routed post.

Backcountry directional trail signage should provide users with wayfinding information, keeping them on the trail and identifying junctions and intersections for other trails and routes. Directional markers such as carsonite signs provide a sustainable trail marker that can house sticker decals, similar to bollard plates, to denote information specific to the trail and general area. Single-slat carsonite posts, pedestal signs with maps, or triangular posts are all effective sign options for the backcountry.

6.0 Crossings and Roadway Interface

Wasatch County and the Heber Valley are dissected by US-189 and US-40, regional highways which connect the county to the Wasatch Front and the Uintah Basin. These highways carry a significant volume of semi trucks, which makes crossing these roads a challenge. To improve trail connectivity between communities within in the valley, three types of crossings, at-grade, elevated, or underpass, will need to be considered for each location (see Table 2).

Crossing Type	Pros	Cons
At Grade Crossing	Low Cost	Traffic Disruption
	Low Visual Impact	Pedestrian Safety
	No grade change	
Pedestrian Overpass	Pedestrian Safety	Cost
	Potential Land Mark, Unique Feature	Large Footprint
		High Visual Impact
Pedestrian Underpass	Small Footprint	Cost
	Low Visual Impact	Potential For Flooding
	Safety	

Table 2: Pros and cons table for trail crossings.

At-Grade Crossings

Of the three crossing options, building an at-grade crossing may be the least expensive. Several multi-use trails in the urban area of the Wasatch Front cross major collectors that carry high

volumes of traffic (see Figure 45-46). These crossings may be a cost-effective solution since they can be used at signalized intersections within downtown Heber City where speeds are lower.

Figures 45-46: Examples of at-grade trail crossings. Photos courtesy of Smartgrowth USA and FHWA.

Trail Overpasses

When trails need to cross higher speed roadways, grade separation is required for safety (see Figure 47-48). A trail bridge over US-189 or on US-40 north or south of the Heber City limits would be recommended as it will allow for trail users to cross safely. Trail bridges can be expensive (typically exceeding $1 million) as additional property is needed to build the ramps and meet height requirements.

Figures 47-48: Examples of trail overpass structures. Photos courtesy of UDOT and Google Images.

Trail Underpasses

Building a tunnel or underpass is another solution to safely separate trails from high volume/high speed roadways (see Figures 49-50). Depending on the number of underground utilities, the level

of groundwater in the area, and soil types, an underpass can be a cost effective solution for the proposed trail crossings on US-40 and US-189. These underpasses will require lighting for safety.

Figures 49-50: Examples of trail underpass structures. From left to right, photos courtesy of the Daily Herald and PEC.

7.0 Public Involvement

Public involvement (PI) played an integral role in the development of the Wasatch County Regional Trails Master Plan. Generating support among all the communities in the Greater Heber Valley was crucial to building a valley-wide plan that connects each municipality together and ties the recreational locations into the core network of trails. To accomplish this goal, the project team conducted area tours, created a key stakeholder work group, held a public meeting, held one-one-one meetings, and conducted an online survey to gauge frequency of trail use and willingness to find alternatives to fund trail construction and maintenance.

7.1 Project Tours

The project team held two area tours to build support among the cities, towns, and the county to develop a regional trails master plan for the Heber Valley. The first tour included representatives from Heber City, Midway, Charleston, Wasatch County and the Wasatch County Trails Alliance. The group visited several trail locations, including Heber Valley Railroad trail route, Soldier Hollow, Provo Canyon trail, and the Murdock Canal trails in Utah County.

At each location, the group discussed the various aspects of each trail and the benefits of working together to create a trail network that connects the Heber Valley communities with the state parks located in the area and connecting into a larger, regional trail network that runs from Ogden to Provo.

The project team conducted a second tour with Heber City representatives and MAG to identify key planning issues for connecting city trails into a regional network.

7.2 Stakeholder Group Meetings

Developing a unified trail plan required assembling a working group of key representatives who could speak for their municipalities and organizations and would champion the creation of the trail master plan for the Heber Valley (see Figures 51-52). Meetings were held once a month in the

Wasatch County Administration Building. A brief summary of each meeting and major decisions are provided below. More detail can be found in Appendix B: Public Involvement Materials.

Figures 51-52: Photographs from stakeholder group meetings.

The purpose of the first meeting was to establish project goals and outcomes, objectives, and policies and identify additional organizations and trail user groups to bring into the process. The team wanted to create a plan that identified a core network of trails that would connect to existing recreational trailheads and routes that connect each community. The second goal was to create a comprehensive plan that would include standards for each trail type and provide uniformity for each municipality to adopt and implement as various trails are built. The group identified the following objectives for the plan:

- Encourage Heber Valley residents to use local trails more often;
- Help stimulate the area economy by connecting to the various recreational locations within the valley to draw people from outside the area to stay;
- Improve air quality; and
- Create a plan that developers could incorporate into their plans.

The second meeting focused on refining the proposed trail classification system to ensure it correlated with the federal classifications for trails, increasing the likelihood of obtaining federal grants. Additional refinements were made to the proposed trail network. The team also reviewed the public survey and provided comments. The team wanted to explore how willing respondents would be to pay an additional fee to build and maintain trails and what fees they would prefer.

To make further refinements to the trail maps, identify potential railroad crossings, and address individual concerns, project team members met one-on-one with representatives from JDSP, WMSP, Midway City, Heber City, UDOT, and Wasatch County.

7.3 Public Open House

The team scheduled a public open house on September 29, 2015 at the Heber City Council chambers. The purpose for the meeting was to present to the public the core trail network and trail classifications that had been developed and gather feedback. The public was given the opportunity

to review the maps of the proposed trail routes and make changes to where they felt a route should go. Approximately 100 people attended the meeting, with 82 signing the attendance roster.

Several methods were used to promote the meeting, including working with local news media, using the project website, and implementing social media tools.

News Media Outreach

Two weeks prior to the meeting, PEC placed legal notices with the Wasatch Wave and Summit County News. The project team drafted a news release and distributed it to the area media groups, which generated additional media coverage and sparked a radio interview with KPCW in Park City. KPCW also conducted follow-up interviews based on the survey results.

Electronic/Social Media

The project team used social media to promote the public meeting. Each organization involved with the project and the Heber Valley Chamber of Commerce promoted the meeting using Facebook, Twitter, and group email lists. This coverage boosted attendance to the public meeting.

The project website was used as the primary information source. The project survey, meeting updates, and all project materials were posted to the website, allowing stakeholders to look at the information at their convenience. Figure 55 summarizes the comments from the September 29, 2015 public open house.

Number of Comments	Topic	Comment Descriptions
4	Crossing US-40 and US-189	189 is scary and dangerous to cyclists; major routes are not safe for bikers or pedestrians; concern for lack of sidewalks, shoulders on Main Street (US-40)
7	Trail Connectivity	Trail connectivity should be first priority, make a large, safe loop around the valley; [Connect] Deer Creek to Vivian Park; Add paired pedestrian/bike path near UT-248 connecting Wasatch and Summit Counties; Expand network to include Hideout area; Connect to Red Ledges area; Connect switch with Coyote
8	Safety	No shoulders from Midway to Charleston; No safe crossing on UT-248; Separated bike lanes needed; Trail crossing at 1200 South is too close, it needs to be moved; Midway Lane crossing hard to cross traffic; Need bike path along 1200 South from library heading east, no shoulder on roads
3	Equestrian Trails	Horses leave big holes in the dirt; Would be nice to limit horse traffic on dirt trails; Don't want horse trails combined with other trail types
7	General Support Of Trail Network	Trails are not a luxury, they're an essential amenity; Enhances quality of life; Provide opportunities for recreation, exercise, and connectivity; Should be first priority

Number of Comments	Topic	Comment Descriptions
3	Connect Deer Creek to Vivian Park	It would be great to have Deer Creek trail paved and connected to Provo Canyon trail; bike path (paired) around Deer Creek
1	Privacy	Our fence is only 5 feet high, include a higher fence to preserve privacy
1	Funding	Update water mains, utility infrastructure first
1	Bridge Crossings	Walking bridges at railroad bridges at Snake Creek and Casperville Hill
1	Property Impacts	Do not want 80 foot trees chopped down and paved with asphalt
2	WOW Trail	Need sign/paired parking at Guardsman's Road trail head; Wider turns at top of new WOW trail would be great
A total of 19 persons submitted comments at the open house		

Table 3: Summary of comments from the September 29, 2015 public open house.

7.4 Public Opinion Survey

At the beginning of the project, PEC proposed using QR codes to gather feedback from trail users where they would scan the code while at a trailhead and respond to the survey. In lieu of using the proposed QR codes, which would limit the number of questions, the project team developed an online survey of 13 questions to measure topics such as frequency of trail use, primary use of trails, desired trail characteristics, and willingness of the public (or trail users at least) to pay additional fees or taxes to build and maintain trails. The survey was posted on the project website and each member of the key stakeholder team sent out a link to the survey to each of their communities and user groups.

The data may be skewed in favor of trail users and may not reflect a true sample of the population of Heber Valley residents, since trail users were the greatest number of respondents to the survey. That said, the information from the survey provides good information to conduct more research and analysis.

More than 190 persons responded to the survey, with 187 respondents answering all the questions. Of those who responded to the survey, 63% of respondents came from Heber, 20% from Midway, 9% from outside of the county, and the remaining 8% from the smaller communities within the Heber Valley and unincorporated areas of the county.

Some key findings from the survey included the following:

- 68% of respondents use the trails in Wasatch County more than once a week, so use is very high;
- Primary use of the trails are for walking, biking, and mountain biking (evenly split among the three main responses), possibly meaning that multi-use trails may be needed before building other trail types;

- Approximately 81% of respondents want trails that are conveniently located and accessible, while 76% of respondents rank safety as somewhat to very important;
- Respondents also want trails connecting within the Greater Heber Valley (80% somewhat to very important); and
- 76% of respondents said they would be willing to pay additional fees and taxes to build and maintain trails.

Most of the respondents were current trail users. Their responses could mean that if residents see the benefits of creating a unified trail system, they may be more likely to pay an additional fee to build and maintain trails. Respondents would prefer municipalities use development impact fees followed by an increase in sales tax to fund the system. They were evenly split among the other categories for possible funding (property tax increase, bike fees, special service district fees and bonding). The complete survey can be found in Appendix B: Public Involvement Materials.

8.0 Implementation, Cost, and Conclusion

Wasatch County and the greater Heber Valley area are positioned to implement a quality non-motorized transportation trail system that can be used for transportation purposes and recreation. This type of system can enhance the quality of life for existing residents and those desiring to move into the area.

The foundation to develop a unified trail system is in place. Local planners and trail interest groups have a strong desire to implement a functional system for residents and visitors. This plan focuses on the need to connect neighborhoods, schools, public facilities, state and federal lands, business districts, backcountry trails, and environmental features.

8.1 Implementation

The Wasatch County Regional Trails Master Plan should complement the various planning documents currently in place within the local communities. The plan is a planning tool and policy guide for consideration of future land use and development proposals, as well as capital improvement plan expenditures.

Implementation of individual projects or facilities may be subject to county and city approvals. Minor modifications to the master plan are expected to be made from time to time due to situations and circumstances, such as engineering constraints, resident concerns, land use changes, topographical constraints, or other unforeseen circumstances.

If major modifications to the plan are desired, these changes should be discussed and implemented during the annual review of the trails master plan. Regardless of the changes made to the plan, the idea is to promote the overall goals and objectives defined as part of the plan and to implement a successful non-motorized trail system, ultimately incorporating a integral mode of transportation as well as contributing to the quality of life in Wasatch County.

Implementation of the trails master plan throughout the county is essential to the plan's success. Some recommended implementation strategies are as follows:

- Prioritize trail projects outlined in the trails master plan and source funding based on priorities;
- Encourage the adoption of the trails master plan as part of local general plans, parks and open space master plans, and public facilities plans;
- Encourage private developers to incorporate features of the trails master plan into their development project designs, including offering incentives to developers if trail features are built as part of the development;
- Help municipalities and agencies identify potential funding sources to be used in trail construction and design; and
- Provide community outreach events to educate the public about the benefits of creating a unified trail network.

8.2 Trail Prioritization

Wasatch County area has an extensive backcountry trail network that continues to expand. With the amount of growth and development planned for the Heber Valley area, creating a regional trail plan that provides for both transportation and recreational purposes is critical. Trail prioritization is a vital component to the regional trails master plan to develop a seamless trail network that connects all communities with the recreational areas. By working together to develop trail priorities and continually updating the plan, all entities can have confidence that trail links that fall within other jurisdictions will be completed in a timely manner.

The recommended core trail network builds upon existing plans and ongoing local and regional planning efforts and reflects input from the local governmental entities, the Trails Advisory Committee, the Wasatch Trails Alliance, UDOT, Wasatch Mountain State Park, Jordanelle State Park, MAG, and others.

After the development of and agreement upon the core network, the project team identified priorities within the system to help municipalities and agencies plan for improvements. Priorities were developed with each agency and community by assessing the most important connections for each community and important connections to link communities. With these priorities, the decision makers can search and secure funding in an efficient manner (see Table 4).

