

METRO GREENBELT/TRAIL PLAN



Department of Planning & Development
Department of Parks & Recreation

City of Columbia
Missouri

NOVEMBER 2002

Introduced by HindmanFirst Reading 10-21-02 Second Reading 11-4-02Ordinance No. 017494 Council Bill No. B 362-02A

AN ORDINANCE

adopting the Columbia Metro Greenbelt/Trail Plan; and
fixing the time when this ordinance shall become
effective.

WHEREAS, many natural corridors or greenbelts of open space exist within the greater Columbia area located largely along streams and their associated flood plains; and

WHEREAS, these natural greenbelt corridors provide a number of benefits which are important to the well-being of the public, including protection from flooding, habitat for native plants and wildlife, open space buffers between development, and opportunities for recreational use, and pedestrian and bicycle transportation routes; and

WHEREAS, a long-range plan has been prepared for the preservation of these greenbelt corridors as well as to develop a system of hiking and biking trails which would make these corridors more accessible to community residents.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

Section 1. The City Council adopts the "Columbia Metro Greenbelt/Trail Plan," dated July 2002, a copy of which is on file in the City Clerk's office.

Section 2. Subdividers, developers, and owners of land located within or adjacent to greenbelts are encouraged to protect these natural corridors from development and provide access to the public through greenspace conservation easements, access and trail easements, donation of land to the City, or other appropriate means.

Section 3. This ordinance shall be in full force and effect from and after its passage.

PASSED this 4th day of November, 2002.

ATTEST:

Deany G. Romaine

City Clerk

Larry Kindman

Mayor and Presiding Officer

APPROVED AS TO FORM:

Paul R. Romaine

City Counselor

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Part 1 - Greenbelt Plan

1. Introduction

1.a. What is a Greenbelt?

The greenbelt concept has existed in the United States for many years. The so-called “City Beautiful” movement beginning in the 1850's had as its focus the beautification of America's cities. The idea was to improve city living conditions by providing scenic beauty. Adding parks and open space was the method of achieving this end. Terms like “greenbelt” and “parkway” began to be used in this period. For example, the City of Boston established a so-called “Emerald Necklace”, which was a seven-mile linked system of parks. This formed a semi-circle around the city, and was designed by Frederick Olmsted, a prominent landscape architect. Among the lands making up this system was an arboretum; a park, both for enjoyment of the natural scenery, and for active recreation such as lawn sports and baseball; a narrow strip of land along a river; a marshy area; and a pond. All these types of land were part of what Boston formally named “parkway” and all served the purpose of providing open space to City residents.

Whether formally designated or not, all communities have tracts of land that remain undeveloped. These lands may be in a natural state, or they may be managed or altered in some way. Such open lands may be called greenbelts, even if they do not form a connected system. A greenbelt may or may not follow a stream. Creeks and their floodplains are greenbelts, for instance, even though they may not be declared as such through some official action. City parks and other open spaces also may be described as greenbelts. Communities use these lands to provide a variety of benefits and opportunities. They might be formally used for playing fields, to build recreational walking/bicycling trails, to construct reservoirs for holding excess rainwater, or to establish gardens or other landscaping. If lacking any official use, citizens could use such areas to escape the noise of a community, to observe birds or other wildlife, or simply for walking or other recreation.

1.b. Previous Columbia Planning Efforts

The 1935 Columbia Land Use Plan showed a greenbelt in portions of the City, using the term “parkway” to identify them. The plan describes parkways as “usually elongated park areas, often preserving a natural stream valley, and usually providing, either through the area, or on the borders, roadways for pleasure driving”. It also states that other purposes include “preserving natural water channels, thus often avoiding the cost of storm sewers; and also providing local recreation areas for adjacent property”. Even then, consideration was being given to stream corridor preservation for a variety of reasons. These parkways were thought to be part of a scenic highway system, as well as providing recreation opportunities. The Plan shows the Flat Branch corridor as a parkway, as well as the Hinkson Creek corridor south from Business Loop 70 (then Highway 40), then west to a point west of Providence Road. The parkway then extended northwest to an intersection with Flat Branch. It continued further northwest to the County House Branch, generally following this corridor north to terminate at Highway 40 just southeast of the current Cosmo Park. This conceptual parkway system extended circumferentially three-

fourths of the way around the community.

While the 1935 Plan envisioned a greenbelt corridor that would in effect constitute scenic roadways, the current vision does not include such streets as part of the greenbelt concept. Rather, recreational, environmental, scenic, and a variety of other community values are justification for having a greenbelt.

The original recreational greenbelt in Columbia was the MKT Trail constructed on the abandoned MKT Railroad corridor. The trail generally follows the floodplains of Flat Branch and Hinkson Creeks. The popularity of the MKT led to the desire for more such facilities. Additional trails have now been built in other stream corridors, and the potential exists for more.

The Metro 2020 Plan, adopted in 2001, includes the Open Space/Greenbelt District as one of its five generalized land use districts. As defined in the 2020 Plan, this district is to provide for the aesthetic and recreational needs of the community's residents. It also is intended to protect sensitive environmental areas from development and to preserve natural areas. The district includes greenbelts, which, like the Hinkson Creek and Bear Creek Greenbelt Plans, are defined as the 100-year flood plain as identified by (FEMA) maps. It also contains parks and other preserved open spaces.

