

## CHAPTER 2 BACKGROUND

This background chapter provides the foundation for understanding the development of rail-trails and their value as conservation/recreation corridors which can be used to promote economic development. The history of the railroad was derived from *The Life and Decline of the American Railroad* by J. Stover, 1970.

### IN THE BEGINNING

With sails and brightly colored flags swaying in the wind, the captain and his seamen waved to the crowd from a twenty-seven-foot miniature brig that was the highlight of the Independence Day Parade. This parade, which was held July 4, 1828, was the most spectacular of Baltimore's history, and only a small part of the festival. The celebrating had been going on for days and the highlight of the festival had yet to occur. On James Carroll's estate on the edge of town, the officials and directors of the Baltimore & Ohio Railroad Company (B&O) prepared to lay the first stone of the first rail road. This commemorative cornerstone was set amidst the cheers and hoopla of one of the biggest parties Baltimore had ever experienced.

The opening of this first line, in May, 1830 (a 13 mile rail from Baltimore to Ellicott's Mills), was anti-climatic after the celebration that had occurred two years earlier. The horse drawn "rail wagon" opened the railway but was quickly replaced by the first steam engine in October, 1830. This steam engine only lasted a few months however. On June 17, 1831, the fireman became tiered of the noise the engine made and tied down the

steam pop valve. A valuable lesson was learned by future firemen when the engine exploded.

The importance and financial benefits of the railroad caught on quickly. By January of 1832 there were already nine different railroad companies up and running with dozens more in the wings trying to get started.

On June 13, 1851, New York City opened a 483 mile route which cost \$23,500,000 to build. The railroad was becoming big business. A 43 mile route in Chicago was grossing \$1,000 a week in 1850, and the same year saw farmers outside Milwaukee mortgaging their farms to get in on the action.

The excitement and promise of fortunes and glory turned quickly to disillusionment, frustration and, in some cases, financial devastation during the "Panic of 1857." Extravagance, mismanagement and often outright fraud had placed every railroad in Wisconsin near bankruptcy.

The financial disillusionment of investors did not dampen the celebration marking the completion of the railroad to the Pacific however. This much publicized celebration was topped off with a golden spike to commemorate the completion of the dream on May 10, 1869.

## THE EFFECT WAR HAD ON THE RAILROAD

The Civil War created a boon in railway miles as both the North and South used the rail to move men and supplies. General Sherman depended so heavily on the rail for his advance on Atlanta in 1864, that he refused to allow box cars to be used for storage. "The Union commander had made certain that every one of the 160 freight cars which daily arrived from Chattanooga was unloaded on arrival so that it could be returned to the North at once (Stover, 1970; pg. 158)."

Figure 1  
GROWTH AND DECLINE OF TOTAL RAILROAD MILEAGE  
IN THE UNITED STATES

1830	23	1925	249,398
1840	2,808	1930	249,052
1850	9,021	1935	241,822
1860	30,626	1940	233,670
1870	52,922	1945	226,696
1880	93,267	1950	223,779
1890	163,597	1955	220,670
1900	193,346	1960	217,552
1910	240,439	1965	211,107
1916	254,037	1968	209,000
1920	252,845		

(Stover, 1970; pg. 155)

World War I was credited with bringing railway miles to its peak (Figure 1) of 254,037 miles in 1916, with total usage increasing by 43% in 1917 when the United States became fully involved in the conflict. The combination of a bad winter and the massive freight of war however, brought the railroad industry to its knees in 1918. This marked the beginning of a renaissance in river traffic, which was boosted tremendously from 1922

on, when congress appropriated tens of millions of dollars to canalize the Ohio and Upper Mississippi rivers.

The rate of rail abandonment increased during the depression, but World War II, with gas rationing, rubber shortages and military use of coastal tankers, revived the railroad, slowing the rate of abandonment. In 1944, the railroad handled 72% of the commercial freight traffic and 74% of the inter-city commercial passenger traffic, as a direct result of the war.