Community	Priorities
Wasatch County	• Rail Trail from the Heber Valley Railroad Train Depot to Soldier Hollow • Walmart to the Bypass Road, with the intent to have a trail along the bypass road, connecting users to Midway Lane and the Depot • Lake Creek area to ensure the Red Ledges area connects from city to county • Completion of the Coyote Backcountry Trail to the Bench Creek Trail on the USFS • Connection to Summit County to the north via rail trail • Connection to Utah County to the south in the Provo Canyon • Wildlife tunnel to WMSP
Midway City	• Homestead Trail • South Center Street Trail to Rail with Trail • River Road Trail • Pine Canyon Road bike lane • North Center Street bike lane
Heber City	• Railroad Trail (Heber Portion) • Mill Road and Canal Trails • Bypass Road multi-use trails • Main Street Bike Lanes • Canal Trail Connection from Coyote Lane trailhead to the Basset annexation area
Charleston	• Connection from town across US-189 to cemetery • Connection along UT-113 to Midway • Connection along US-189 to Heber City
Daniel	• Connection across US-40 to Heber
Wasatch Mountain State Park	• Wow completion • Mid Mountain Trail from Soldier Hollow to WMSP • Elk Run (Crows Nest to Snake Creek) • Kay's Way (Ridge Line)

Table 4: Summary of prioritized trails for each community.

8.3 Phasing

To develop an action plan for the core network, a phasing plan was developed for the prioritized trail routes. Each phase reflects a 10-year period to help each municipality to work through the necessary processes (environmental, funding, development, etc.) and build proposed trails within that period. The trails proposed in each phase are not final and should be examined as part of the plan re-evaluation to ensure priorities reflect the latest needs of the communities and state parks within the Heber Valley region (see Figure 57).

Phase 1: (2016-2025)	
Wasatch County	• Rail Trail from the Heber Creeper Train Depot to Soldier Hollow • Canal Trail connection from Coyote Lane trailhead to the Bassett annexation area • Provo Canyon Trail
Midway City	• South Center Street Trail to Rail with Trail • River Road Trail • Middle Provo Trail
Heber City	• Railroad Trail (Heber portion) • Mill Road and Canal Trails • Center Street • Complete Midway Lane to Heber Main Street
Charleston Town	• Connection along SR-113 to Midway
Wasatch Mountain State Park	• Wow completion, 3 parking areas, high blank and quick draw 40 • Wow and Snake Creek

Phase 2: (2025-2034)	
Wasatch County	• Lake Creek area to ensure the Red Ledges area connects to Heber City • Completion of the Coyote Canyon backcountry trail to the Bench Creek trail on USFS
Midway City	• Homestead Trail • Pine Canyon Road bike lane
Heber City	• Main Street bike lanes
Charleston Town	• Connecting town center across US-189 to town cemetery
Daniel Town	• Connection across US-40 into Heber
Wasatch Mountain State Park	• Elks Run (Crows Nest to Snake Creek) • Mid Mountain (Wasatch to Soldier Hollow)

Phase 3: (2035-2044)	
Wasatch County	• Walmart to the Bypass Road, with the intent to have a trail paralleling the bypass road to connect users to Midway Lane and the train depot
Midway City	• North Center Street bike lane
Heber City	• Bypass Road multi-use trails
Charleston Town	• Trail along US-189 to Heber City
Wasatch Mountain State Park	• Kay's Way (Ridge LIne above Soldier Hollow)

Table 5: Suggested phases for the trail improvements.

This phasing plan is not inclusive of all planned trails. The study recognizes each community has additional routes as part of their internal plans. Those trails and pathways will be developed, funded, and built outside of the regional trails master plan.

8.4 Cost/Funding

To aid in securing funding and for use in trail planning, design, and construction, the following cost estimates for the regional trails master plan have been prepared (see Table 6). These costs are conservative estimates and will vary with the location of trail corridor to be constructed.

Trail Type	Unit	Unit Cost	Notes
Backcountry Trail	Linear Foot	$5	Design and Construction (Survey, Marking, Clearing, and Grading)
Urban Soft Surface Trail	Linear Foot	$35	Design and Construction
Improved Pedestrian Trail	Linear Foot	$70	Design and Construction
Improved Multi-Use Trail	Linear Foot	$90	Design and Construction
Sharrow	Linear Foot	$5	Design and Construction (Pavement Markings Only)
Bike Lane	Linear Foot	$30	Design and Construction (Pavement and Striping/Paint Included)

Trail Type	Cost per Linear Foot	Proposed Linear Feet as per the 2016 Trails Master Plan	Total Estimated Cost
Backcountry Trail	$5	1.6 Million (Total Existing and Proposed)	$8 Million
Urban Soft Surface Trail	$35	157,858 LF	$5.5 Million
Improved Pedestrian Trail	$70	94,269 LF	$6.6 Million
Improved Multi-Use Trail	$90	356,937 LF	$32.1 Million
Sharrow	$5	29,658 LF	$148,290
Bike Lane	$30	211,663 LF	$6.3 Million

Table 6: Estimated costs for the trail improvements.

Funding for the trails master plan implementation will need to come from a variety of sources, including but not limited to the following:

Federal Sources

- Federal transportation funding and grant programs

State Sources

- Integrating proposed trail improvements with planned roadway construction
- Recreation Trails Program (RTP), associated with state funding for trail projects
- Other state trail funding sources such as the Waypoint Grant

Local

- Developer contribution improvements as part of planning and development process and approvals

- Local funding sources, such as trail impact fees, bonds, special service districts, restaurant tax, public-private partnerships, etc.

Nonprofit Organizations

- Active transportation initiatives from non-profits and healthcare providers that offer funding for bicycle and trail projects

A complete list of funding sources can be found in Appendix C: Funding Sources.

8.5 Maintenance Guidelines

Building and maintaining trails that are safe for users is a high priority. Individual jurisdictions will need to implement considerations for construction and maintenance within their individual budgets. However, the suggested trail maintenance guidelines can help communities identify what activities to incorporate in their maintenance plans (see Table 7).

Maintenance Activity	Protocol
Inspections	Seasonal; beginning and end of summer
Pavement sweeping/blowing	Early spring after snow melts, weekly in fall, and as needed
Pavement sealing, resurfacing	Every 5 to 15 years
Culvert and drainage grate inspection	Before winter and after major storm events
Pavement markings	Replace every 3 to 5 years, or as needed
Trail signs	Replace every 3 to 5 years, or as needed
Shoulder areas (weed control)	Spray annually and as needed
Major damage (e.g. washouts, fallen trees, flooding)	As quickly as possible

Table 7: Maintenance guidelines for the trail improvements.

Bikeway and Multi-use Trail Maintenance

Like all streets and roads, bicycle facilities and multi-use trails require regular maintenance. This includes sweeping, maintaining a smooth roadway, weed spraying, ensuring that the gutter-to-pavement transition remains relatively flat, proper signage in place and in good order, and installing bicycle-friendly drainage grates. Crack sealing and pavement overlays should be used as an opportunity to improve and maintain bicycle facilities.

Soft Surface Trail Maintenance

Soft surface trails should be checked to ensure that base material is to adequate depth and that high traffic areas are patched and compacted with additional road base for optimal tread surface. Weeds should be sprayed, and vegetation should be trimmed to maintain adequate site distance for trail users. Proper signage should be in place and in good order.

Backcountry Trail Maintenance

Backcountry trails should be checked in the spring for downed trees and deadfall that may have

come down over the winter months. If trails are built to sustainable standards, incorporating grade reversals and proper drainage, little should have to be done to ensure proper drainage and run-off. If not, drainages should be cleaned out where necessary. Vegetation should be cut back to allow for good site distances, and weeds should be sprayed where necessary. Proper signage should be in place and in good order.

8.6 Conclusion

The Wasatch County Regional Trails Master Plan is a dynamic document that should be updated, modified, and improved as circumstances require. The trails master plan should be regularly updated to preserve the usefulness of the plan throughout the county and local municipalities. Each update of the trails master plan should address four primary elements of the plan.

Review of Proposed Trail Routes

This includes all proposed trails and a review of their status, potential funding sources, and proposed construction dates. The review may also consider potential or proposed trails that may not have been included in the original plan but have since been considered as potential routes. Potential trails not included in the original master plan should be reviewed by representatives from the original team to certify that all original goals and objectives are still being met by the addition of new proposed trails.

Inventory of Existing Trails

Each time the plan is updated, existing trails should be verified and identified on the trails master plan maps. Trails that have been built since the last update of the trails master plan should have their status changed on maps, GIS shapefiles, and in the written portion of the trails master plan.

Design Guidelines

Design guidelines includes specific directions that can be used as appropriate in designing individual trails. Over time, different uses, increase in use, or advances in construction processes and materials may require that the design guidelines in the trails master plan be updated. County, city, and agency planners involved with the trails master plan are responsible for keeping current with the latest practices used worldwide and for the careful review of these practices to determine their applicability to the trails outlined in the master plan.

Use and Management Guidelines

Use and management guidelines are specific directions that can be used as appropriate to determine the use and management of individual trails. As the county grows and urban dynamics change, it may be necessary to revisit some of the guidelines in the trails master plan regarding maintenance and use. It also may become necessary, as municipal boundaries change, that agencies responsible for certain trails also change to ensure proper care and management. By reviewing the management guidelines and certifying that all trails outlined in the Wasatch County Regional Trails Master Plan fall under the management of the appropriate agencies, the trails will remain a valuable transportation and economic resource in the county.

Wasatch County Regional Trails Master Plan

Appendix A

Trail Maps

WASATCH COUNTY OVERVIEW

Connect To Rail Trail

Jordanelle Reservoir

Victory Ranch Area

To Wolf Creek Ranch

UVU Campus

Wastch Canal

Mound City Cemetery

JR Smith School

Murfield Park

Wasatch County School District Offices

The Cove Park

Wasatch Canal Trail

Valley Hills Park

Heber Cemetery

Eagle Park

Red Ledges Park (Future)

Little Pole/Big Pole Area

Main Street Park

Wasatch County Park

South Field Park

Midway Park

Midway School

Rocky Mountain Middle School

Heber Valley Elementary School

Midway Cemetery

Soldier Hollow Charter School

Wasatch Alternative School

Old Mill School

Mill Road Estates Park

Wasatch High School

Timpanogos Intermediate School

Wheeler Park

DEER CREEK RESERVOIR

WASATCH COUNTY TRAIL MASTER PLAN

ESRI Shaded Relief Base Map
Date: November 9, 2015
Author: ZS

0 3.0 6.0
Miles

- Improved Multi-use Trails
- Urban Soft Surface Trails
- Improved Pedestrian Trails
- Bike Lanes
- Sharrows
- Backcountry Trails
- County Boundaries
- Rivers/Streams/Canals

- Municipal Boundaries
- State-Owned Lands
- Federal-Owned Lands
- Parks and Open Space
- Schools
- Cemeteries

- Major Crossings
- Proposed Trailheads
- Existing Trailheads
- Existing Fisherman's Access

*SOLID LINES INDICATE EXISTING TRAILS, DASHED LINES INDICATE PROPOSED OR BACK COUNTRY TRAILS

HEBER AND DANIEL OVERVIEW

WASATCH COUNTY TRAIL MASTER PLAN

ESRI Shaded Relief Base Map
Date: November 9, 2015
Author: ZS

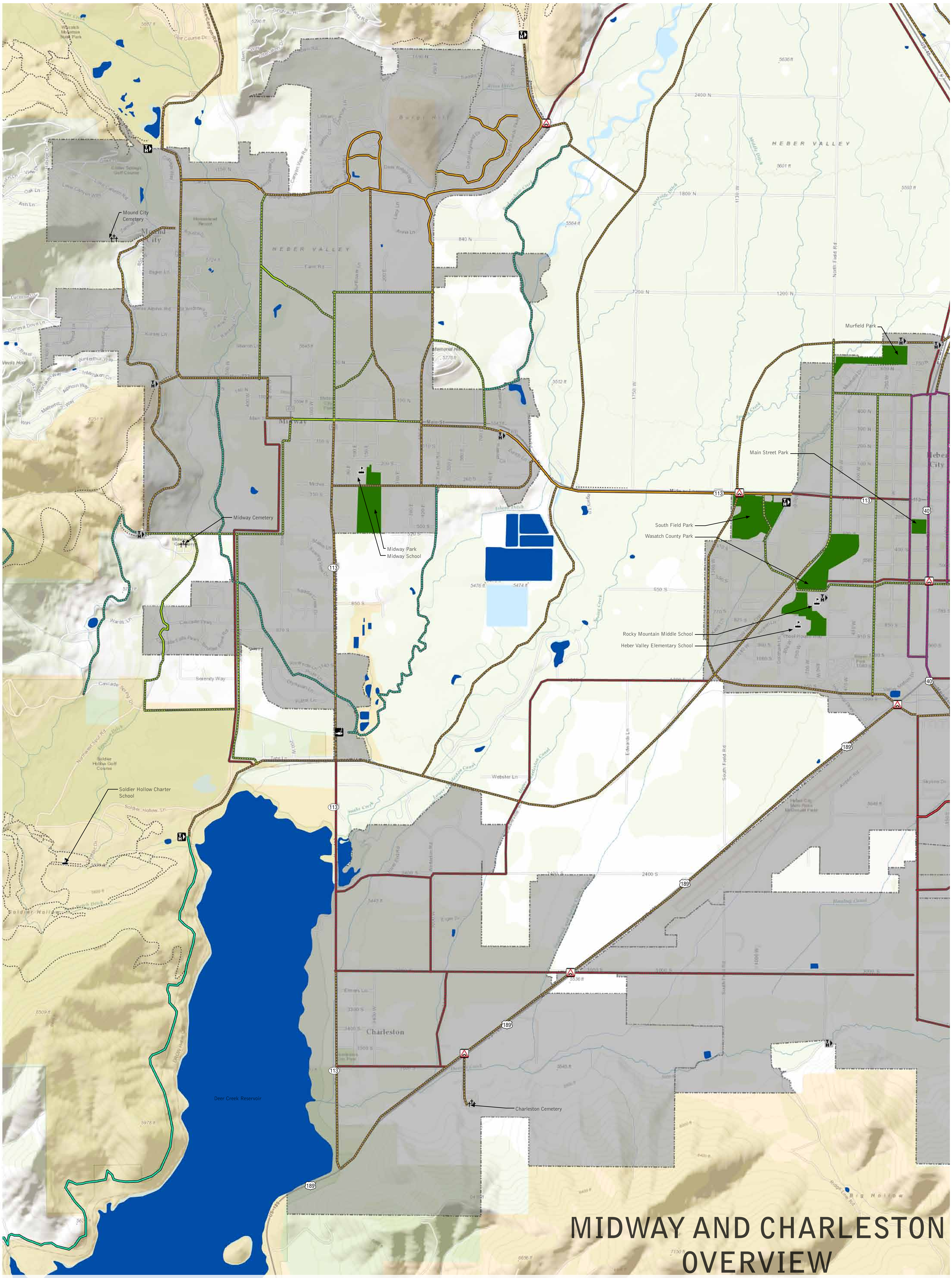
0 1.5 3.0
Miles

- The Cove Park
- Wasatch Canal Trail
- JR Smith School
- Murfield Park
- Valley Hills Park
- Heber Cemetery
- Eagle Park
- Red Ledges Park (Future)
- Wasatch County School District Offices
- Main Street Park
- South Field Park
- Wasatch County Park
- Rocky Mountain Middle School
- Heber Valley Elementary School
- Mill Road Estates Park
- Wasatch Alternative High School
- Timpanogos Intermediate School
- Wasatch High School
- Old Mill School
- Wheeler Park