1.c. Other communities

A number of other cities have greenbelt plans in a variety of forms. Springfield, Missouri, has a greenways plan element in their Springfield-Greene County Comprehensive Plan. The greenways are linear parks that protect corridors of land and serve a number of important functions such as protection of flood-prone land, providing more recreational opportunities and open space, and providing routes for alternative transportation via pedestrian/bicycle trails. In Springfield, the greenways are incorporated into the development process, as the dedication of greenways is encouraged when subdivision plats are submitted.

Other examples of cities with greenbelt systems include Boulder, Colorado; Overland Park, Kansas; and Bowling Green, Kentucky. Kansas City is in the process of establishing a regional system of trails called Metro Green. And there are numerous other municipalities with greenbelt networks.

2. Purposes and History of the Existing Columbia Greenbelt Plan

Public interest was responsible for the implementation of the first specific greenbelt plans in Columbia. Citizens expressed concern that the City's natural areas, especially the undeveloped lands adjoining the City's creeks, were threatened by development. A grassroots public effort was undertaken to preserve these undeveloped lands. The development of a greenbelt plan and the establishment of policies on local creeks and their adjacent lands was seen as an initial step to address this issue and to raise local awareness. This led to the Columbia City Council taking action in response to this public sentiment.

The City of Columbia passed policy resolutions on greenbelts in 1993 and 1995. The most specific of these, PR 42-95A, adopted the Hinkson Creek and Bear Creek Greenbelt Plans and established policy goals for the greenbelt plans. The resolution states “The primary goal of the greenbelt plans is to maintain and preserve open space along major stream corridors. This goal should be accomplished preferably by private ownership or action, or by public acquisition of land or flood plain regulations.” Another stated goal was the construction of trails within specific portions of the greenbelt corridor where “appropriate and feasible”.

Sub-dividers and developers of land, in addition to other property owners adjacent to and within the designated greenbelt, are encouraged to provide easements or donations of land to the City in order to provide greenbelt protection and access.

Those streams included in the revised general policy resolution, PR 170-95, are Bear Creek, Perche Creek, Hinkson Creek, Flat Branch, Grindstone Creek, Rocky Fork Creek, and Hominy Branch Creek. This resolution does not adopt a plan, but merely establishes the City’s policy in regard to these greenbelts.

Currently, the greenbelt plan has no legal standing or regulatory authority. There are no regulations that mandate protection of the designated greenbelts, nor are landowners required to dedicate public easements or make donations of land. The only regulations that affect the greenbelt are those federal rules that impose restrictions on floodplain development. Additional restrictions and/or incentives are desirable if an effective and viable greenbelt is to be implemented.

3. Purpose of Greenbelt Plan

3.a. Introduction

As stated earlier, the existing City of Columbia Greenbelt is defined by a policy resolution and covers only those portions of the stream corridors specified within the city limits. Actual greenbelt plans, with a simple legal description and map, were done only for Hinkson Creek and Bear Creek.

This plan proposes to expand upon the existing plan and create a more comprehensive greenbelt system for the Columbia Metro area. This new plan covers specified streams within the Columbia Metropolitan Planning Area. This area is the geographic basis for the Columbia Metro 2020 Community Structure Plan. It is also used for transportation planning purposes, as the CATSO 2025 Transportation Plan encompasses it. The 2025 Plan includes the proposed Pednet pedestrian and bicycling network. As part of Pednet consists of greenbelt trails, the greenbelt plan needs to be consistent with Pednet’s geographic coverage.

Given that the Columbia area population lives both inside and outside of the City’s boundaries, and that the major streams do not stop at the City limit, creating a Greenbelt plan that is metro-wide is sensible.

3.b. Defining the greenbelt

For the purposes of this plan, a greenbelt is defined as a linear park following creek corridors and including some defined space on each side of the creek. This system of land corridors along natural streams or drainages is protected and managed for conservation purposes. The City of Columbia Greenbelt Policy Resolution specifically defines the greenbelt along designated stream corridors as the “natural corridors of open space around the community in the form of streams and associated flood-prone areas”. The Greenbelt Plans for Hinkson Creek and Bear Creek both state that the greenbelt consists primarily of the one hundred year floodplain along the creek, as shown on Federal Emergency Management Agency (FEMA) maps. The adopted Metro 2020 Plan also uses this definition. The Metro Greenbelt Plan will include the boundaries of the one hundred year floodplain as shown on Federal Emergency Management Area (FEMA) maps along the designated creeks in its definition of greenbelt, however, it will not limit its definition of the greenbelt to the floodplain in all locations. The greenbelt may well include non-floodplain lands in some circumstances. Public or private park lands and open space adjacent to the floodplain may be designated as part of the greenbelt network.

The purpose of the Metro Greenbelt plan is to create a master plan that identifies and analyzes all the major stream corridors in the Metro area. This will allow for a coordinated effort for the protection of these corridors. The plan will draw public attention to the greenbelt issue. It will allow for the protection of these corridors for their scenic value, for flood control, and for other community benefits. The Metro greenbelt plan will also provide a map for the planning and construction of new trail facilities in specific sections of the corridor. It will be coordinated with the Trail Plan being done by the Parks & Recreation Department as part of their revision of their Master Parks Plan.

4. The Greenbelt Corridor

The stream and floodplain areas within the urban area are relatively undisturbed and characteristically undeveloped. These are the natural drainage ways for stormwater and as such provide the logical locations for gravity flow sanitary sewers and stormwater management structures. So the greenbelt corridor does have real functional utility for a community, aside from its ecological role as a drainage way and in providing other benefits.