## RAILWAY ABANDONMENT

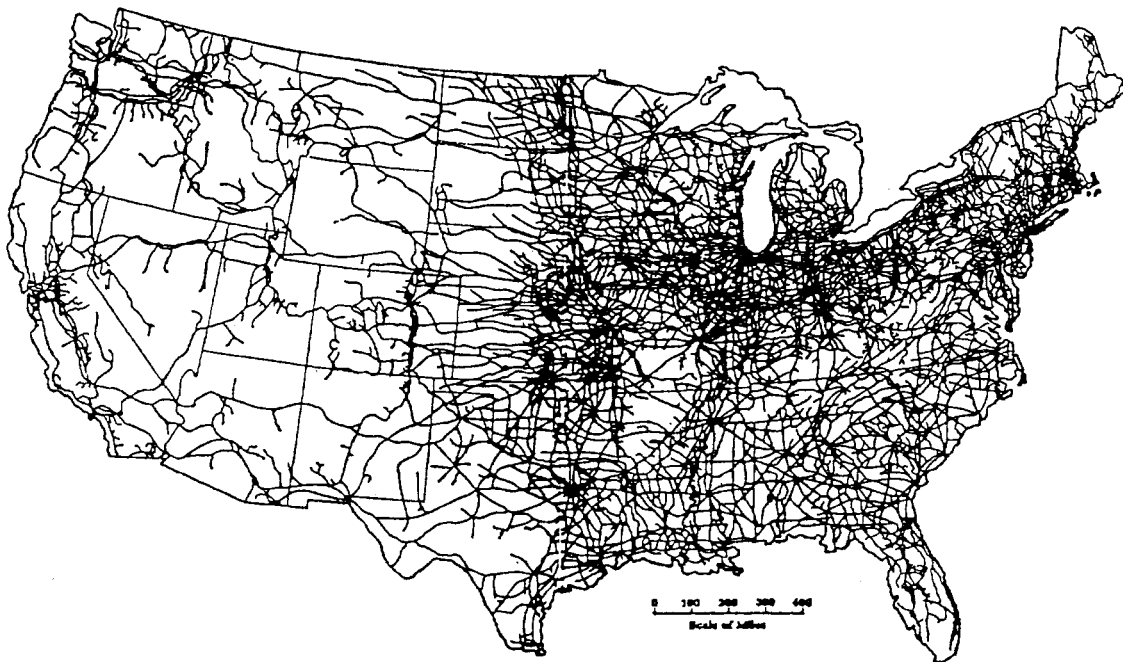


Figure 2  
(Stover, 1970; pg. 194)

In 1968 the railroad consisted of 209,000 miles of line (Figure 1) and still served nearly all Americans (Figure 2). There were very few areas in the nation more than 25 miles from a railroad. Only regions with very sparse populations were considered under represented by the railroad (Stover, 1970; pg. 194).

Railroads have not escaped the changes that naturally occur over time however. The enhancement of the national highway system; the introduction of air freight and the Staggers Act of 1980, which deregulated railroads, have all played a role in the continued decline of active railway miles. Since the Staggers Act was enabled, "railroads have put more of their own money into mainlines and sold off branch lines (Frey, 1996)." Since the late 1980s, Santa Fe had sold nearly 1,200 miles of track in Kansas alone (Frey, 1996). This abandonment rate has created an opportunity for the development of unique and interesting linear greenways. Before this can happen however, the ICC must approve the railroad's request for abandonment. There are three ways a railroad can process the abandonment of a rail line. These three procedures include: Regulated Abandonment's, Notice of Exemption Abandonment's, and Petition for Exemption Abandonment's. The following is a list of the deadlines, which took effect January 23, 1997 per action by the Surface Transportation Board, that are required for each of these procedures.

REGULATED ABANDONMENT PROCESS  
(Assuming no protests or appeals are filed.)  
(STB, 1996)

15 - 30 days before application filed	"Notice of Intent to Abandon" filed
Application for abandonment filed.	
10 days after application filed	Due date for oral hearing requests.

15 days after application filed	Due date for Board decision on oral hearing requests.
20 days after application filed	Due date for Notice of Application to be published in the <u>Federal Register</u> .
45 days after application filed	<b>Deadline for Interim Trail Use or Public Use Condition request.</b>
60 days after application filed	Due date for applicant's reply to trail use requests.
110 days after application filed	Due date for service of decision on the merits.
120 days after application filed	Due date for offers of financial assistance.

NOTICE OF EXEMPTION ABANDONMENT PROCESS  
(STB, 1996)

15 - 30 days before application filed	"Notice of Intent to Abandon" filed
Application for abandonment filed.	
10 days after application filed	Due date for oral hearing requests.
15 days after application filed	Due date for Board decision on oral hearing requests.
20 days after application filed	Due date for Notice of Exemption to be published in the <u>Federal Register</u> .
10 days after Notice of Exemption is published in the Federal Register.	<b>Deadline Interim Trail Use request.</b>
20 days after Notice of Exemption is published in the Federal Register.	<b>Deadline Public Use Condition request.</b>
60 days after application filed	Due date for applicant's reply to trail use requests.

110 days after application filed

Due date for service of decision on the merits.