- Improved Multi-use Trails
- Urban Soft Surface Trails
- Improved Pedestrian Trails
- Bike Lanes
- Sharrows
- Backcountry Trails
- County Boundaries
- Rivers/Streams/Canals
- Municipal Boundaries
- State-Owned Lands
- Federal-Owned Lands
- Parks and Open Space
- Schools
- Cemeteries
- Major Crossings
- Proposed Trailheads
- Existing Trailheads
- Existing Fisherman's Access

*SOLID LINES INDICATE EXISTING TRAILS, DASHED LINES INDICATE PROPOSED OR BACK COUNTRY TRAILS

MIDWAY AND CHARLESTON OVERVIEW



WASATCH COUNTY TRAIL MASTER PLAN

ESRI Shaded Relief Base Map
Date: November 9, 2015
Author: ZS

0 1.5 3.0
Miles

- Improved Multi-use Trails
- Urban Soft Surface Trails
- Improved Pedestrian Trails
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- Schools
- Cemeteries
- Major Crossings
- Proposed Trailheads
- Existing Trailheads
- Existing Fisherman's Access

*SOLID LINES INDICATE EXISTING TRAILS, DASHED LINES INDICATE PROPOSED OR BACK COUNTRY TRAILS

WASATCH MOUNTAIN STATE PARK OVERVIEW

WASATCH COUNTY TRAIL MASTER PLAN

ESRI Shaded Relief Base Map
Date: November 9, 2015
Author: ZS

0 1.5 3.0
Miles

- Improved Multi-use Trails
- Urban Soft Surface Trails
- Improved Pedestrian Trails
- Bike Lanes
- Sharrows
- Backcountry Trails
- County Boundaries
- Rivers/Streams/Canals

- Municipal Boundaries
- State-Owned Lands
- Federal-Owned Lands
- Parks and Open Space
- Schools
- Cemeteries

- Major Crossings
- Proposed Trailheads
- Existing Trailheads
- Existing Fisherman's Access

*SOLID LINES INDICATE EXISTING TRAILS, DASHED LINES INDICATE PROPOSED OR BACK COUNTRY TRAILS

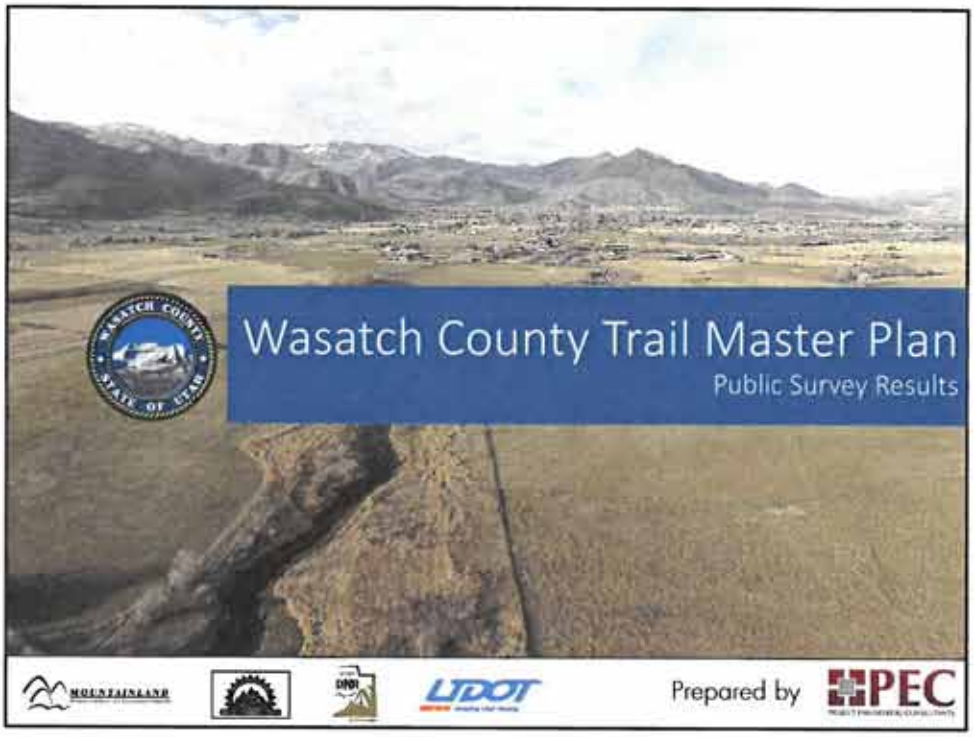
Mound City Cemetery
Midway Park
Midway Cemetery
Soldier Hollow Charter School
Deer Creek Reservoir

Wasatch County Regional Trails Master Plan

Appendix B

Public Involvement Materials

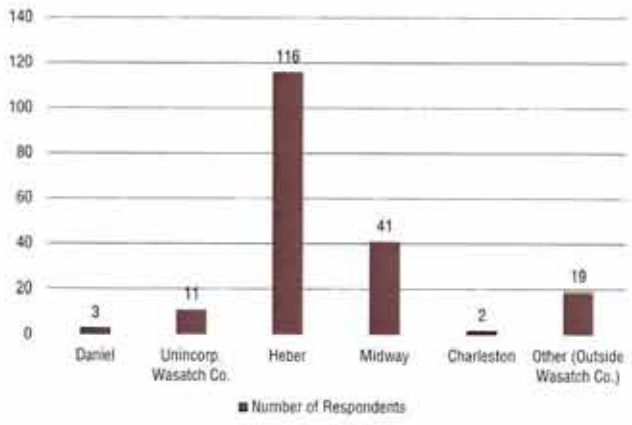
Public Survey Results



Trail Master Plan

Demographics: Place of Residence

Q1: Which community do you live in?

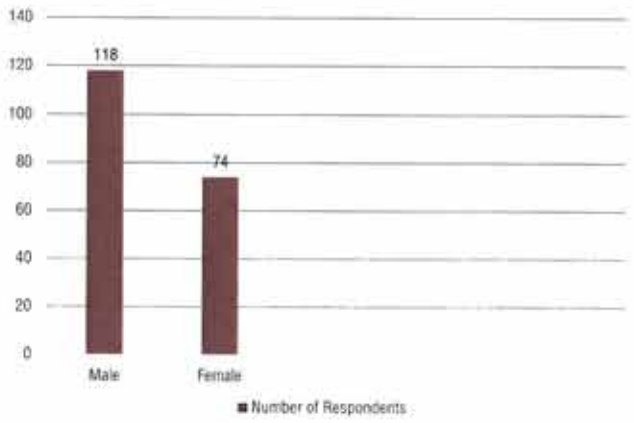


PEC

Trail Master Plan

Demographics: Gender

Q2: What is your Gender?

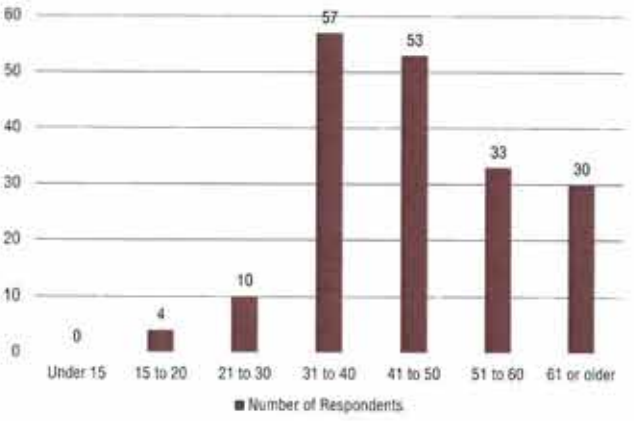


PEC

Trail Master Plan

Demographics: Age Group

Q3: What is your age group?

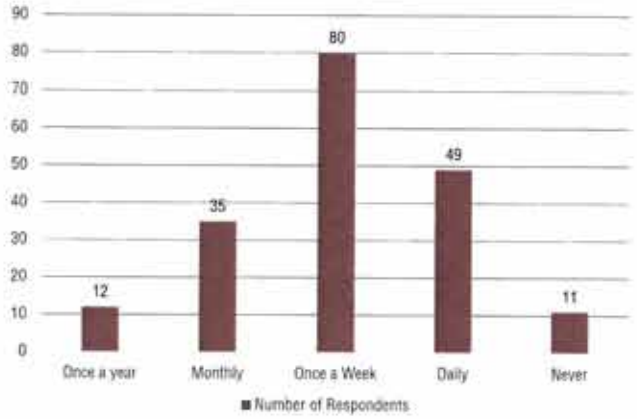


PEC

Trail Master Plan

Frequency of Trail Use

Q4: How often do you use the trails in the Heber Valley?:

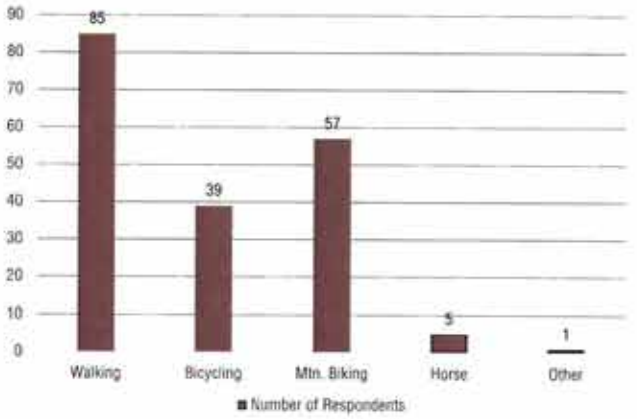


PEC

Trail Master Plan

Primary Trail Use

Q5: What is your main use of the trails?

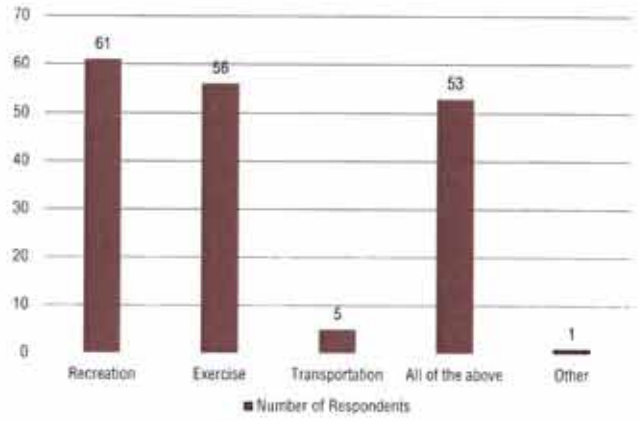


PEC

Trail Master Plan

Main Purpose for Using Trails

Q6: What is your primary reason for using the trails?