Visualizing the floodplain as a greenbelt corridor expands the current uses to include opportunities for environmental preservation and additional community facilities.

5. Environmental Benefits of a Greenbelt

A number of beneficial environmental effects are provided by the establishment of a greenbelt system. A greenbelt network can protect sensitive areas from erosion. Flood plains and the steep

topography (e.g. bluffs) often adjacent to them are fragile landscapes and need to be protected from disturbance. Some of these lands are important natural areas, and may contain unique plants or wildlife. The greenbelt can serve to provide a corridor for wildlife movement and native plant habitats. Preserving streams and their associated floodplains helps to prevent flooding and its associated environmental and financial costs by keeping development away from creek corridors. Wetland areas in the greenbelt corridor serve as natural water filtration systems, and contribute to the maintenance of creek water quality. Maintaining the streams and their tree-shaded buffer areas has the potential for lowering peak temperatures in summer, as well as keeping water temperatures cooler.

6. Community Benefits of a Greenbelt

There are also a number of positive effects for the Columbia area from the establishment of a greenbelt system.

A greenbelt network effectively provides for the establishment of a linear park system, left mostly in a natural state. It is valuable open space and additional park land to the more traditional types of parks. It also creates the potential for additional connections to the MKT Trail and statewide Katy Trail. As such, it would provide potential corridors for pedestrian/bicycle trails for recreation and transportation use and serve as the framework for an off-street transportation network for non-vehicular transportation. This function also gives the opportunity for establishing pedestrian/bicycle links between neighborhoods, where direct street connections are lacking.

The greenbelt also may contribute to increased property values, especially for adjacent neighborhoods. It enhances the marketability for new residential lots, particularly if the lots are within easy walking or bicycling distance of the greenbelt. If the greenbelt includes a trail, even more advantage is gained. Even without trails, the greenbelt serves aesthetic purposes, as well as providing a buffer between neighborhoods, or between residential and non-residential uses. The buffer serves to reduce noise pollution, in addition to providing attractive scenery.

Greenbelts, especially those incorporating recreational trails, also may serve as a tourism attraction. This is true in Missouri, where the state's Katy Trail draws bicyclists and other visitors, many of them from out of state. Travelers using the statewide trail also frequent the local MKT Trail, utilizing the connection this route affords to and from Columbia.

7. Metro Area Greenbelt Plan

7.a. Justification

As noted earlier, the population of the Columbia area is not only within the boundaries of the City of Columbia. There is a substantial population on the fringe of the City limits. While the 2000 Census showed 84,531 persons in Columbia itself, the rest of the Metro area contained a population of 22,682. So over 107,000 persons reside in the Metro area, and all need to be served by a greenbelt system. This is one reason why it is appropriate to have a Metro-wide greenbelt plan. Given that the stream corridors themselves do not end at City boundaries, this is another factor in expanding the scope of the plan to the Metro boundaries.

7.b. Designated Stream Corridors

The plan adds additional greenbelt corridors to the current system established by the Columbia greenbelt plans and policy statements. This is in addition to expanding the boundaries of current City designated greenbelt streams to add the portions that are within the Metro area boundary. The following additional stream corridors are included:

1. Callahan Creek
2. Clear Creek
3. Cow Branch
4. County House Branch
5. Gans Creek
6. Harmony Creek
7. Little Bonne Femme
8. Merideth Branch
9. Mill Creek
10. North Fork Grindstone
11. Scotts Branch
12. South Fork Grindstone