120 days after application filed

Due date for offers of financial assistance.

## PETITION FOR EXEMPTION ABANDONMENT PROCESS

“This procedure allows the railroad to apply the exempt procedure guidelines to lines still in active use. [T]he ICC retains the right to request further information or solicit, through the Federal Register, additional information from third parties.(Ryan and Winterich, 1993; pg. 70)”

The timetable for filing is nearly the same as the Notice of Exemption procedure. The only exception is that the deadline for requesting interim trail use and a public use condition are the same at 20 days after notification in the Federal Register.

## IMPORTANT TERMS

In the Regulated Abandonment Process noted above, the term “railbanking” is used. Railbanking refers to the “voluntary agreement between a railroad company and a park agency to use an out-of-service rail corridor as a trail until such time when the railroad might need the corridor again for rail service. Because a banked corridor is not considered abandoned, it can be sold, leased or donated to a trail manager without reverting to adjacent landowners (RTC Fact Sheet No. FS3).”

In the Notice of Exemption Abandonment Process noted above, the term "Trails Act" is used. The Trails Act refers to the National Trail System Act, 16 USC 1247(d).

This Act states the following:

The Secretary of Transportation, the Chairman of the Interstate Commerce Commission, and the Secretary of the Interior, in administering the Railroad Revitalization and Regulatory Reform Act of 1976, shall encourage State and local agencies and private interests to establish appropriate trails using the provision of such programs. Consistent with the purposes of that Act, and in furtherance of the national policy to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use, in the case of interim use of any established railroad rights-of-way pursuant to donation, transfer, lease, sale or otherwise in a manner consistent with this chapter if such interim use is subject to restoration or reconstruction for railroad purposes, such interim use shall not be treated, for purposes of such rights-of-way for railroad purposes. If a State, political subdivision, or qualified private organization is prepared to assume full responsibility for management of such rights-of-way and for any legal liability arising out of such transfer or use, and for the payment of any and all taxes that may be levied or assessed against such rights-of-way, then the Commission shall impose such terms and conditions as a requirement of any transfer or conveyance for interim use in a manner consistent with this chapter, and shall not permit abandonment or discontinuance inconsistent or disruptive of such use. 16 USC 1247(d)

In this document, the issue of legal liability is mentioned. In Kansas, a degree of limited protection from liability is granted by State law. This can be found in K.S.A. 75-6104.

The final noteworthy term mentioned in the abandonment procedures above is "public use condition." A public use condition "gives public agencies the right to negotiate exclusively for 180 days with the railroad for purchase of an abandoned corridor. During this time, bridges, culverts, surface material, and any other features essential to building a trail must be kept intact (RTC Fact Sheet No. FS3)."



*"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever does."*

Margaret Mead

## **WHAT IS A RAIL-TRAIL?**

Rail-trails are multi-purpose public paths created from abandoned rail corridors, flat or following a gentle grade, they traverse urban, suburban and rural America. Ideal for many uses, such as bicycling, walking, horseback riding, cross-country skiing and wheelchair recreation, rail-trails serve as historic and wildlife conservation corridors, linking isolated parks and creating greenways through developed areas. They also may stimulate local economies by increasing tourism and promoting local business. (RTC; Fact Sheet No. FS3)

## **HOW DID RAIL-TRAILS BEGIN?**

The beginning of the "rail-trail" movement has been attributed to one woman. In 1963, Mrs. May T. Watts, a Naturalist Emeritus of the Morton Arboretum at Lisle, wrote a letter to the editor of the Chicago Tribune "emphasizing the potential for the creation of a significant resource" out of a 35 mile railroad right-of-way just west of Chicago that was under consideration for abandonment (CACEQ, 1975; pg 30). This letter marked the beginning of a era. By stimulating public awareness and encouraging active citizen involvement, Mrs. Watts started what became, after 20 years of intense public support, the Illinois Prairie Path (Nevel and Harnik, 1990; pg 3).