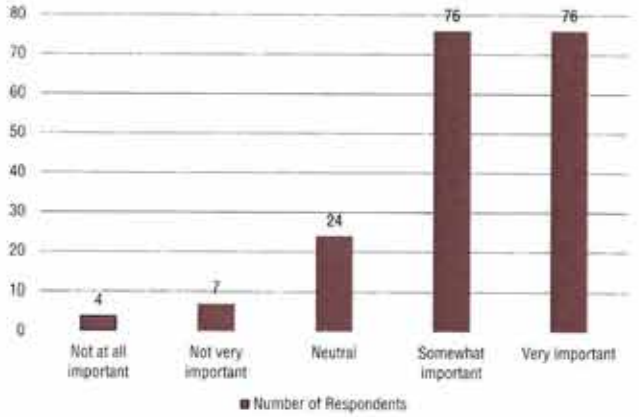


PEC

Trail Master Plan

Trail Characteristics

Q7: Rank the importance of qualities of a trail- Convenience

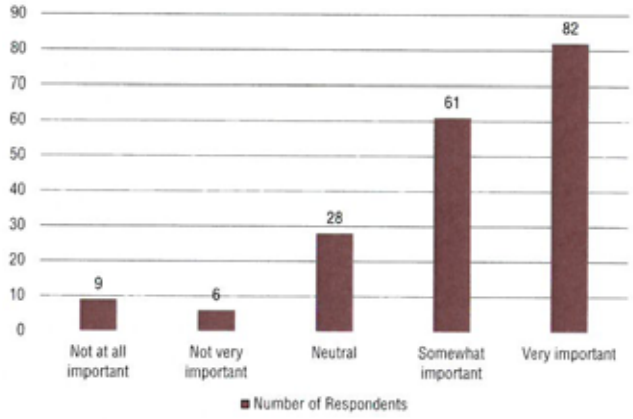


PEC

Trail Master Plan

Trail Characteristics

Q7: Rank the importance of qualities of a trail- Safety
(1 not important, 5 very important)

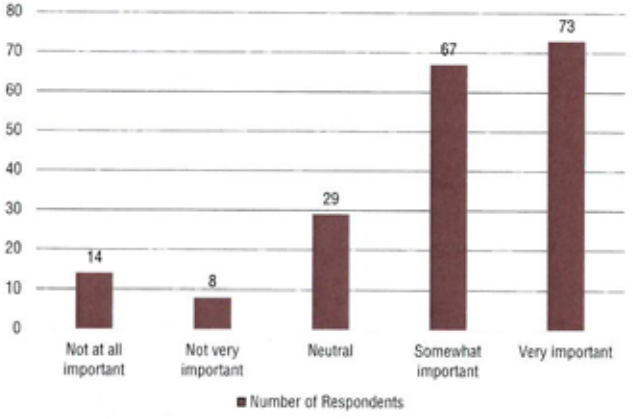


PEC

Trail Master Plan

Trail Characteristics

Q7: Rank the importance of qualities of a trail- Connectivity
(1 not important, 5 very important)

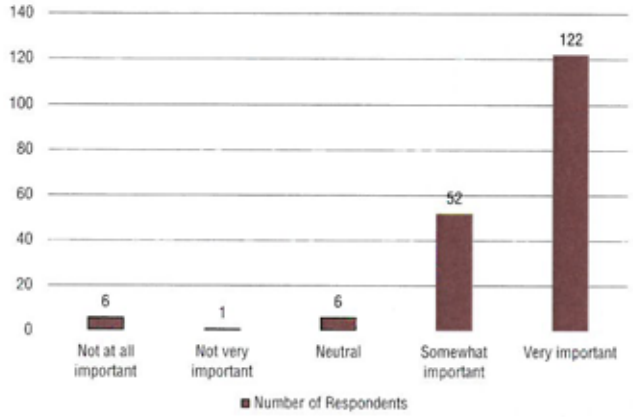


PEC

Trail Master Plan

Trail Characteristics

Q7: Rank the importance of qualities of a trail- Separation from motorized vehicles (1 not important, 5 very important)

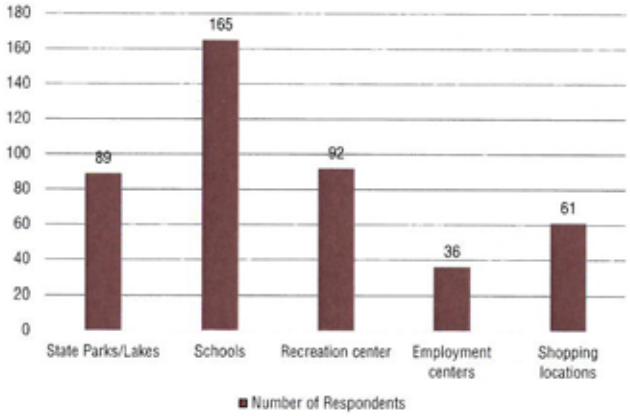


PEC

Trail Master Plan

Connections to Locations

Q8: What attractions or locations should the trails connect to within the Heber Valley?

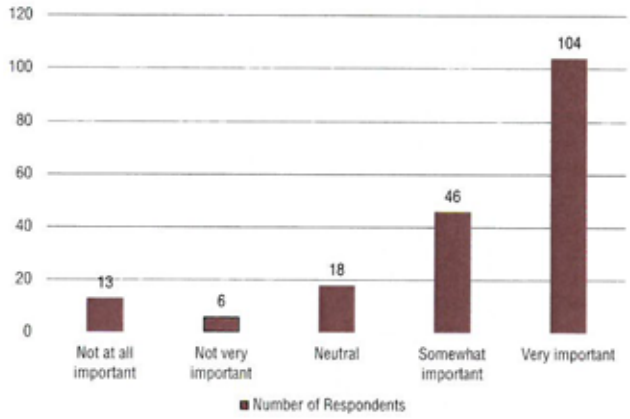


PEC

Trail Master Plan

General Trail Connectivity

Q9: How important is it to you to have trail connectivity within the Greater Heber Valley (1 not important, 5 very important)?

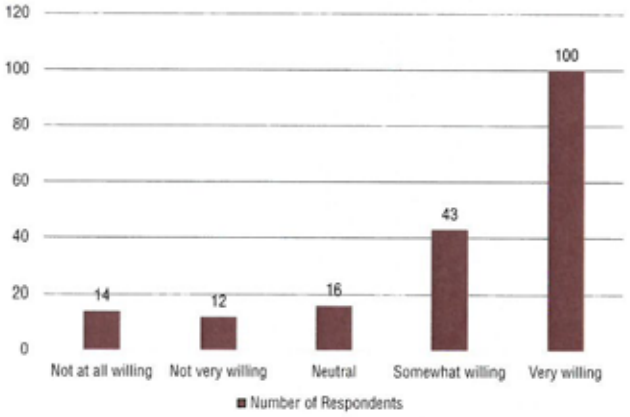


HPEC

Trail Master Plan

Willingness to Pay for Trails

Q10: How willing would you be to pay additional taxes and fees to build and maintain trails in Wasatch County?

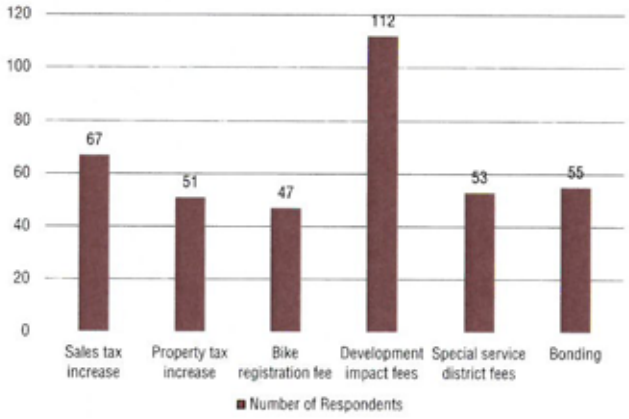


HPEC

Trail Master Plan

Fund Collections

Q11: If willing to pay additional fees to build and maintain trails, what methods should be used to collect funds?

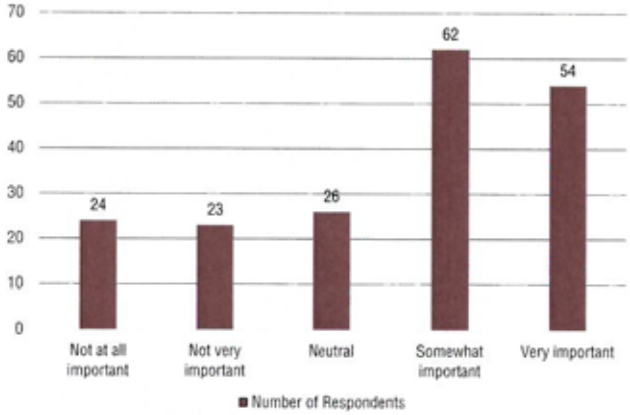


PEC

Trail Master Plan

Pedestrian Access to Trail System

Q12: How important is it to you to improve sidewalk (pedestrian) access to trails (1 not important, 5 very important)?

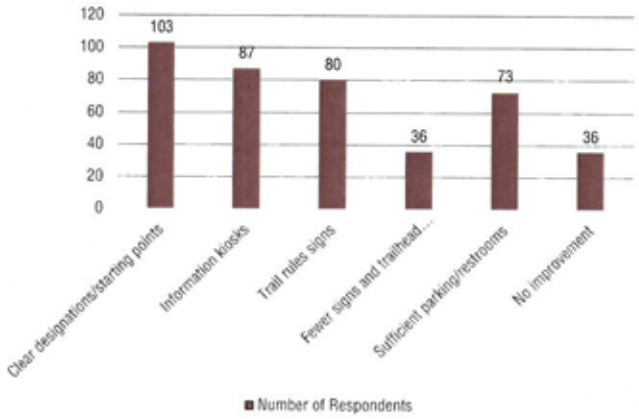


PEC

Trail Master Plan

Trailhead Amenities

Q13: What trailhead improvements would you like to see?



PEC

Trail Master Plan

Written Comments

Q4: How often do you use the trails in Heber Valley? (Unfiltered)

The trails at Dutch hollow are amazing

Unaware of their location

I ride motorcycles dirt bikes

What a JOKE!!!

Didn't know there were any

There are only sidewalks near where I live. I would like to use trails like there are on the east side of town.

We moved to St. George partly because as a community they truly value recreation and already have a terrific trail system and many other community facilities for young and old alike.

I commute to and from work daily on a bicycle and travel to Midway a couple times a week

I live in Orem so if I head that direction I'm usually on my way to Park City. Heber trails are mostly XC type trails.

I tend to ride more AM/DH.

Live closer to Park City/Summit County & am unaware of the trail systems in Heber Valley area

I usually ride pc

I don't know where they are or if they are suitable for young children whom I would take with me.

Two to three times a week

Daily for commuting- weekly for mtn. biking

PEC

Trail Master Plan

Written Comments

Q5: What is your main use of the trails? (Unfiltered)

High school cross country team
Dog walking
and mountain biking
This should allow multiple choices. I use the equally for running and mountain biking.
Walking
Exercise dogs
Walking
none i don't even ride horses but i had to pick one
NONE!!!
I would use them for biking and walking
Walking
All forms of cycling. Commute, road, mountain, and errands.
Hiking
I use the trails for walking my dogs, running, and mountain biking.
we walk doggies too.
wildlife viewing
kids ride to school in town- I ride to work in town
Hiking
Running

Trail Master Plan

Written Comments

Q8: What attractions of locations would you like to see connected to the trails in Heber Valley? (Unfiltered)

Ball Fields and Parks. I wish my children could ride their bikes from Southfield Park to Rocky Mountain Middle School
It would be great if they had some sort of trail from Zermatt/ Homestead to Midway Main Street.
Off Leash Park
Backcountry Trails
Trail connecting center creek to riverview
Connect all trail systems just like Boulder, Colorado
Need a bike lane from midway to Charelston. Road is way too narrow. Scary for kids
Existing and future mountain trails, a Provo River trail, a 7000 foot round valley trail
Away from or safe ways to cross major highways
NO ATTRACTIONS!!! NO STUPID TRAILS!!!
trails interconnected
Connect to canyon trails and to mountain top trails
Trailhead to trailhead linkage.
Heber to Midway continuous, the pathway is only partial.
Need a note space below for fees. I think usage fees should be an option. Also, below parking, but not necessarily restrooms. More space for general notes. TY
Community parks
Church

Trail Master Plan

Written Comments

Q8: What attractions of locations would you like to see connected to the trails in Heber Valley? (Unfiltered)

Bike parks
Local Parks, Downtown Cores
Provo River, any scenic, safe place to ride or walk in Wasatch County. This is long over due. We have needed trails for years, keeping bikers off the highways and back roads. We have such a beautiful home here. We badly need this!
Park City trails, Jordanelle trails, Midway trails
City Parks
None, None, none, none. This question does not give a NONE choice.
East Side Mountains
Soldier Hollow
City parks
through quiet, wild areas in the mountains, along the Provo River, etc.
Provo River Trail System- Trail system over to Park City Round Valley
City parks
City parks
Always provide public access thru new developments to public trails and off leash areas for dogs
Connectivity between neighborhoods, connections along and to natural amenities in city.

Trail Master Plan

Written Comments

General Comments

They (trails) need to be dog friendly

1 - Would love to have a paved trail along Provo River. 2 - Loop on east side of Heber important to us

In addition to the paved trail going in by railroad in Heber to Soldier Hollow, I would like to see that connected to proposed loop around: 1) East side of Heber, 2) Mill Road (1200 East) connected, 3) Connected to north side of Heber then connected to Midway. Love these ideas and proposed trails. Would LOVE paved trail on Provo River connected to Railroad Trail.

Comment to question 11: Share the road share the cost. License bikes to pay for maint., pain, signs. All rider 18-55 must be licensed. Visible on bike from distance.

I'd like to see some of the major paths/trails plowed in the winter.

Meeting Summaries

Wasatch County Trails Master Plan

Project No.:	15-072
PIN:	
Date:	July 28, 2015
Time:	3:00 PM
Location:	Wasatch County Downstairs Conference Room

Meeting Summary

I. Introductions and Project Team

Doug Smith, Wasatch Co.	X	Bob Allen, Charleston		Heidi Franco, Heber City	X
Jim Price, MAG	X	Don Taylor, Wasatch Trails	X	Lars Anderson, PEC	X
Matt Parker, UDOT R-3	X	Courtland Nelson		Geoff Dupaix, PEC	X
Tony Kohler, Heber City	X	Tracy See, Wasatch St. Park		Senta Beyer, PEC	X
Michael Henke, Midway		Kelleen Potter, Heber City	X		

- Note: Bob Allen will not be representing Charleston in the future. Mayor Kowalis will select a different representative.

II. Establish Goals, Objectives, and Policies (GOP)

A. Project Goals and Outcomes

The team discussed several possible outcomes and goals. Several team members felt the trails and pathways create a lifestyle that would benefit the Heber Valley by reducing air pollution. The trails should connect to regional destination points such as Soldier Hollow, the Heber Valley Train Depot, Wasatch State Park, Jordanelle State Park, and Red Ledges.