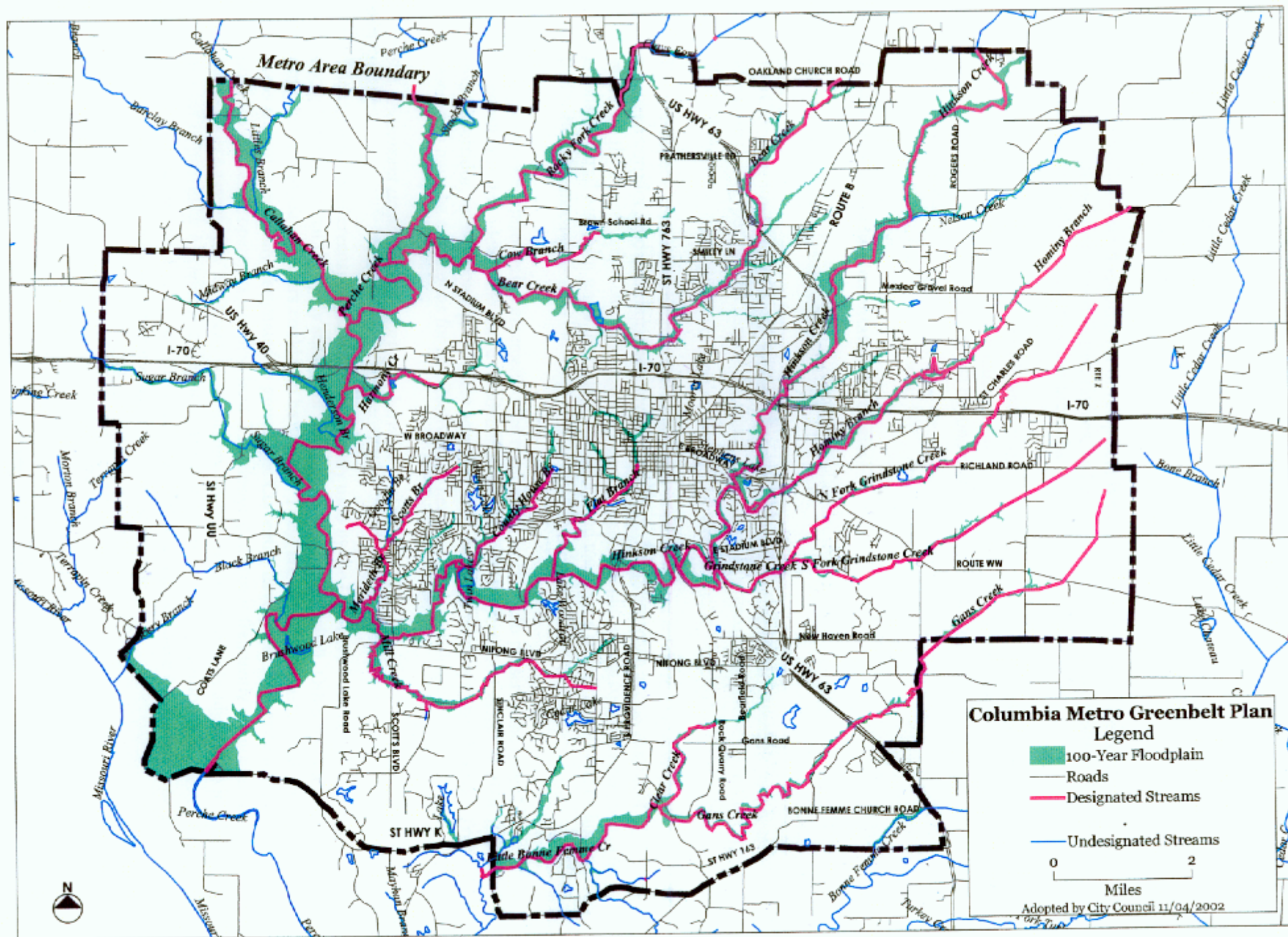
Also part of the greenbelt network are those creeks identified in the City's policy resolution on greenbelts. These streams are Bear Creek, Flat Branch, Grindstone Creek, Hinkson Creek, Hominy Branch, Perche Creek, and Rocky Fork Creek. A total of nineteen creeks will initially make up the system. The proposed greenbelt network is shown in the attached Greenbelt Plan map.

Eleven additional streams could be added to the plan in the future. Other possibilities that exist are: Barclay Branch, Black Branch, Bonne Femme, Grocery Branch, Henderson Branch, Littles Branch, Midway Branch, Nelson Creek, Slacks Branch, and Sugar Branch.

8. Threats to the greenbelt

8.a. Development and fill

Filling of the 100-year floodplain for development is a major threat to the existence of the



greenbelt. Cut and fill of steep slopes, ravines, and other severe topography results in the destruction of the floodplain and other areas that function as greenbelt.

Consideration should be given to ordinance revisions that would address this issue. Primarily, the prohibition of cut and fill beyond a minimal amount would be an effective tool. If possible, additional protection for the floodplain beyond that afforded by the federal FEMA standards could be provided.

9. Acquisition and implementation strategies

9.a. Existing tools - greenbelt easements

The City currently has provisions for developers to dedicate easements for greenbelt purposes. There are three types of such easements, which are defined as greenspace easements in the City ordinances.

The greenspace conservation easement, as its name implies, serves solely to conserve the greenbelt corridor, and does not grant any public access. The greenspace access easement is similar to the conservation easement, except that it gives the public access for pedestrian use. The greenspace trail easement gives the right to construct and maintain a pedestrian/bicycle or hiking trail within the easement.

The greenspace conservation easement is the type which functions to preserve the overall greenbelt corridor, ideally the entire floodplain present on the property concerned. Within this overall corridor, an additional greenspace access or trail easement might also be obtained. Trail easements must be continuous for an effective trail network to be established.

9.b. Easement acquisition as part of subdivision process

The three types of greenspace easements currently used by the City have been noted, and have enough flexibility that they may suffice for development of the greenbelt. Other methods of providing greenbelt corridors could also be utilized. These are already being used, though the areas are not specifically designated as greenbelts. Currently, developers frequently dedicate portions of their property as common land. This designated area is frequently maintained by a homeowners association. Or it may be maintained by the owners of the lots adjacent to it. This manner of providing a greenbelt corridor is similar in its effect to the provision of a greenspace conservation easement. Even if not specifically dedicated as a greenspace conservation easement, the common area ideally would be managed in a similar manner.

Greenbelt corridors can also be deeded outright to the city, or to some private organization, to manage for conservation and recreation use. This dedication may be done as part of the subdivision process, and has already been done in some instances. Property owners may receive a tax deduction as a charitable donation when the value of the dedication can be established. Previous land and easement acquisitions by the City may help determine such values.

As the current definitions note, other easements may be acquired in addition to properties having greenspace easements attached. The same can be true for those subdivisions having dedicated common area. For those sections of the greenbelt that are components of the Pednet system, trail easements, either singularly, or within the dedicated common area or greenspace conservation easement, are necessary. Trail easements should ideally be 50', but not less than 30' in width.