This "grass-roots" movement was supported in 1976 by congress with the Railroad Revitalization and Regulatory Reform Act. This act "sought to restore the financial stability of the [railroad] industry, but also officially recognized the potential

public value of abandoned railroad right-of-ways for a variety of functions including recreation (RTC, bulletin)." Unfortunately, this act did not provide railroad companies with the legal authority needed to convert abandoned corridors to public use. This oversight was corrected in 1983 with the National Trails System Act. In amendment 8(d) (Appendix A), legislation created a process which allows abandoned railroad right-of-ways to be railbanked, thereby removing the legal impediments for railroad companies. The legislation expressly states that the conversion of a railroad right-of-way to recreational use is not an abandonment of the railroad purpose. Since the railroad purpose remains intact, the legislation provides for the transfer of the liability and management responsibilities to trail managers, allowing the railroad to resume service in the future. (RTC, bulletin)

## **IS CITIZEN PARTICIPATION IMPORTANT?**

It is clear from Mrs. Watts example that one person can make a difference. In response to the rail-trails movement, citizen participation has proved to be a critical factor in both the success and failure of rail-trails. Almost every resource dealing with rail-trails covers the issues of both positive and negative public involvement and the importance of recognizing and dealing with both. The dominant negative response has historically come from adjacent land owners and the dominant positive response has been borne by active trail enthusiasts, such as hikers, bikers and nature preservationists.

Behind the rail-trails movement "is a history of determination and energy on the part of citizens working individually or in groups (CACEQ, 1975; pg 30)." Rail-trails

have historically been an emotionally charged issue with advocates devoted to both sides and politicians riding the fence in the middle. Because of this, it is critically important that trail supporters become organized and educated early. It is only through a comprehensive public involvement campaign that the trust and support needed to complete the trail can be obtained (Ryan, 1993; pg 35).

### **How To Involve The Public**

There are many ways to educate and entice involvement from the public. Mike Engeman, the Kansas Trails Coordinator for The American Discovery Trail, choose to establish "Friends Groups" to help support the Prairie Spirit Trail. Each major city along the trail route has it's own Friends Group. This group consists of local volunteers who provide their time and talents toward the establishment of the trail. The following list contains the "7 Magic Steps" to creating a successful Friends Group:

- 1) Read. Ask questions. Contact other nonprofit organizations in your area.
- 2) Develop a list of projects that your Friends Group could do; both short term and long term.
- 3) Design your own checklist of chores to do, who could do them, skills needed to complete the tasks and who could help you recruit those people.
- 4) Remind yourself, this is supposed to be fun.
- 5) Remember to delegate.
- 6) Be patient. It takes time to instill enthusiasm in people, to recruit the right people, to do the paper work, to handle the hundreds of details.
- 7) Use your checklist and the standard "Checklist for Starting a Co-op/Friends Group" to help get the work done. Timelines are helpful in being realistic. (Lopez, 1995)

As is suggested in number 7, actually implementing a Friends Group is more complicated than just following this simple list. The "Checklist for starting a Co-

op/Friends Group" is a detailed listing that includes written reasons for establishing the group and long-range goal planning.

Another good "list" to help jump start public support comes from the Citizens' Advisory Committee on Environmental Quality. This committee stresses the importance of conducting a thorough inventory of the proposed trail. This inventory is then used to assess the potential assets of the trail. They suggest following a ten point guideline to inform the public and generate enthusiasm. This list includes:

- 1) Contact other potential trail advocates.
- 2) Present the idea to the planning and recreation agencies in the jurisdiction where the right-of-way is located.
- 3) Send letters to influential citizens. Inform State Legislators, Congressmen, and Senators. Ask for their support and assistance.
- 4) Write an informative article for the local newspaper highlighting the trail's potential and the resulting benefits for the local area. Ask for citizen support, and arrange for a meeting of interested trail advocates. Present an exhibit or maintain a booth at local or county fairs.
- 5) Hike along the right-of-way with a group of interested and enthusiastic citizens.
- 6) Try to get people who live along the route involved.
- 7) If the trail could serve children on their way to school, request an opportunity to explain that at a local PTA meeting.
- 8) If the trail could serve commuters on their way to work, explain the benefits to large employers in the community.
- 9) Be willing to assist local park and recreation officials in presenting the proposal to the city or county.
- 10) Be prepared and willing to testify at public hearings. (CACEQ, 1975; pg 23)

Again, this list makes the job of instilling public support look easy. In truth, generating enough public support to launch and complete a rail-trail project is very time consuming and difficult. Overcoming adversity and addressing problems in a positive manner is an on going problem that doesn't end even when the trail is established.

A third approach to involving the public in a rail-trail project, with a slightly different twist, comes from two experienced rail-trail advocates, Karen Ryan and Julie Winterich. They believe in the power of a name and a logo. According to these two, an organizational meeting should be held early on to develop an identity for the trail. From this meeting, a trail coalition should be formed to organize and strengthen the movement for the trail. Instead of a list identifying who to include, they believe in building a foundation within the coalition before going public. They have developed a list of "do's and don'ts," which include the importance of selecting an enthusiastic and appropriate chairperson; appointing prominent citizens to a board of advisors and then not asking them to do much; creation of a "mission statement" and organizing committees to get the work done. Only after the coalition is formed, and the name and logo for the trail has been established, is the public involved. (Ryan and Winterich, 1993)

Each potential rail-trail will include different variables that will ultimately determine which approach is best for generating public involvement. Whether the public is included early on, or after influential support has been secured depends on the atmosphere of the community involved.