The master plan should be comprehensive and account for various types of users, including pedestrians, cyclists, recreationalists, and equestrian users. The study should also identify where trail users are traveling to. These trails should be prioritized.

The study should identify key nodes (defined as features, geographic locations, and connections to existing trailheads) and types of trails that should connect to the key nodes.

Motorized trails were also discussed, but the team felt that in most cases people would be towing their ATVs to specific areas so this type of user wouldn't benefit from the type of trails the Master Plan should be focusing on. Non-motorized trails should be the focus of this study.

Discussion came together into two main outcomes for the master plan:

1. The plan should identify a CORE network that connects east and west and north to south within the Heber Valley.

2. The plan should be comprehensive enough that it includes various types of pathways that connect each community into one, unified trail system.

B. Objectives

Team members felt that creating a unified plan would stimulate economic development because the system could be tied to other popular features within Wasatch County such as the train and the State parks which pull visitors from outside the county.

Another objective would be to encourage more recreational use by local residents.

Quality of Life should also be an objective as transportation choices help improve air quality and developers can include trails and pathways into their development plans if a unified system is adopted.

C. Policies

Team members discussed various policy items the study should provide guidance on. With the different types of users the team felt creating guidelines for motorized and non-motorized trail users would be important. Each trail or path type should have dimensional cross sections and signing and striping standards so that they can be consistently applied throughout the county. The team also discussed the need to develop policies regarding trail maintenance, encroachments, easements and widening.

D. Existing Trails Review (Maps)

As the team reviewed the various maps presented during the meeting, each map needed to be updated so that the study team had the latest information. Each city and MAG will review the maps and make sure they are up-to-date. The maps should also include the trails identified by the Wasatch Trails Alliance. Senta Beyer would help coordinate that effort.

III. Stakeholder Outreach

A. Stakeholder identification (area trail groups, cycling groups, general users)

Cycling groups: Wasatch Trails Alliance is a very active group that several members of the study team are affiliated with. Don Taylor would help get the team in touch with them.

Equestrian groups: These are small private groups or just individuals who own horses. There is not a formal organization in the area. There may be a group in the Red Ledges area.

Recreational trail users: This audience is more difficult to identify as it includes the general public.

Pedestrians: (School routes, pathways to parks, Main Street areas, etc.) The SNAP program or the Wasatch County School District would be able to provide the routes.

Other contacts include Genelle Fitzgerald with the Wasatch County Health Department, Amy Tuddenham, with Intermountain Health Care.

B. Key messages (This item was postponed until next meeting)
a.Main message: "Now is the time to plan for Heber Valley's future"
b.**Benefits**:
Identifying routes now helps cities and the county incorporate those plans into development projects and future road construction.

A comprehensive trail master plan encourages active transportation as a lifestyle and creates a sense of ownership among Heber Valley stakeholders.

Master plan will be prioritized into phases to identify short-term and long-term needs.

C. Public Meetings/Open Houses (Two are approved)
A public open house will be held at the scoping phase and at the draft phase.
   a. Community events (This discussion was postponed to next meeting)

D. Political Landscape/Processes
Council Presentations –Project team has two presentations/updates planned for the four communities in the Heber Valley. Councilmember Franco wants to make sure the other communities such as Wallsburg and Independence have the opportunity to comment.

The study team should work with MAG to establish an interlocal agreement between the cities and county on the core pathways.

Deliverable: PEC would contact Shawn Seager of Mountainland AOG to find out when the next interlocal meeting would be and have a project representative attend to discuss the project. This would allow for the other communities to stay informed and comment on the master plan.

E. Project Website, links to other websites
Project team members are happy to post a link to the project website to increase awareness of the study. Geoff asked if PEC could get some existing photos to use for the project website. Doug Smith would send him some contacts after the meeting.

QR Codes (will be discussed more at the next meeting)

IV. Next Meeting

A. Date: Aug. 25, 1:30 – 3 p.m., Wasatch County Downstairs Conference Room, 55 South 500 East
B. Agenda Items, will discuss public meeting and public involvement/ outreach strategy
C. Deliverables

Wasatch County Trails Master Plan

Project No.:	15-072
PIN:	
Date:	August 25, 2015
Time:	1:30 PM
Location:	Wasatch County Downstairs Conference Room

Meeting Summary

I. Attendance

Doug Smith, Wasatch Co.	X	Casey Farfel, Charleston	X	Heidi Franco, Heber City	X
Jim Price, MAG		Don Taylor, Wasatch Trails	X	Lars Anderson, PEC	X
Matt Parker, UDOT R-3	X	Courtland Nelson	X	Geoff Dupaix, PEC	X
Tony Kohler, Heber City	X	Tracy See, Wasatch St. Park	X	Senta Beyer, PEC	X
Michael Henke, Midway		Kelleen Potter, Heber City	X		

II. Review of Past Meeting

A. New representative: Casey Farfel will represent Charleston
B. Before agreeing on the project goals and objectives identified from the previous meeting, team members requested PEC send the meeting minutes from the July 28 meeting again with the August 25 minutes.

III. Discussion

A. Courtland Nelson reviewed his suggested areas of emphasis with team members:
The first ring of emphasis is the connection points. These connections should consider the transportation component and community components of how to get from one side of the Heber Valley to the other safely. Crossing U.S. 40 and 189 are challenging today because they are high-speed roads and they create barriers to tying the network together. Irrigation canals present another opportunity but more outreach is needed.

The second ring of emphasis is the neighborhoods and how they connect to the trail network. This ring of emphasis focuses on the less active user who may not travel as far but needs sidewalks and clearly marked paths to schools, shopping and other services.

The third ring of emphasis is tourism. The network would need enough destinations for cyclists and recreational bikers to use for approximately three days and would require a commitment from the business community and local governments to provide the hard costs of building the network.

Courtland's comments will be included in email.

B. PEC presented a draft trail classification system to the team. Team members felt it was a good start but wanted the classifications to be combined and simplified. PEC will revise and prepare a new draft. The team

discussed if this new classification would match-up with the federal classification system so they could apply for federal grants. The team felt Jim Price would be able to provide guidance on grant funds.

Some team members felt the trail images should also be reflected on the website with some descriptive text. PEC will make additional updates to the website.

C. As the team reviewed the existing trail maps, several members were curious about where easements exist on trail corridors, canal and utility easements and other privately owned property. If possible, team would like PEC to identify easement locations on maps.

A few members also recommended identifying locations where grade-separated crossings should be placed.

IV. Stakeholder Outreach

A. Stakeholder identification (area trail groups, cycling groups, general users)
PEC contacted Brenda Metzger with Red Ledges to identify equestrian groups in the area. There are a few contacts but most of them specialize in dressage or are back country associations. During the discussion, Red Ledges has a planned trail connection but it is still in the future. Doug Smith commented that it's only one trail within 400 acres and more work is needed to encourage Red Ledges (Todd Gates) to provide more access into the area.

Doug mentioned working with Rachel Kahler with the Heber Valley Chamber of Commerce.

B. Public Meetings/Open Houses
A public open house will be held at the Heber City Offices on **September 29 from 5:30 to 7:30 p.m.**

The team discussed making this meeting more of a scoping meeting where the public can draw on maps of the existing trail plans and then take the next step to identify new trail routes modify proposed routes, identify what types to trails they should be, and what they should connect to (major hubs).

C. Project Website, links to other websites
PEC presented the draft website for the project team to review. The site is not public yet but the link is wasatchtrailmp.weebly.com. Once the team approves the website, the link will be purchased and will be made live before the public meeting.

D. Public Survey
PEC presented a draft survey for team members to review. Several comments were made regarding deleting questions 9 (how trails would be used), 15 (improving sidewalk access to trails), 16 (trail markers) and revising question 10 to rate the three categories of convenience, safety and connectivity. Because of the discussion, the team decided to email their comments and suggestions regarding the survey to PEC by end of day on **September 4.**

V. Next Meeting

A. Date: Sept. 15, 1:30 – 3 p.m.
B. Deliverables:
    a. Revised survey with team member feedback
    b. Revised classification descriptions
    c. Schedule public open house

Wasatch County Trails Master Plan

Project No.:	15-072
PIN:	
Date:	September 15, 2015
Time:	1:30 – 3:30 PM
Location:	Wasatch County Downstairs Conference Room

Meeting Summary

I. Attendance

Doug Smith, Wasatch Co.	X	Renee Green, Charleston	X	Heidi Franco, Heber City	X
Jim Price, MAG		Don Taylor, Wasatch Trails		Lars Anderson, PEC	X
Matt Parker, UDOT R-3	X	Courtland Nelson,	X	Geoff Dupaix, PEC	X
Tony Kohler, Heber City	X	Tracy See, Wasatch St. Park	X	Senta Beyer, PEC	X
Michael Henke, Midway	X	Kelleen Potter, Heber City	X		

II. Review of Past Meeting

A. New representative: Renee Green will represent Charleston.

III. Discussion

A. Maps Review:

Between the August meeting and the September meeting, PEC staff laid out a preliminary core trail network and met individually with representatives from Jordanelle State Park, Midway City, Heber City, UDOT, and Wasatch County to review the proposed and existing trail plans and identify potential road crossings and trailhead connections. Project team members reviewed the preliminary core network and their own trail plans.

The team asked PEC to show a trail near the middle Provo River. Tracy See asked PEC not to show an expansion of the existing trailheads and fisherman parking and instead to show locations for new trailheads. Courtland Nelson and Tracy asked if the maps could show a dual path system: one along River Road (bike lanes) and one along the Provo River. US-40, from the intersection of River Road to downtown Heber City, is also a potential location to show trails on both sides of the road.

B. Trail Classifications:

The project team reviewed the next iteration of the proposed classifications. Many members would like to revise the classifications further. Equestrian trail and backcountry trail categories will be combined. Trail classifications need a minimum width standard to separate them from sidewalks; standards vary from 4 to 6 feet.

Courtland suggested referencing classifications identified on the International Mountain Biking Association website *www.imba.com* to help clarify and refine the draft classifications PEC created. Team members would review the information at the site, and PEC will make additional revisions to the classifications.

C. Survey Questionnaire:
PEC made revisions to the questionnaire based on feedback from the previous meeting. As a group the team made additional wording and category revisions to make the survey more clear. A follow-up question will be added asking respondents what methods should be used to collect funds to build and maintain trails. PEC will update the survey on September 15. The cities will post the link to the project website to their individual websites. Other members committed to contacting various groups to increase the awareness of the website and the survey.

D. Public Open House:
PEC submitted the legal notice announcing the open house to run in the next two editions of the Wasatch Wave and Summit County News. The team reviewed the media release and made corrections and additions to the release. Geoff Dupaix will contact the editor of the Wasatch Wave to encourage her to set-up an interview with Doug Smith and Jim Price. PEC will email the press release about the open house to the individuals in the group for them to post on their websites and will post the press release on the project website.

The open house will be held at the Heber City Offices in the city council chambers from 5:30 to 7:30 p.m. The team will need to set up and be ready to talk with people as early as 5 p.m. The public will be able to review the trail maps on boards and duplicates of the maps will be placed on tables for them to write comments and suggest revisions to the preliminary core network. The maps will be broken into areas and project team members will encourage attendees to review all of the information before providing comments and making changes to the maps. Tracy will provide the round tables. PEC will create the remaining materials (comment forms, paper copies of the survey, additional boards, name tags etc.).

IV. Next Meeting

A. Date: October 20, 1:30–3 p.m.
B. Deliverables:
Survey response data
Public Meeting Summary
Map revisions based on public input

Wasatch County Trails Master Plan

Project No.:	15-072
PIN:	
Date:	October 20, 2015
Time:	1:30 – 3:30 PM
Location:	Wasatch County Downstairs Conference Room

Meeting Summary

I. Attendance

Doug Smith, Wasatch Co.	X	Renee Green, Charleston		Heidi Franco, Heber City	X
Jim Price, MAG	X	Don Taylor, Wasatch Trails		Lars Anderson, PEC	X
Matt Parker, UDOT R-3		Courtland Nelson,	X	Geoff Dupaix, PEC	X
Tony Kohler, Heber City	X	Tracy See, Wasatch St. Park	X	Senta Beyer, PEC	X
Michael Henke, Midway	X	Kelleen Potter, Heber City	X		
Laurie Backus, Jordanelle	X	Troy Morgan, Was. Co. FD	X	Steve Rutter, FFSL	X

II. Review of September 29, 2015 Public Meeting

A. Open house attendance: 82 people signed in, with more than 100 people in attendance. This was a successful meeting as far as attendance was concerned.

B. Media interviews: Doug Smith and Don Taylor did a great job on the interview with KPCW.

C. What to improve:

- Some people didn't see the signs. Some heard about the meeting through word of mouth, but it was after the meeting. For future meetings, the signs need to be larger and need to be posted earlier in more visible locations.
- For the public next meeting, responses to comments should be posted to website so that people know they were listened to and what we did with their feedback.
- A table with information about the master plan should be posted at UVU or at locations to get feedback from different audiences.

III. Discussion

A. Interlocal meeting:
Location: To Be Determined
PEC will create three separate presentations for the meeting. The presentations will be for the Provo River Trail, Heber Valley Railroad Trail, and Master Plan.

B. Master Plan Document:

Courtland Nelson is concerned that the master plan may reflect all the comments or feedback from various stakeholder groups within the valley, especially those from the smaller communities. He wondered if a short presentation should be developed, where Courtland or some of the other key stakeholder groups could use the presentation and the maps to take them around to gather more feedback. This would enable the group to connect with other key decision makers in the area, and identify trail connection issues or other routes, to make sure they have as much feedback as possible.