Acquisition of individual sections of the greenbelt should be done as part of the subdivision process. The basic steps in acquisition and implementation of the greenbelt are outlined below.

- 1) Areas to be included in the greenbelt should be shown on preliminary plats, as well as on development plans for planned districts.
- 2) Those greenbelt areas shown on preliminary plats and planned districts should be dedicated as the appropriate greenspace easements, or common land, and shown on final plats. Tracts of land being given as outright donations to the City can be processed as part of the final plat approval process as well.
- 3) Another option is the reservation of a greenbelt easement or right-of-way for future acquisition. Such reservation would be done for a limited period of time, such that if the easement or right-of-way acquisition does not occur within a specific time frame, the reservation would expire.

9.c. Utility easement combinations - sewer and drainage

Another potential method for acquiring access to the greenbelt corridor is to acquire a greenspace trail easement during the process of acquiring a utility easement. For example, since sewer lines typically follow drainage patterns, it may be possible to acquire a separate or overlapping trail easement at the time of acquiring a sewer easement. It should be noted, however, that this may complicate the process and increase the cost of acquiring the sewer easement and possibly delay construction of the sewer line. In addition, the width needed for a trail easement is typically greater than what is needed for a sewer easement and the desired location for a trail may not follow the sewer line easement.

It also might apply to drainage easements, which in some cases might overlap with greenspace easements. The existing greenbelt plan defines the greenbelt along included streams as being the 100-year flood plain. So any drainage easement which is comprised totally or in part of lands within that flood plain is part of the greenbelt under the current definition.

9.d. Annexation

Annexation of critical greenbelt areas may be necessary to insure that adequate protection is given to them. This is especially important for those creek corridors through which greenbelt trails will ultimately run. Failure to gain control of these specific greenbelt areas will result in gaps in the greenbelt trail portion of the Pednet system.

A significant creek corridor for Pednet access is Perche Creek on the western side of the Columbia Metro area. This is a significant floodplain and provides the north-south linkage for any future trail system in the west portion of Columbia. In particular, annexation of this corridor is critical to future greenbelt and trail development.

9.e. Stormwater management

Integration of new efforts to manage stormwater runoff with greenbelt planning are appropriate and may lead to more efficiently designed facilities. Greenbelt corridors ideally will be planned for multiple use. Drainage concerns are an important issue which the greenbelt development needs to consider.

The 1998 Burns & McDonnell Stormwater Management Plan report prepared for the City discusses greenways and their relationship to stormwater issues. This document recommends that the City adopt a policy on encroachment of development adjacent to FEMA regulated streams. It recommends the use of easements to accomplish the goals of greenbelt preservation and drainage control. Specifically, it recommends that the 100-year floodplain used for greenbelt definition should be either 1) the flood elevations accepted by the City's Flood Insurance Study, or 2) the values of the Stormwater Report based on future land use conditions, whichever is higher. The limits of the 100-year floodplain would, at a minimum, be the boundaries of a greenspace conservation easement, as currently defined in the City ordinances. Those sections that would contain public access points and trails would require obtaining greenspace access or trail easements. It recommends that easement acquisition be done through the preliminary platting process, and that the report's calculation for the 100-year floodplain be used rather than the FEMA boundary.

The Burns & McDonnell report also recommends that the existing greenbelt plans be revised, such that the definition of the greenbelt limits be revised to reflect the 100-year floodplain as determined by the Stormwater Management Plan, rather than the current situation in which the FEMA floodplain boundary defines the greenbelt. Further consideration of the Burns and McDonnell report's suggestions, and discussion of stormwater issues in general, should happen as part of the implementation of the Metro Greenbelt Plan.

Consultation with the appointed Community Stormwater Committee needs to be done to coordinate this group's efforts with future greenbelt and trail planning.

9.f. Development of a greenbelt project capital improvement program (CIP)

Preparation of a CIP specifically for greenbelt projects is one step that might be taken to ensure the orderly development of a greenbelt system. The Parks & Recreation, Public Works, and Planning Departments could conceivably work together to compile a list of projects. These would be projects tentatively scheduled for the current fiscal year, as well as the subsequent four fiscal years, as the current capital projects section of the City budget shows. Included could be such items as scheduled trail construction projects, acquisition of greenbelt corridors, and

planning studies. Project selection would be based on priorities and funding availability as recommended by the participating departments and determined by the City Council.

Potential funding for greenbelt projects includes federal or state grants (e.g. STP Enhancement funds), general fund revenues, targeted revenues (e.g. quarter cent sales tax ballot issues for greenbelt purposes), and stormwater utility revenues. Additional funding could come from private sources, such as foundations or other private concerns that provide money for greenbelt and/or trail projects. The private sector should be given opportunities to partner with the City on specific greenbelt projects.

10. Metro Greenbelt Recommendations

10.a. Management and Maintenance

The majority of the greenbelt corridor will require minimal maintenance. There are some sections of the corridor that will require some attention, such as mowing, tree trimming, and trail repair. The City Parks and Recreation Department should be designated/reaffirmed as the agency having responsibility for managing and maintaining the greenbelt system. Parks has the resources, skills, and staff to effectively care for the greenbelt. In conjunction with the City Council, the Parks Commission, and greenbelt proponents, the Parks Department can manage the greenbelt lands, developing trails and related facilities as necessary.