### **Examples of State Wide Citizen Participation**

The following examples of involving the public were taken from states where rail-trails and trails in general are accepted and recognized as a vital part of the state wide open space plan.

Nebraska, which is advanced enough in their trails efforts to have developed a Comprehensive Trails Plan for the state, has established "Focus Groups." These groups include "local economic development professionals, business representatives, recreationalists, members of local governments, representatives of state and federal agencies, museum directors, residents, and citizen volunteers (Nebraska, 1994)." Focus Groups are located in ten locations around the state and have "raised extraordinary public interest and local media coverage (Nebraska, 1994)." They were also considered a critical component to the development of the Comprehensive Plan.

Idaho, which also has a state wide trails plan, has initiated an "Adopt-A-Trail" program to help with the planning, development and maintenance of the state's trail system. Trail users have found this program to be so effective, they have indicated that they would like to see the program expanded. This program involves the hiring of "land managers" who supervise and coordinate volunteer groups in an effort to maintain and enhance Idaho's trails. (Idaho, 1993)

Colorado, which has established a state wide greenway plan, has developed a network of "partnerships." These partnerships allow the various public and private organizations that manage the state's vast array of trails to work towards a common goal. These partnerships abide by a "Memorandum of Understanding" or "M.O.U." which is a working document that states the shared goals of this network of people. (Colorado, 1994)

### **Examples of Local Citizen Participation**

The following are examples of the "power of the people." In each case local citizens took it upon themselves to initiate and implement the rail-trail movement. Please note that not all cases turned out successful. The Wichita example was included to illustrate what happens when citizen involvement against a project outweighs the citizen involvement for a project.

Kane County Trail System: W. L. "Les" McCullough and his group of trail enthusiasts, spearheaded an intensive promotional and educational program in the Fox River Valley of northern Illinois. Because of their work, the Fox Valley Park District was approved on April 1, 1947 by a 4 to 1 margin in a public vote. This same group of people, with various forms of public support groups helping them, eventually went on to initiate the development of the Kane County Trail System.

This system includes the Virgil Gilman Trail, the Fox River Trail and the Great Western Trail. (Huffstodt, date unknown)

**Burke-Gilman Trail:** In 1971, Burlington Northern Railroad formally applied to abandon 11 miles of branch line in the Seattle Metropolitan Area. This track had been established in the 1880s due to the efforts of Judge Thomas Burke and Captain Daniel Gilman. Area residents, inspired by the efforts of Burke and Gilman to forge this right-of-way, formed the Burke-Gilman Trail Park Committee, Inc. This committee felt that since the right-of-way had played such an important role in the development of Seattle, it should be preserved and protected for future generations. They petitioned the ICC for a rehearing for the discussion of alternative uses and submitted an environmental impact statement. In 1972, as public support for the project grew, the ICC stated, in a precedent setting decision, that the city, public agency, or civic group desiring the opportunity to purchase a right-of-way for use as public park land should be given the first opportunity to acquire it from the rail carrier. In addition to intervening in the abandonment proceeding of the ICC, this citizen based committee was successful in stimulating wide public awareness and support. (CACEQ, 1975; pg 36)

**North Bend Rail-Trail:** In 1989, a small group of concerned citizens from four counties, formerly served by a 62 mile rail corridor which was slated for abandonment, gathered to brainstorm about creating a trail that would restore the link between their communities and also energize their economies. Early on the group recognized the need for political support and an identity for the trail they envisioned. They developed a name, enlisted support from business owners, civic organizations, local politicians and prominent citizens. Then, they went public. After two years of hard work, the corridor was purchased and converted into a state park rail-trail. This group knew how to generate excitement. They turned the trail into a band wagon that everyone wanted to become a part of. (Ryan and Winterich, 1993)