As a final deliverable, PEC will create thumb drives for each organization that will contain a PowerPoint presentation, the final master plan document, and the maps—separated out so that they can be used for individual presentations.

C. Map Review:

The Town of Daniel: The team had a request to bring a trail to Wheeler Park. Two crossings are proposed at US-40 and at another location at US-189 near Charleston. The former town mayor wants to see more connections to retail areas. The lines on the maps are identified as bike lanes, multi-use trails, and soft-surface trails as part of the core network. PEC will reach out to Chip Turner, mayor of Daniel, to verify the routes are the ones that make sense for the town.

Doug Smith commented that the mountainside south of Daniel is in Wasatch County. There are no plans for backcountry trails in that area at this point. In referring to a previous meeting with the engineering firm representing the town of Daniel, Lars mentioned that he and Doug will reach out to the engineering firm and show them maps of the area south of Daniel.

Heber City: Lars Anderson received feedback to move the trail connections at 100 East and 100 West to 300 East and 300 West. These roads are wider and can accommodate bike lanes. 300 West connects to the retail area where Walmart is located. 300 East connects to area schools. 100 West and 100 East carry more traffic today so these routes will be designated as improved pedestrian trails up to 8 feet wide. These may change since the city is in the process of updating their transportation master plan.

Courtland asked if the trail on Midway Lane could connect to Center Street and not 100 South because there is less traffic, and it will be safer. The team agreed. Red Ledges would also be designated as a future trailhead.

Midway City: A multi-use trail is proposed along the Provo River from River Road into Midway. A separated path would run on the east side of U.S. 40. Another trail is proposed along the canal into Heber.

The proposed bike lanes on U.S. 40 would meet the need of special events such as Tour of Utah, and heavy users in the area. If tourism is the plan, then the trails and bike lanes would need to be physically separated from the road.

D. Survey Questionnaire:
The survey was closed on October 15, 2015. The team reviewed the preliminary results from the survey. When finalized, the survey with the analysis would be posted on the project website as early as the end of October 2015.

One of the more interesting responses to the survey was the willingness of respondents to pay additional fees to build and maintain trails. Doug cautioned that those who took the survey are primarily trail users and that more research would be needed. Quoting results from a 2001 survey, Jim Price stated that in his experience working with trail user surveys that 50 percent of people are willing to pay, even if they are not actually using trails.

IV. Next Meeting

A. No future meetings are proposed at this time.

Presentations & Handouts

Wasatch County Trail Master Plan

Greater Heber Valley Area

Prepared by PEC

Trail Master Plan

- Purpose
- Core Network
- Heber-Daniel
- Midway-Charleston
- Classifications
- Involvement
- Estimate
- Options

Purpose of Project

Identify Core Trail Network
- Connect each community
- Connect to State Park trails

Develop Trail Classification Guidelines

Develop Cost Estimate

PEC

Trail Master Plan

- Purpose
- Core Network
- Heber-Daniel
- Midway-Charleston
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- Estimate
- Options

Core Trail Network

Trail network links:
- Soldier Hollow
- Wasatch Mountain State Park
- Jordanelle State Park
- Red Ledges

Crossing US-40 & 189
- 189: 2 crossings
- 40: 9 crossings

Planned future trail routes

Trail Master Plan

- Purpose
- Core Network
- Heber-Daniel
- Midway-Charleston
- Classifications
- Involvement
- Estimate
- Options

Heber City-Daniel Area

Links needed to key areas:
- Core Loop needed to connect valley from east to west
- Safe crossings across US-40
- Connecting Daniel to Jordanelle State Park
- Link local trail networks to Core Loop

Trail Master Plan

- Purpose
- Core Network
- Heber-Daniel
- **Midway-Charleston**
- Classifications
- Involvement
- Estimate
- Options

Midway-Charleston Area

Links needed to key areas:

- Soldier Hollow to Wasatch Mt. State Park
- Deer Creek Reservoir to Heber City
- Crossings needed across US-189
- Midway to Jordanelle State Park

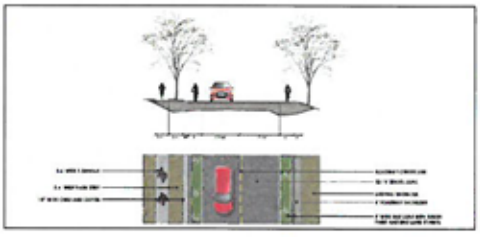
PEC

Trail Master Plan

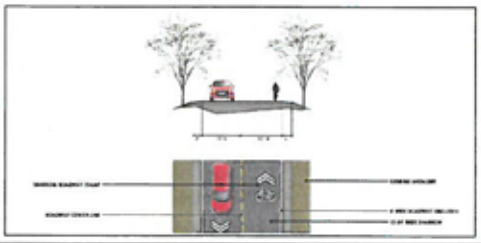
- Purpose
- Core Network
- Heber-Daniel
- Midway-Charleston
- **Classifications**
- Involvement
- Estimate
- Options

Trail Classifications

Bike Lanes



Shared Bike Lanes



PEC

Trail Master Plan

- Purpose
- Core Network
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- Midway-Charleston
- Classifications
- Involvement
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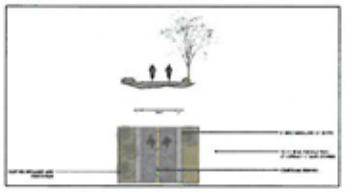
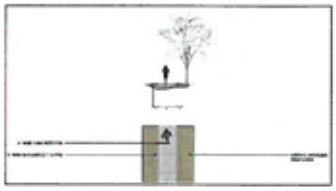
- Options

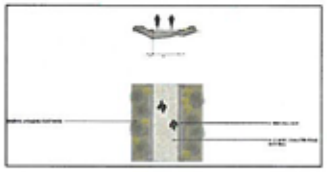
Trail Classifications



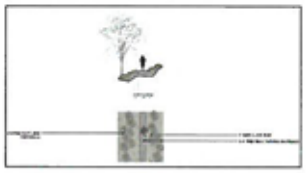
Improved Multi-Use Trail



Improved Pedestrian Trail



Urban Soft Surface



Backcountry Trail

PEC

Trail Master Plan

- Purpose
- Core Network
- Heber-Daniel
- Midway-Charleston
- Classifications
- Involvement
- Estimate
- Options

Community Involvement

Public Survey Results: 193

Trails are used primarily for:
- Walking (46%)
- Mtn. Biking (31%)
- Cycling (21%)

Trail connectivity somewhat to very important: 82%

Willingness to pay additional taxes/fees to build and maintain trails: 79%

Trail funding preference:
- Development impact fees
- Sales tax increase
- Bonding and service district fees

PEC

Trail Master Plan

- Purpose
- Core Network
- Heber-Daniel
- Midway-Charleston
- Classifications
- Involvement
- Estimate
- Options

Options/Next Steps

Adopt unified trail plan and trail classifications/standards

Regularly update trail plan (2 to 3 years)

Develop long term strategies to build network

Wasatch County
Trails Master Plan

Planning for Area Growth

Wasatch County is one of the fastest growing counties in Utah. From 2000 to 2010, the population grew by nearly 55 percent. The annual growth rate remained steady at just more than 3 percent annually. This steady growth rate indicates that creating a valley-wide trail master plan is vital to the future connectivity of trails throughout the Heber Valley.

Creating a Unified Trail Network

Developing a unified trail network plan as proposed in that all municipalities can support and adopt will help create a standard that can be applied as Wasatch County grows (see Figure 1).

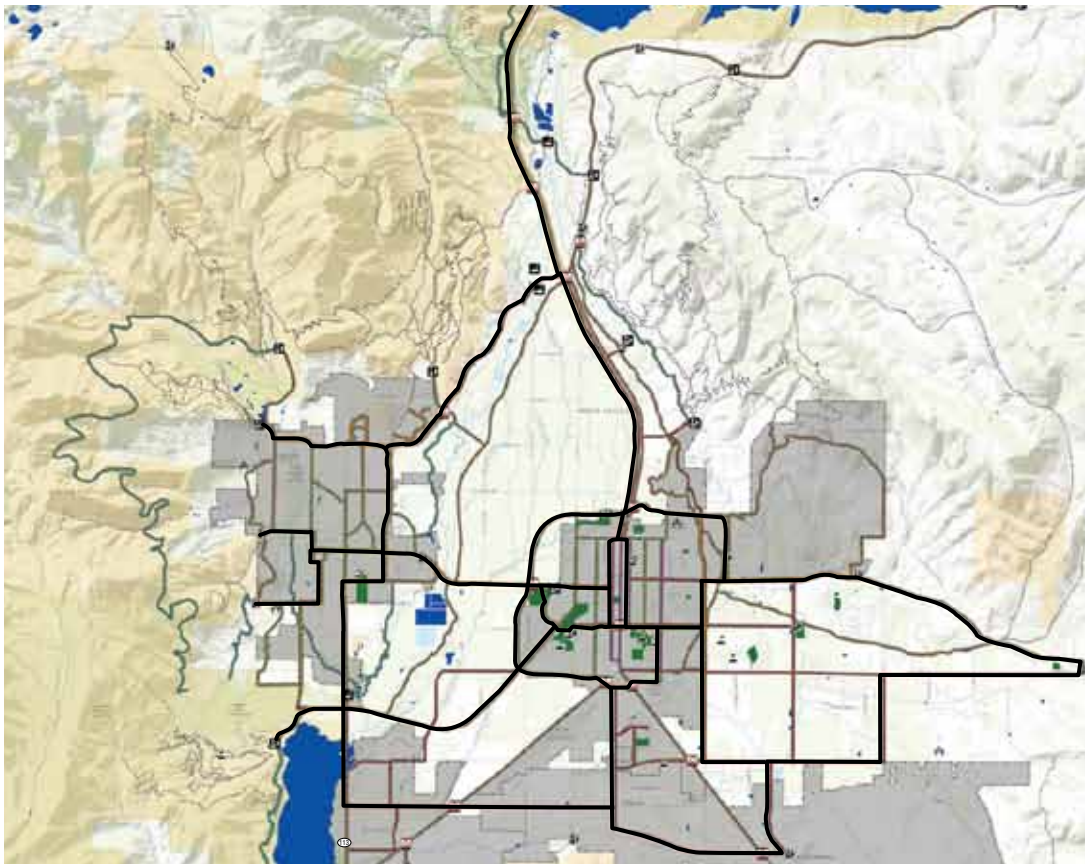


Figure 1. The core trail network pictured above in black identifies routes that connect each municipality and recreation area.

The goals of the Wasatch County Trail Master Plan are as follows:

1. Establish a core network of trails that connects all communities within the Heber Valley;
2. Connect to current and planned trailheads at Wasatch Mountain State Park, Jordanelle State Park, and Soldier Hollow;
3. Develop unified trail classifications and guidelines;
4. Identify future trail crossings at US-40 and US-189 that are safe for users;
5. Improve coordination and planning between municipalities, and identify funding options to build and maintain the trail network.

Importance of Trail Planning

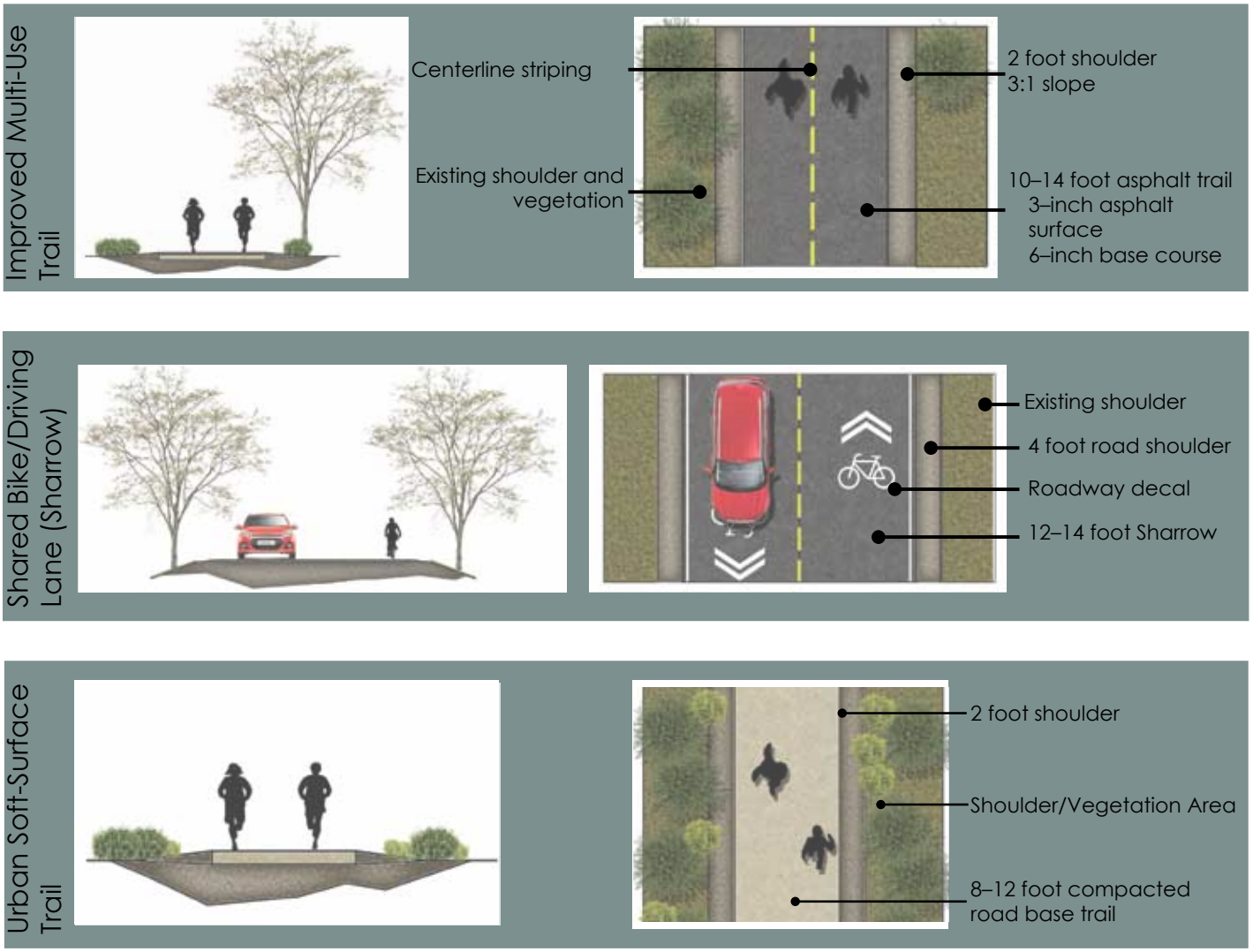
Good trail planning does more than create amenities for a community. A unified a trail master plan does the following:

- Connects trail users into a regional network;
- Connects communities;
- Provides alternatives to driving by improving accesses for cyclists and pedestrians;
- Encourages integrated development planning;
- Connects the local trail network to public lands and recreation areas;
- Helps preserve open space
- Fosters an active lifestyle;
- Helps communities better prioritize the development and construction of trails; and
- Strengthens a community's ability to secure outside funding to build trail projects.