10. b. Other Recommendations

- Maintain connections with the Greenbelt Coalition as an additional method of acquiring land and incorporating it into the Greenbelt system.
- Potentially establish a Greenbelt division within the City Parks and Recreation Department for the planning and implementation of Greenbelt and adjacent parks.
- Establish design/construction standards for the development of trails within the greenbelt system.
- Use the greenbelt system to define the future urban development and land use pattern.
- Use the natural drainage pattern to define the structure of the greenbelt system.
- Ensure that designated greenbelt corridors are preserved for future use, prior to being filled and developed.

- Provide convenient links between the greenbelt corridor and adjacent commercial and residential developments, parks, schools, and other activity centers as development occurs.
- Utilize the greenbelt system to provide a system of links between City parks, University of Missouri recreational facilities, and other open space.
- Coordinate the development of the greenbelt with the City Parks Master Plan, and incorporate greenbelt connections and development into other Parks projects as appropriate.
- Employ the greenbelt system as one element of the Pednet pedestrian/bicycle transportation network.
- Place special emphasis on securing those greenbelt corridors that are a part of the Pednet System, particularly the Pednet backbone.
- Employ a public relations campaign that emphasizes the variety of functions to be served by the greenbelt, such as natural resource conservation, flood control, transportation, scenic beauty, etc.
- Provide as many uses as practical within the greenbelt that are appropriate for the nature of the corridor - without detracting from the scenic qualities of the greenbelt.
- Avoid the visual and physical clutter of too many accessory objects (signs, benches) in the greenbelt corridor, especially along trails.
- Maintain close contact and cooperation between City departments and other agencies that may have facilities, easements, etc. in a greenbelt corridor, avoiding duplication of services and conflicts.
- Make use of environmentally friendly techniques and materials in maintaining greenbelt corridors, and in design and construction of greenbelt trails.

Part 2 - Metro Trail Plan

2.a. Overview

A principal use of greenbelts is to function as a corridor for walking and bicycling trails. A number of greenbelts will have trails within their boundaries. As in the Metro Greenbelt Plan, the Metro Trail Plan will emphasize those greenbelt corridors that are part of the Pednet system.

Greenbelts and trails have been identified for many years as one of Columbia's most valued recreation resources. The long term planning and identification of the greenbelt and recreation trails network began many years ago and continues to provide a blueprint for the trails and greenbelt development to date. The development of a trail network encircling the city will allow residents the opportunity to experience natural beauty and wildlife in the heart of Columbia, as well as an alternative transportation option. Community sentiment has consistently indicated strong support for the development of more recreational trails that can be used for a wide range of activities. The success of the existing trails within the park system is an excellent indicator of the popularity of this activity.

In an effort to satisfy the public's need for trails, the City has pursued the development of a wide range of trails. The MKT Nature/Fitness Trail is a 4.7 mile trail running from downtown Flat Branch Park to the southwest where it connects to Boone County's MKT Trail and eventually to Missouri's KATY Trail. It was the first railroad conversion project in Missouri and serves as an excellent example of a multi-use trail offering opportunities to exercise or simply enjoy nature in a beautiful natural setting. The newly finished 4.3 mile Bear Creek Trail in the northern part of Columbia extends from Columbia Cosmopolitan Recreation Area (CCRA) to Oakland Park. The Hinkson Creek Trail, a joint effort between the City of Columbia and the University of Missouri, connects Grindstone Nature Area/Capen Park to the MKT at the 1.9 mile marker. Each of these trails is accessible from a number of different trailhead parking lots and access points. Boone County's section of the MKT Trail runs approximately 4.5 miles from Scott Boulevard to the KATY Trail at McBaine.

City planners are placing an increased emphasis on providing space for non-motorized forms of transportation within the roadway corridors. City staff and the Pednet Coalition have proposed a comprehensive network of nature trails and urban "pedways" that blend the recreation trails with the development of the roadway trails network. The goal is to integrate trails into the overall transportation network.

This development effort is intended to provide an effective system of inter-connectivity between: residential subdivisions, employment centers, businesses, parks, schools (including local colleges and MU), the public library, the recreation center, and downtown. It will enable pedestrians, cyclists, wheelchair users, in-line skaters, and skateboarders to travel safely between these locations while enjoying a pleasant experience. The Pednet master plan describes a twenty-year time frame for achieving this level of trail and pedway development in Columbia.

The goals established for the Pednet planning and implementation are desirable. The CATSO 2025 Transportation Plan has incorporated the current Pednet map as part of this transportation planning document. The potential benefits of this proposed comprehensive trail system are numerous. The pedestrian-friendly corridors offered by the Pednet plan will provide a more efficient and safe method for people to travel by non-motorized means within the city. From the perspective of the Parks Department, the highest priority for a pedway is a linkage between Cosmo Recreation Area and the new Recreation Center on Ash Street.

2.b. Future Acquisitions

The City of Columbia is committed to acquiring green space for the construction of trails, greenways, and greenbelts. These areas will provide quality and diverse recreational opportunities for an ever-growing population. As an added benefit, these green spaces also help provide areas for stormwater control. As this is a Metro-wide plan, Boone County could take on a larger role in the planning and construction of greenbelt trails in the future.

To meet these needs, the Columbia Parks and Recreation Department prepared a ranking of the targeted acquisitions. Four factors were used to determine this ranking:

- The role the trail section plays in the overall goal to complete a “loop trail” around Columbia.
- Areas currently or soon to be under development. Properties may become unavailable or prohibitively expensive.
- The need to serve areas of expanding residential population.
- Current feasibility of acquisition.