**Wichita, KS:** A proposal to convert a 36 mile stretch of abandoned railroad right-of-way into a rail-trail sparked an emotionally charged conflict that pitted city against county, and eventually neighbor against neighbor. When the county vetoed a proposal to turn an abandoned right-of-way from Valley Center to Medora into a trail, the Wichita City Council took up the issue seeing it as an extension of the metropolitan area. The city council voted to pursue the development of the trail. This decision initiated wide spread public involvement on both sides of the issue. Trail advocates tried to explain the benefits of the trail while adjacent land owners, and those who felt the city had over stepped it's bounds, fought to block the city's involvement. Eventually, the decision was turned over to the railroad which offered the adjacent landowners a buy out agreement. While the railroad contemplated their decision however, the Wichita City Council backed down to the overwhelming public outcry against their involvement, and withdrew their decision. (Wichita Eagle, 1995)

## Kansas Land Owner Perspectives

Kansas has a history of vigilant land owners who are not willing to share what they feel is theirs. This attitude dates back to the framing of the American Constitution. With a "collective memory of a turbulent European history based on land -- and power -- held by the few, the founders believed that social tranquillity could ensue only from individual ownership of land (Galleria, 1997)." In Kansas, most early farmers and ranchers bought their land from the federal government, the railroads, or private brokers. The railroad was given 10 million acres in Kansas by the federal government which they sold for \$1.25 to \$2.50 per acre. During these early years, competition for land sales and over land use was fierce. Cattle were shot, wells were poisoned, buildings and pastures were burned and land agents ruthlessly outwitted each other to sell each scrap of land. (Dickenson, 1995) The effects of this emotional and often violent settling of Kansas is still present today.

The passion of Kansas land owners over land rights demands careful consideration when trail enthusiasts decide to take on a rail-trail project. In addition, politicians tend to sway with popular opinion and, therefore, can not usually be counted on to support such a controversial issue. Thus far, the majority of those who have braved the rail-trail frontier in Kansas have been crushed by the efforts of adjacent land owners who do not want a trail on "their property." This pioneer effort, however, has not been wasted. With every attempt, more and more rail-trail advocates surface.

Although the Wichita case ended unsuccessfully, it served as a tremendous educational tool for the public. Several well written articles, denoting the advantages of



rail-trails, appeared in the Wichita Eagle and other state newspapers. Many people in Wichita did not even know what a rail-trail was before this case emerged. With each attempt to promote a rail-trail the public becomes better educated and, eventually, as acceptance and enthusiasm build, the tide will turn. It may take several more attempts, as well as the proven success of the Prairie Spirit Trail, to change the popular opinion in Kansas, but eventually the tide will turn.

## **CONSERVATION ISSUES SURROUNDING THE RAIL-TRAIL**

By their very nature, railroad right-of-ways, which criss-cross the very heart and soul of this country, maintain a wildness that transcends the development man has pressed against them. Rail-trails, which are multi-purpose paths created from abandoned railroad corridors, offer us a rare opportunity to catch a glimpse of nature while helping ourselves at the same time. A properly designed and maintained rail-trail has the ability to cure, or at least appease, many of our urban ills.

This section will address the conservation issues surrounding the rail-trail concept.

### **The Need For Conservation**

In just twenty-three years, between 1959 and 1982, the total area in urban and other developed land uses in the United States increased by twenty-two million acres, or 45 percent. That is more than the total area of the state of Maine. Only recently has it been widely recognized that the proliferation of intensive human activities and the loss of natural areas are leading to serious decline of ecosystems and ecological processes.

Human activity is not only reducing the size and number of remaining natural areas but also causing habitat fragmentation, which results in configuration, or arrangements, of these areas that are poorly

suited to maintaining ecological function. Remaining wildlife habitats have become isolated from one another by inhospitable land uses. (Smith and Hellmund, 1993)

Fragmented, dysfunctional ecosystems will not provide long-term sustainability nor benefit society and the global environment. Through a process of preservation, management, reclamation and establishment of man-made nature areas, a multiple-use system can be established that will be beneficial in an urban setting. This system can be viewed as a natural or ecological network. The network would consist of a system of interconnected patches and corridors woven into an urban landscape matrix and connected to external and internal source areas (large natural areas with significant native species populations). (Cook, 1991)

This is where rail-trails come into play. Rail-trails are the result of transforming abandoned railroad right-of-ways into public, multi-use corridors. These corridors are generally linear in nature and have the potential to connect these isolated habitat patches, even those split apart by urban development.

Not only can rail-trails connect wildlife habitats, they can also provide the tangible relief needed to win political and economic interest. A few of the areas that rail-trails can be designed to cover include: flood hazard reduction, erosion and sedimentation control, climate moderation, natural water and air cleansing, rare species protection, environmental education through hands-on access and preservation of historically significant sites. (Flink and Searns, 1993)

Stuart Macdonald, the state trails coordinator for Colorado, states that greenways (rail-trails are considered greenways) "combine the natural with the industrial, provide recreation and wildlife habitat, and link utilities and living streams. In short, greenways are linear parks that borrow the power in our minds of the River, the Forest, and the

Journey.” (Macdonald, 1991) The power of rail-trails lies in this diversity. What better way to connect the circle between nature and man than to exploit the potential of a rail trail? What better way to educate inner city youth than to allow wildlife to migrate past their back yards? Rail-trails can be the key component to retaining the wildness that is being lost at such an alarming rate.