Everyone benefits from trails. When communities adopt a trail master plan, planners and engineers can work with developers to integrate trail routes into their development plans. Without a plan, trails are built in fragments and connectivity to other future trails is potentially lost or becomes more expensive to build.

Trail Classifications for Core Network

Part of developing a unified trail system includes creating and adopting unified trail standards as the proposed classifications shown below. These standards enable communities to provide trails that are uniform in design and consistent in construction and maintenance.



Above: Adopting these proposed trail classifications will provide consistency in trail design and construction.

Wasatch County Regional Trails Master Plan

Appendix C

Funding Sources

Federal Grants (Transportation)

Name	Federal Lands Access Program (FLAP)	Surface Transportation Program (STP) (under MAP-21)	Transportation Alternatives Program (TAP) (under MAP-21)	Congestion Mitigation & Air Quality (CMAQ)	Mormon Pioneer Heritage Area (MPHA)
Program Purpose	To improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands	Provides funds for projects or activities that improve surface transportation, including pedestrian and bicycle infrastructure	Provides funds for projects or activities related to surface transportation alternatives	Improving air quality and traffic congestion through transit and ped/bike facilities	Congress allocates funds based on a federal fiscal year
Eligible Infrastructure	Transportation planning, engineering, preventive maintenance, rehabilitation, restoration, construction, and reconstruction of Federal Lands Access Transportation Facilities; operation and maintenance of transit facilities; and provisions for pedestrians and bicycles	Bicycle transportation facilities, pedestrian walkways, and recreational trails	Construction, planning, and design of ped/bike facilities; bike share programs, recreational trails, rail trails, turnouts & overlooks, safe routes to schools	Non-recreational bike/ped transportation improvements; projects that reduce air pollution or that shift traffic demand to other transportation modes	Planning, design, construction for items identified in the MPHA Plan
Eligible Non-Infrastructure	Research; acquisition of necessary scenic easements and scenic or historic sites ; and environmental mitigation in or adjacent to Federal land to improve public safety and reduce vehicle-caused wildlife mortality while maintaining habitat connectivity	Environmental mitigation; noxious weed control; inspection of trails, tunnels, and bridges	Historic preservation of transportation facilities, vegetation management, environmental mitigation	Workforce development, training and education activities	Interpretation/education
Key Project Requirements	Projects providing access to Federal high-use recreation sites; and the project improves safety while improving access to a Federal facility	Not specified	Not specified	Priority for projects proven to reduce PM 2.5 emissions	Request is through the MPHA board
Process Timing	Applications due May 15	Varies	Varies	Varies	Varies
Local Match Required	6.77%	Can vary; up to 20%	Can vary; up to 20%	Can vary; up to 20%	50%
Contact	Bill Lawrence, UDOT billlawrence@utah.gov (801) 964-4468	Contact local planning organization / UDOT region	Evelyn Tuddenham, UDOT etuddenham@utah.gov (801) 964-4564	Contact local planning organization / UDOT region	Lori Talbet (435) 676-8585
Website	http://www.cflhd.gov/programs/flap/ut/	http://www.fhwa.dot.gov/map21/stp.cfm	http://www.fhwa.dot.gov/map21/tap.cfm	http://www.fhwa.dot.gov/map21/factsheets/cmaq.cfm	http://www.mormonpioneerheritage.org/htm/under-therim
Funding Amount	$10,652,636 in Utah for FY 2013	Varies depending on federal funding & state allocation $81,137,116 in Utah for FY 2013	Varies depending on federal funding & state allocation $6,421,900 in Utah for FY 2013	Varies depending on federal funding and state allocation $11,501,051 in Utah for FY 2013	Varies
Status	Active	Active	Active	Active	Active

State of Utah

Name	Utah Boater Access Grant	Land & Water Conservation Fund	Utah Rural Development Grant	Community Impact Board (CIB)	Community Development Block Grants (CDBG)	Mormon Pioneer Heritage Area (MPHA)
Program Purpose	Provides grants for boat access facilities and outreach	Provides federal reimbursement grant program for the acquisition and/or development of public recreation areas	Assists economic development in rural areas (defined as counties with a population under 30K and an average annual household income under $60K)	Provides loans and/or grants to communities which may be socially or economically impacted by mineral resource development on federal lands	Provides grants to cities and towns of fewer than 50,000 in population and counties fewer than 200,000 people	Congress allocates funds based on a federal fiscal year for the Heritage Area
Eligible Infrastructure	Ramps, docks, breakwaters, access roads, bridges, restrooms, fish cleaning stations, lighting, trash receptacles, parking areas, camping areas, navigation aids	Ball fields, sports courts, spray parks, golf courses, public restrooms, swimming pools, skate parks, walking trails, land acquisition for recreation	Not specified	Planning, construction and maintenance of public facilities	Park improvements, curb cuts, sidewalks	Planning, design, construction for items identified in the MPHA Plan.
Eligible Non-Infrastructure	Dredging, weed control, buoys, planning, environmental assessments, permitting, signage, brochures, maps, websites, operation and maintenance		Planning, feasibility studies, labor, services	Not specified		Interpretation/Education
Key Project Requirements	Emphasis should be placed on enhancement of access, enhancement of sport fishery, or existing conservation activities.	How well the project relates to the 2009 Utah State Comprehensive Outdoor Recreation Plan (SCORP)	Project must increase employment, increase local economic income, or increase knowledge and participation	Request must involve local planning organization	Must attend a workshop in your region	Request is through the MPHA board; Sanpete, Sevier, Piute, Garfield, Wayne, & Kane Counties
Process Timing	October 31, 2014	May 1, 2014	Applications accepted at any time	June 1, October 1, February 1	September	Varies
Local Match Required	Not specified	50%	Not specified	50% for planning, study, or design requests	None	50%
Contact	Craig Walker craigwalker@utah.gov (801) 834-1970	Susan Zarekarizi, susanzarekarizi@utah.gov, (801) 538-7496	Les Prall lprall@utah.gov (801) 538-8804	Keith J. Burnett (801) 526-9465 kjburnett@utah.gov or local planning org.	Contact local planning organization	Monte Bona (801) 699-5065 montebona@hotmail.com
Website	http://stateparks.utah.gov/resources/boating/general	http://stateparks.utah.gov/grants/land-water/	http://business.utah.gov/programs/rural/	http://jobs.utah.gov/housing/cib/cib.html	http://housing.utah.gov/cdbg	http://www.mormonpioneerheritage.org
Funding Amount	Around $1.3 million available statewide annually; individual project amounts vary	Depends on federal funding for the program.	Varies	Maximum $5,000,000	Varies, typically up to $150,000	Varies
Status	Active	Active	Active	Active	Inactive (???)	Active

Federal NGO Foundations

Name	People for Bikes Community Grants	National Fish & Wildlife Foundation Environmental Solutions for	EPA/NFWF Five Star Restoration Program
Program Purpose	Provides funding for important and influential projects that leverage federal funding and build momentum for bicycling in communities	Supports projects that link economic development and community well-being to the stewardship and health of the environment. Includes protection and restoration of habitat, improving water quality, and investing in green infrastructure	Brings together students, conservation corps, citizen groups, corporations, landowners and government agencies to provide environmental education and training through projects that restore wetlands and streams
Eligible Infrastructure	Bike paths, lanes, trails, bridges, rail-trails, mountain bike trails, bike parks, BMX facilities, bike racks, bike parking/storage	Not specified	Not specified
Eligible Non-Infrastructure	Large-scale bicycle advocacy initiatives	Not specified	Wetland, riparian, in-stream, or coastal habitat restoration; equipment; supplies; outreach, education, training
Key Project Requirements		Preference given to projects in priority geographic regions where Wells Fargo operates; and align with one or more thematic priorities (see website).	Must involve a diverse partnership and environmental education in on-the-ground restoration projects.
Process Timing	Two cycles per year; 2014 cycle start dates: December 16, 2013 June 16, 2014	12/16/2013; part of a five-year initiative with Wells Fargo - expected to be offered again in 2014	Applications generally open in late fall, RFP due Feb., 3, 2015
Local Match Required	None; grant must not amount to >50% of project budget	Meet or exceed 1:1 ratio	at least 1:1
Contact	Zoe Kircos zoe@peopleforbikes.org (303) 449-4893 x5	Carrie Clingan Carrie.Clingan@nfwf.org 202-595-2471	Claire Thorp claire.thorp@nfwf.org (415) 243-3104
Website	http://www.peopleforbikes.org/pages/community-grants	http://www.nfwf.org/environmentalsolutions/Pages/home.aspx	http://www.nfwf.org/fivestar/Pages/home.aspx
Funding Amount	$5,000 to $10,000	From $25,000 to $100,000; average grant $40,000	$20,000 to $50,000 average grant is $25,000
Status	Active	Active	Active