This ranking was used to divide the Plan’s trail facilities into three categories: primary, secondary, and tertiary. These designations are based on their priority in acquisition, as well as on their significance to the overall trail system.

The Metro Trail Plan includes all of the greenbelt trails included in the adopted Pednet system, as well as additional trails. It includes existing trails, as well as those planned for the future. Recommended trails for inclusion in each category are listed below. The trail network is illustrated in the attached Trail Plan map.

EXISTING TRAILS - (PRIMARY)

MKT Trail

Hinkson Creek Trail: MKT Trail to Grindstone Nature Area

Bear Creek Trail: Cosmo Recreation Area to Albert-Oakland Park

RECOMMENDED ACQUISITION - TRAILS

Primary Acquisition Targets

The primary targets represent important pieces of the overall trail system. In addition, they are or may come under increasing development pressure. These linkages should be aggressively pursued.

<u>LOCATION/DESCRIPTION</u>	<u>ESTIMATED MILEAGE</u>
▶ <u>Hinkson Creek Trail</u> Grindstone Nature Area to Rock Hill Park/Stephens Lake Park	3.5
▶ <u>Bear Creek Trail</u> Blue Ridge Road to Smiley Lane/Lange Middle School	1.2
▶ <u>Bear Creek Trail</u> Smiley Lane/Lange Middle School to Boone County Fair Grounds to Smith Property-Brown Station Road	1.5
▶ <u>Bear Creek Trail</u> Cosmo Recreation Area to Blackfoot Road	0.5
▶ <u>Scotts Branch Trail</u> MKT to Gillespie Bridge Road to Russell Property	3.0

Secondary Acquisition Targets

These targets are under less development pressure than the primary targets. While critical to the overall plan, there may be additional time available for acquisition. It is, however, important that these linkages eventually become integrated into the trail system.

<u>LOCATION/DESCRIPTION</u>	<u>ESTIMATED MILEAGE</u>
▶ <u>North Fork of Grindstone Creek</u> Grindstone Nature Area to Lake of the Woods Golf Course	6.5
▶ <u>Hominy Branch</u> Hinkson Creek to Clark Lane	4.0
▶ <u>Cow Branch/Bear Creek</u> Blackfoot Road to Auburn Hills Neighborhood	4.8
▶ <u>Perche Creek</u> Interstate 70 to MKT	5.0
▶ <u>Hinkson Creek</u> Stephens Lake Park to Smiley Lane/Lange Middle School	5.0

Tertiary Acquisition Targets

These properties are either under little development pressure or not feasible to purchase at this time. It is important to monitor the status of these linkages and more actively pursue them as they become available or threatened by development.

<u>LOCATION/DESCRIPTION</u>	<u>ESTIMATED MILEAGE</u>
▶ <u>Perche Creek/Rocky Fork Creek</u> Bear Creek Trail to Interstate 70	5.0

▶ <u>Hinkson Creek</u> Mexico Gravel Road to City Landfill	4.5
▶ <u>County House Branch</u> Twin Lakes Park to Again Street Park	3.0
▶ <u>Mill Creek</u> MKT to Nifong Boulevard-CCMO Area	3.6
▶ <u>Clear Creek</u> Nifong Park to Rock Bridge State Park	2.8
▶ <u>Gans Creek</u> New Haven Road to Rock Bridge State Park	4.0
▶ <u>COLT</u> Southern Portion, Interstate 70 to Columbia College	3.0
▶ <u>COLT</u> Central Portion, Interstate 70 to Highway 63	1.9
▶ <u>COLT</u> Northern Portion, Highway 63 to Heller Road	3.2
▶ <u>Harmony Creek</u> Cosmo Recreation Area to Perche Creek	3.0

2.c. Trail Acquisition and Development Costs

Acquisition costs

The following estimated acquisition costs are based on the purchase of a 100-ft.-wide trail corridor in or near Columbia. The assumed width of 100 ft. is used to establish a minimum standard for trail corridor development and may vary for each site. There are many factors that influence land cost, and the purchase price for trail land can vary greatly. Some of the properties being targeted for trail development are located in flood plains, which have limited development

potential. This is some of the least expensive land in the city. The upper range of cost for trail land would encompass land that is better suited for development, thus more valuable on the open market.

The estimated acquisition cost for a one mile by 100-ft.-wide trail corridor would range from \$72,000 to \$168,000. This would represent a per acre cost estimate range from \$6,000 to \$14,000 per acre.

Development Costs

The actual trail development costs per mile will also vary with each piece of land. The primary factors affecting construction costs are: design fees, bridges costs, trail surface construction, and trailhead construction. Historically, bridge construction caused the most dramatic variation in cost per mile for trail construction, due in part to the average number of bridges per mile. Boone County has many local streams, which provide beauty and interest to the natural landscape. Unfortunately, the need for bridges over these streams increases the cost per mile for trail construction.

The recent Bear Creek and Hinkson Creek Recreation Trail projects averaged just over one bridge per mile and represent a fairly accurate estimate of bridges per mile for many of the proposed trails. Based on the number of bridges on these two trails, the estimated range for bridge costs per mile of trail is \$150,000 to \$250,000. These prices include contract installation, survey, architectural, and engineering fees.