### Designing A Conservation Corridor

Due to the various needs of wildlife and vegetation; the impacts of the “edge-effect;” recreation demands and general human behavior patterns, all rail-trail projects are not necessarily good candidates for conservation projects. Only after extensive analysis of the individual factors, both natural and man-made, which make up the potential rail-trail has been completed, can a judgment be made as to the conservation/preservation value of a particular rail-trail project.

In general, those rail-trails with the best chance for enhancing a conservation effort, are those that are predominantly rural in nature, with extra wide right-of-ways, connections to natural waterways, and connections to existing wildlife habitats or migration routes.

For those projects that qualify as potential conservation corridors, Daniel Smith and Paul Hellmund have provided a detailed listing of the “Ecological Greenway Design Method” in their book Ecology of Greenways (1993). This list includes such things as understanding regional context; selecting project goals; defining greenway boundaries and creating and implementing site designs and management schemes. Charles Flink and

Robert Searns, in their book Greenways: A Guide to Planning, Design, and Development (1993), take this list of design concerns further to include the impact on the site and the carrying capacity of the site. They discuss design load, soil impaction, drainage, vegetation, tread standards, materials, multi-objective use, legal and regulatory tools, and a whole host of other concerns.

Smith and Hellmund also emphasize the need for wide corridors, vital connections and proper maintenance. Attention is granted to these same areas by Carl Korfmacher in his research paper regarding the conservation movement. In his paper, Carl states that “[a] greenway designed for maximum benefit to a wild population will have certain qualities: It must be wide enough to allow comfortable movement of wildlife. It must have a diverse habitat and areas for cover, feeding, and social manifestations of all species. It should connect greater areas of wilderness (act as a corridor). It should retain or improve it’s original value as a wildlife habitat. Human use should have as little impact as possible.” (Korfmacher, 1991)

Another design view comes from Edward Cook. Mr. Cook divides conservation corridors into three categories: biodiversity, sustaining hydrological processes and ameliorating climate. Biodiversity is primarily concerned with preserving native species. Hydrological processes include drainage corridors, flood control and wetland patches. These corridors are kept in a natural state to act as a filter, thus promoting the purification process. Climatic amelioration, or the “urban heat island effect”, “can be partially mitigated by the preservation of existing vegetation and extensive new planting.”

Vegetation provides shade, wind protection and cooling through evapotranspiration.  
(Cook, 1991)

Mr. Cook suggests that using these three categories to define the corridor type, and then using them as a guide to determine the needs of the corridor is the first major step to designing a conservation corridor. He also suggests the use of conservation easements, overlay zoning, and environmentally sensitive land ordinances as planning tools in nature conservation. (Cook, 1991)

Finally, there are the "Generation Three Greenways." This section on Generation Three Greenways was derived from Robert Searns article *Generation Three Greenways: A New Partnership in the Management of Urban Stream Corridors* (Searns, 1993). In 1992 the National Pollution Discharge Elimination System (NPDES) program was developed which mandates better management of non-point pollution sources. "The NPDES requires that communities with populations of 100,000 or more must have a U.S. EPA-approved plan for storm water drainage systems." This mandate came at a time when many of these agencies were faced with tightened funding and voters demanding less government spending. This is where rail-trails become beneficial.

Rail-trails, which include trails and recreation, can also be designed to "consider flood damage reduction, erosion control, water quality, resource management, wildlife habitat, historic preservation, education and a host of other important issues and themes. Not only are these projects multi-objective, they are multi-agency, multi-disciplinary,

multi-faction and multi-jurisdictional.” This multi-objective theme is the basis of the Generation Three Greenway concept.

Generation Three Greenway projects are designed to plan the management of urban stream corridors. This management includes the creation of a trail to support community involvement and education; establishing native, or rough vegetation and buffering to protect the water edge; preserving the stream bottom while maintaining water quality and providing good storm water management. All of this is achieved by forming partnerships between agencies, jurisdictions, advocacy groups, developers, citizen volunteers and individual property owners.