Corporate Foundations

Name	Rocky Mountain Power Foundation	Questar Corporate Giving	Rio Tinto Kennecott Charitable Foundation	Wells Fargo Corporate Giving	Patagonia Environmental Grants & Support	The North Face Explore Fund	REI Nonprofit Partnerships & Grants	Tiffany & Co. Foundation	Ben & Jerry's Foundation	Lowes Charitable and Educational Foundation	Walmart Foundation Grants	New Belgium's Environmental Stewardship Grants Program	Coca-Cola Foundation
Program Purpose	Supports communities through grants to nonprofit organizations in the categories of education; civic and community betterment; culture and arts; and health, welfare and social services	Promotes a healthy environment by supporting projects in the areas of health & human services; education; culture & the arts; and civic & community services	Supports charities that assist children, veterans, senior citizens, and those struggling with homelessness, disabilities or low income	Provides grants in four primary areas: community development, education, human services and civic/cultural/arts, with an emphasis on low and moderate income communities	Supports grassroots environmental groups who take radical and strategic steps to protect habitat, oceans and waterways, wilderness and biodiversity	Supports organizations that encourage youth outdoor participation, help create a connection to nature that will help empower the future leaders of tomorrow, and inspire exploration of natural places	Promotes volunteer stewardship events; provides grants to select stewardship nonprofits that care for outdoor places	The Foundation's Urban Parks program supports the enhancement of urban environments through revitalization, rehabilitation, protection, and creation of green spaces	To further social and environmental justice and support sustainable and just food systems; focus on the types of activities and strategies an organization uses for creating social change	Primary focus on K-12 and community improvement, through supporting non-profits and municipalities having high needs projects; partnerships with Boys & Girls Clubs, and Nature Conservancy	Meet the needs of the underserved by directing charitable towards: hunger relief & healthy eating, sustainability, women's economic empowerment, and career opportunity segments of their charity	To serve and connect with the communities where their beers are sold	Provides grants in four areas: water stewardship, active healthy living, community recycling, and education
Eligible Infrastructure	Not specified	Not specified	Not specified	Not specified	Not specified	501c(3) requirement, youth education with outdoor recreation focus	Not specified	Not specified	Not specified	Building renovations/upgrades, grounds improvements, technology upgrades, safety improvements	Not specified	Bike Infrastructure, soil health and resilience, promotion of urban farming, water restoration project ,	Not specified
Eligible Non-Infrastructure	Not specified	Not specified	Not specified	Not specified	Not specified	Trails and Buildings, green building projects, land acquisition, land trusts, conservation easements	Not specified	Not specified	Organizations with annual budget over 500,000	See website: http://responsibility.lowes.com/wp-content/uploads/2012/12/Giving-Guidelines.pdf	Not specified	Not specified	Not specified
Key Project Requirements	Applicant must have nonprofit status and be in PacifiCorp's/Rocky Mountain Power's service area.	Questar does not usually contribute to organizations deriving major support from government funding (federal, state or local).	Must involve a local community charity that focuses on youth, seniors, homelessness, or low income.	Community development: Support the improvement of low and moderate income communities through programs that: Create and sustain affordable housing, revitalize and stabilize communities, teach financial literacy	Categories include alternative energy (includes transportation), media/publications, social activism, sustainable agriculture, toxic waste, and water	Creating more connections of youth to nature and providing an inspiration to explore. Increasing access to close to home front and backcountry recreation opportunities. Engaging a new and diverse audience with the outdoors.	Must engage with local store teams, who endorse nonprofits with whom they've forged meaningful partnerships.	Letter of inquiry must be submitted before being accepted for grant application process; http://www.tiffanyandcofoundation.org/apply.aspx	Community & ally outreach; leadership development; constituent empowerment & decision-making; popular education; root cause analysis; power analysis; campaign development; mobilizing constituents & allies; coalition building; direct action	High needs projects involving community improvement projects or public education	Hunger relief & healthy eating; sustainability	Youth environmental education; sustainable education; sensible transportation & bike advocacy; water stewardship elements as defined on website.	
Process Timing	Applications accepted quarterly depending on type - check website; Environmental groups, housing & urban renewal, community-based groups, state & local governments: June 15	Applications accepted throughout the year	October 15, 2014	Applications accepted from January 1 to October 15.	Local retail stores accept proposals on a rolling basis; April 30, August 31 nationally	Application accepted April 1-May 1 , 2014	REI does not accept unsolicited grant applications.	Grants are awarded twice annually.	March 2014 & June 2014	March 31 — May 30, 2014 & June 30 — Aug. 29, 2014; small grants are on rolling basis	Depends on whether a national, state, or community grant. See website for details: http://foundation.walmart.com/apply-for-grants/	Youth Environmental Education – February 1, 2014- March 31, 2014. Sustainable Agriculture – April 1, 2014- May 31, 2014. Sensible Transportation & Bike Advocacy – July 1, 2014 –August 31, 2014. Water Stewardship – September 1, 2014- October 31, 2014.	Applications accepted year-round
Local Match Required	None	None	None	None	None	Favored, but not required	None	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified
Contact	Lilisa Hall; Laurie Simmons pacificorpfoundation@pacificorp.com (503) 813-7257	Debra Hoyt Corporate.Giving@Questar.com	Piper Rhodes rhodespiper@kennecott.com	Denise Winslow denise.m.winslow@wellsfargo.com 801-246-5286	Apply online; Local store: (801) 466-2226	Apply online; http://www.explorefund.org/application.php	Local SLC store: (801) 486-2100	foundation@tiffany.com	Rebecca Golden, Director of Programs info@benandjerrysfoundation.org	community@lowes.com	Apply online	Kari Fletcher at kfletcher@newbelgium.com	
Website	https://www.rockymountainpower.net/foundation	http://www.questar.com/4Environment/Community/CorporateGiving.php	http://www.kennecott.com/kennecott-foundation	https://www.wellsfargo.com/about/charitable/ut_guidelines	http://www.patagonia.com/us/patagonia.go?assetid=2927	http://www.explorefund.org/	http://www.rei.com/stewardship/community/non-profit-partnerships-and-grants.html	http://www.tiffanyandcofoundation.org/default.aspx	http://benandjerrysfoundation.org/the-grassroots-organizing-for-social-change-program/	http://www.lowes.com/cd_Charitable+and+Educational+Foundation_936258779	http://foundation.walmart.com/apply-for-grants/	http://www.newbelgium.com/Sustainability/Community/Philanthropy.aspx	http://www.coca-colacompany.com/stories/the-coca-cola-foundation
Funding Amount	Up to $10,000; typically between $2,000 - $5,000	Not specified	Not specified	Not specified	Up to $12,000	Not specified	Not specified	Varies	up to $20,000	2 types: small grants (less than $2000) or $2000-$100,000, with most grants being $10,000-$25,000	Varies	$2500-$10,000	Not specified
Status	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active	Active

Non-Profit Foundations

Name	George S. and Dolores Doré Eccles Foundation	Willard L. Eccles Foundation	Hemingway Foundation	Surdna Foundation Sustainable Environments Program	Robert Wood Johnson Foundation	Captain Planet Foundation Grants
Program Purpose	Supports arts and culture, community, education, health care, or preservation and conservation projects that have the potential to better Utah's communities and enrich quality of life	Support of non-profit organizations addressing needs and opportunities in the areas of education, the environment, social causes, basic science, and health care	Promoting and encouraging environmental stewardship: supports nature education, environmental protection, environmental advocacy, and the acquisition and preservation of open space	Foster healthier, sustainable, and just communities by improving infrastructure in four areas: transportation, energy efficiency, urban water management, and regional food supply	RWJF's mission is to improve the health and health care of all Americans. RWJF periodically issues RFPs based on their areas of focus, and accepts unsolicited proposals	Fund projects that conform to the organization's mission: To give the next generation of environmental stewards an active understanding and love for the natural world in which they live
Eligible Infrastructure	Not specified	Not specified	Not specified	Bike infrastructure, stormwater infrastructure, food supply infrastructure	Not specified	Not specified
Eligible Non-Infrastructure	Not specified	Not specified	Not specified	Planning, advocacy, education, community engagement		Capital or building campaigns, real estate purchases, expensive equipment only used once, beautification or landscaping projects
Key Project Requirements				Letter of inquiry must be submitted before being accepted for grant application process	Varies depending on RFP; unsolicited proposals must demonstrate new and innovative solutions	Provide hands-on environmental stewardship opportunities for youth; serve as a catalyst to getting environment-based education in schools; have real environmental outcomes; inspire youth and communities to participate in community service through environmental stewardship activities
Process Timing	Applications selected quarterly	Applications accepted April-June	April 1, 2013	Letters of inquiry accepted on a rolling basis; full proposals approved 3 times a year	Varies depending on RFP; unsolicited proposals accepted year-round	Spring and summer projects: September 30; fall and winter projects: January 31
Local Match Required	Not specified		None	Not specified		preferred 50% secured match, but not required
Contact	gseg@gseccles.org (801) 246-5340	Stephen Eccles Denkers grants@wleccles.org (801) 582-4483	Brianne Johnson briannej@xmission.com (801) 363-5227	grants@surdna.org (212) 557-0010	Office of Proposal Management (877) 843-7953	grants@captainplanetfdn.org
Website	http://www.gsecclesfoundation.org/home.html	wleccles.org	http://www.hemingwayfoundation.org/	http://www.surdna.org/what-we-fund/sustainable-environments.html	http://www.rwjf.org/en/grants.html#q/maptype/grants/ll/37.91,-96.38/z/4	http://captainplanetfoundation.org/apply-for-grants/2
Funding Amount	Varies	Varies	Varies	Not specified	Varies	$500-$2500
Status	Active	Active	Active	Active	Active	Active

Agricultural Grants & Loans

Name	USDA Community Food Projects Competitive Grants Program	USDA- Local Food Promotion Program (LFPP)	USDA-NRCS Regional Conservation Partnership Program	USDA- Farmers Market Promotion Program (FMPP)	National Resource Conservation Service- Environmental Quality Incentives Program	Utah Department of Agriculture and Food- Agriculture Resource Development Loans	National Gardening Association - Kids Gardening	USDA- Rural Developememt Grants
Program Purpose	Promotes self-sufficiency and food security in low-income communities by linking local food production to the goals of community development, economic opportunity, and environmental enhancement	Support local and regional food business enterprises that process, distribute, aggregate, or store locally or regionally produced food products; there are LFPP Planning Grants, and LFPP Implementation Grants	Through RCPP, NRCS will increase the opportunity for partners to bring innovative ideas and resources to accelerate conservation on private lands	Increase domestic consumption of, and access to, locally and regionally produced agricultural products, and to develop new market opportunities for farm and ranch operations serving local markets by developing, improving, expanding, and providing outreach, training, and technical assistance to, or assisting in the development, improvement, and expansion of, domestic farmers markets, roadside stands, community-supported agriculture programs, agritourism activities	Provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland	The objectives of the program are to: Conserve soil and water resources; increase agricultural yields for croplands, orchards, pasture, range, and livestock; maintain and improve water quality; conserve and/or develop on-farm energy; reduce damages to agriculture as a result of flooding, drought, or other natural disasters	Variety of grants available for schools and organizations that engage kids in gardening activities	A variety of gratns are available to help support energy projects, farming/food projects, and econmomic development projects in rural areas
Eligible Infrastructure	Building/facility construction	Planning stage activities and implementation stage activities; see website	Private land, agricultural land, watershed scale, regional scale	Varies	High tunnels, irrigation systems, farm equipment, etc.	Agricultural infrastructure	Varies	Varies
Eligible Non-Infrastructure	Planning; land acquisition; improvements, renovations, or repairs to land or buildings; equipment purchase; coordination of collaboration development	Varies	Not specified	Varies	Not specified	Not specified	Varies	Varies
Key Project Requirements	Project designs should integrate multiple objectives such as job training, neighborhood revitalization, open space development, or other community enhancements	Eligible entities may apply if they support local and regional food business enterprises that process, distribute, aggregate, or store locally or regionally produced food products	Agricultural lands; private lands; conservation activities; restoration and sustainable use of soil, water, wildlife, and related natural resources on regional or watershed scales; regional cooperative actions; innovative solutions that identify and address natural resource objectives and implement conservation practices	Food production and/or distribution	Benefits are limited to individuals or entities with an Adjusted Gross Income (AGI) of $1 million per year or less, unless two-thirds of that money is derived from agriculture, ranching, or forestry operations	Projects will be considered that: prevent or abate pollution and other environmental degradation; benefit the community through creation of outdoor recreational opportunities, preserving open space, or enhancing the appearance of the area	Education, gardening, and youth	Projects in rural areas that address rural needs, such as energy, food, economic development, and some education
Process Timing	March 31. 2014	June 20, 2014	Pre-proposal applications due: July 14, 2014 Announcement of selected pre-proposals: July 28, 2014 Full proposal applications due: September 26, 2014 Announcement of selected full proposals: October 17, 2014	June 20, 2914	November 15, 2013; March 21, 2014; June 20, 2014	Not specified	Varies	Varies
Local Match Required	1:1 match	25% match required	25% minimum, but higher matches will be more competitive	Not specified	Not specified	None	Not specified	Varies with different RD grants
Contact	Jane Clary jclary@nifa.usda.gov (202) 720 - 3891	Nicole Nelson Miller USDALFPPQuestions@ams.usda.gov 202-720-2731	Mark Rose: mark.rose@wdc.usda.gov (202) 720-1845 Frankie Comfort: frankie.comfort@wdc.usda.gov (202) 690-0164	FMPP Staff USDAFMPPQuestions@ams.usda.gov202 720-0933	Benjamin Hudson Tooele Service Center 185 N Main St Tooele, UT 84074-2161 (435) 882-2276 (435) 882-0429 fax	Richard Sandberg, Manager (801) 538-7030 (801) 538-4940 fax	1-800-LETSGRO or http://www.kidsgardening.org/contact_us	1-800-670-6553
Website	http://www.nifa.usda.gov/fo/communityfoodprojects.cfm	http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateA&navID=WholesaleandFarmersMarkets&leftNav=WholesaleandFarmersMarkets&page=LFPP&description=Local%20Food%20Promotion%20Program&acct=lfpp	http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/home/?cid=stelprdb1242732	http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateN&navID=WholesaleandFarmersMarkets&leftNav=WholesaleandFarmersMarkets&page=FMPP&description=Farmers%20Market%20Promotion%20Program&acct=fmpp	http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/	http://www.ag.utah.gov/markets-finance/agriculture-loans.html	http://grants.kidsgardening.org/	http://www.rurdev.usda.gov/RD_Grants.html
Funding Amount	$10,000 to $250,000	$5,000-$100,000	$0-20 million	$15,000-$100,000	Up to $300,000 over a six year period	Not specified	Varies	Varies
Status	Active	Active	Active	Active	Active	Active	Active	Active

Discontinued (may come back)

Name	UDOT - Safe Routes to School	Scott's Miracle Grow- Give Back to Grow	LeRay McAllister Critical Land Conservation Fund
Program Purpose	To facilitate the planning, development, and implementation of projects to improve safety, and reduce traffic, fuel consumption, and air pollution near schools	To give back to communities, where people live an work through the support of community gardens	Provides grants to preserve or restore critical open or agricultural land in Utah
Eligible Infrastructure	Within 2 miles of school: new sidewalks, off-street bike/ped facilities, pavement markings, connections between locations, bike parking facilities, traffic calming, installing school related signs	Community gardens and green spaces	Developed land with recreation facilities (baseball, soccer, tennis, golf) are NOT eligible for this grant
Eligible Non-Infrastructure	Education, encouragement, enforcement, evaluation	Not specified	"Open land" which includes natural, undeveloped land including wildlife habitat, cultural or recreational use (see above for restrictions), watershed protection, or others.
Key Project Requirements	Any public elementary, middle, junior high, or public charter school, or school district, grades k-8. Must conform with schools Student Neighborhood Access Plan (SNAP)	Community gardens and green spaces	Local support, project leverage, multiple public benefits, unique and irreplaceable benefits, urgency, long term monitoring and maintenance assured
Process Timing	Varies, usually early in the year	Varies	Usually May
Local Match Required	None	Not Specified	50%
Contact	Cherissa Wood, cwood@utah.gov	Not specified	John Bennett, Governor's Office of Planning and Budget jbennett@utah.gov (801) 538-1027
Website	http://www.udot.utah.gov/main/f?p=100:pg:0::::T,V:1388	http://www.scotts.com/smg/goART2/InfoHowTo/give-back-to-gro-giving-back-through-community-gardening/16100048	http://governor.utah.gov/Quality
Funding Amount	Varies according to State funding	Not specified	Varies according to State funding
Status	No new applications, dependent upon reauthorization of transportation bill	Inactive	Inactive