The remaining cost factors are more constant, since there is less variation in design and construction of the actual gravel trail and trailhead access. The recent trail construction projects along Hinkson Creek and Bear Creek indicate a range from \$105,000 to \$175,000 cost per mile for recreational trail construction of this type, depending on whether or not an access is included.

2.d. Conclusion

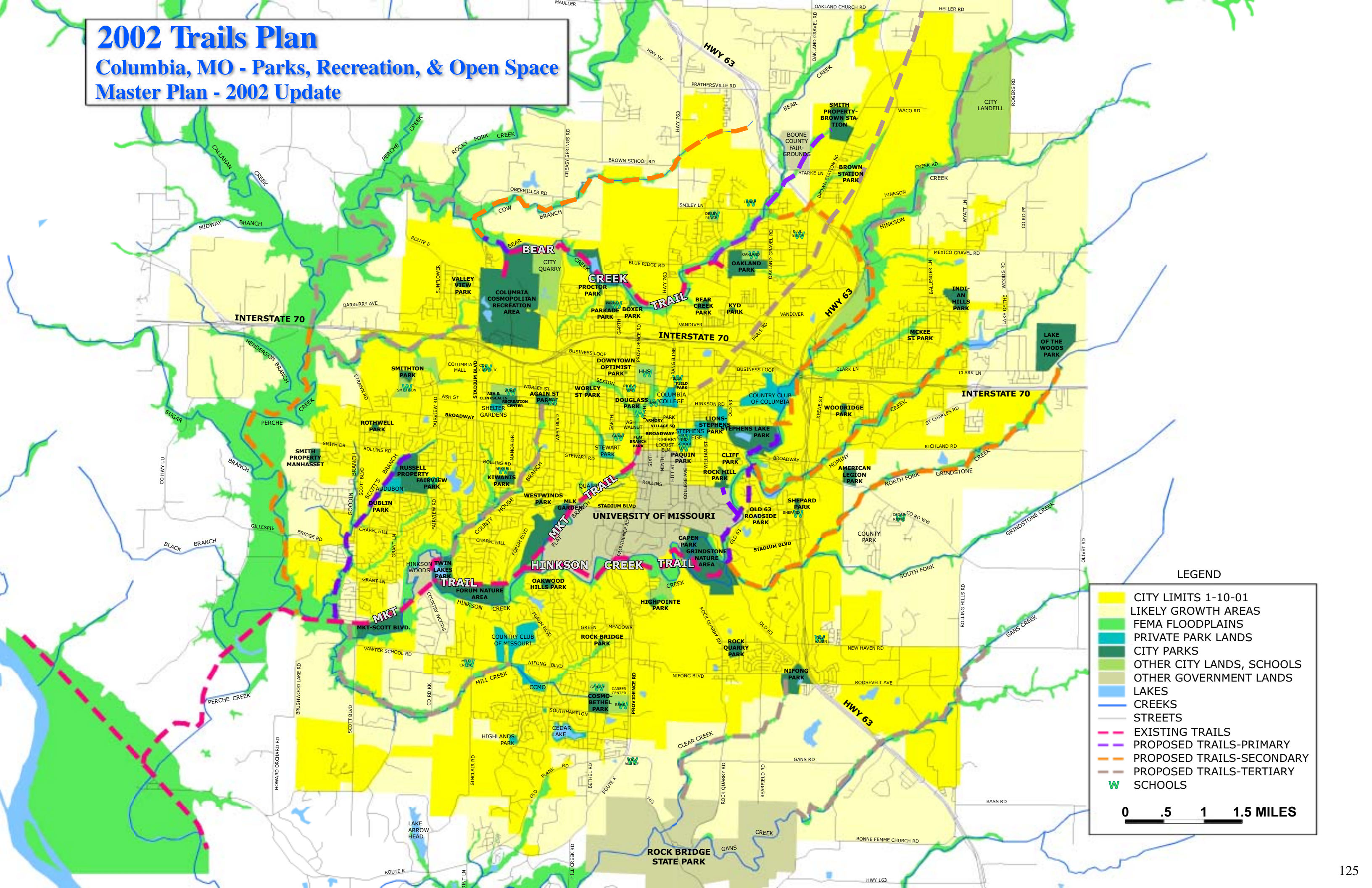
Recreational trail use is a popular trend nation-wide, representing one of the highest-ranked recreational demands in the United States. Trails serve a wide variety of uses. They range from functional transportation connectors, which enable citizens to travel safely from one location to another, to the passive and intimate pathways that provide opportunities to enjoy nature in a quiet and personal way.

The development of a more comprehensive trail network for the Columbia is a significant and important activity. Those trails included in the Pednet system, in particular, will have a particular impact on the transportation opportunities available to area residents. Trails are a valued resource and increase the recreational options for the community and add to the quality of life.

2002 Trails Plan

Columbia, MO - Parks, Recreation, & Open Space

Master Plan - 2002 Update



LEGEND

- CITY LIMITS 1-10-01
- LIKELY GROWTH AREAS
- FEMA FLOODPLAINS
- PRIVATE PARK LANDS
- CITY PARKS
- OTHER CITY LANDS, SCHOOLS
- OTHER GOVERNMENT LANDS
- LAKES
- CREEKS
- STREETS
- EXISTING TRAILS
- PROPOSED TRAILS-PRIMARY
- PROPOSED TRAILS-SECONDARY
- PROPOSED TRAILS-TERTIARY
- SCHOOLS

0 .5 1 1.5 MILES