Railroad right-of-ways work well for this type of planning and cooperation due to their linear nature and typical location. Urban rail-trails generally link many different areas of a community together. They also provide a wide right-of-way and usually run near, or adjacent, to at least one natural water source. By planning for storm water management and stream preservation in the design phase, a rail-trail can effectively become a tool for bringing the Generation Three concept to life. Rail-trails are also notorious for bringing many different groups of people together. The Generation Three concept may be the positive force needed to persuade those against a rail-trail project to reconsider.

All of these views regarding the design of conservation corridors can be condensed into a list of major and minor issues based on the number of authors signifying each issue as important. Each author has stated which aspects of design are most important in his/her view. The following is a recap of these views:

## MAJOR ISSUES

Width of right-of-ways  
Connections to natural waterways,  
wildlife habitats and migration  
routes  
Preservation of native species  
Hydrological processes  
Storm water management  
Impact on the site and carrying capacity  
Continued maintenance  
Education and multi-faction cooperation.

## MINOR ISSUES

Regional context  
Project goals  
Definition of boundaries  
Climatic effects  
Historic preservation

### Conservation Comments

Environmental disputes, legislative issues and disasters are found on the front pages of local newspapers on a regular basis. This intense media awareness of environmental concerns has lead to an education explosion for the general public. School children now learn about recycling and the importance of wildlife habitats. This education has lead to many changes in the way we live. Clean water is no longer a privilege, it is a right. Air pollution is no longer accepted or ignored. Wildlife is much more precious that it was even twenty years ago. In California, a mother of two small children was killed by a mountain lion while jogging. The mountain lion was then tracked down and shot. The fund set up for the mountain lion's cubs was significantly larger than the fund set up for the woman's children. The public responded to their concern for the loss of nature.

Designing an environmentally friendly rail-trail does not necessarily have to mean developing a full fledged environmental corridor. Even a narrow inner-city rail-trail can have a substantial effect on the environment if it is properly designed and maintained.

There have been several books published regarding the use of nature in the design process. One popular process was developed by Ian McHarg. He states that the design process should include the climate, geology, hydrology, soils, vegetation and wildlife of the site (McHarg, 1969). Even short, limited use rail-trails can incorporate these ideals.

This section only briefly reviews the need for conservation with a few of the possible design concepts. Due to media coverage in recent years, this subject is expansive, covering multiple facets of the conservation issue. Prior to beginning a rail-trail project, further research into areas of concern for the specific variables of the individual project should be conducted. Only by including the considerations of this research into the design phase, can a rail-trail begin to reach the potential of a conservation corridor.

## **USING RAIL-TRAIL PROJECTS TO PROMOTE ECONOMIC DEVELOPMENT**

### **What Is Economic Development?**

According to The American Heritage Dictionary, the word economic refers to the "production, development and management of material wealth, as of a country, household, or business enterprise." For the purposes of this paper, this definition has been modified into the following:

Economic Development - The development of wealth in terms of real dollars and employment for a specific area due to the establishment of a rail-trail.



## Why Use A Rail-Trail To Promote Economic Development?

To answer this question we must first understand the American frame of mind. For the majority of the American public, environmental issues and concerns for the well being of others takes a back seat to the focus of "what's in it for me." Using economic development studies to reflect the benefits of a rail-trail lets the public, business leaders and politicians know just how valuable the rail-trail is in financial and employment terms. This answers the "what's in it for me" question.

If a politician can see that a rail-trail has the potential of increasing property values, drawing in new businesses, and increasing the number of jobs in the area, he or she may be more likely to support and contribute financially to the project. Similarly, if area residents are made aware of the potential for new jobs and increased property values, they may be more willing to accept and possibly help build the rail-trail.

There are many ways a rail-trail can benefit a community through economic development. A few of the possible economic benefits of a rail-trail are as follows:

- Increased Property Values
- Increased Expenditures by Residents
- Increased Business Opportunities
- Tourism
- Job Creation
- Corporate Relocation's
- Public Cost Reductions
- Intrinsic Environmental Value
- (Flink and Searns, 1993)

Using green space to help promote economic development is not new. It was commonly used during the late 1800s and the early 1900s by city leaders in park and parkway

proposals across the United States. In the 1960s this approach was modified to project recreation demands and introduce the ideas of benefit-cost analysis by recreation industry leaders (Gold, 1980). More recently, an Economics Clearinghouse has been established by the Rivers and Trails Conservation Assistance Program as a way for interested people to share economic development research information (RTCA, 1990).

Due to the complex nature of this subject and the limited sources of available research, this section is intended only as an introduction to the possibility of using rail-trails as a promotional tool for economic development. The following sub-sections will cover a brief history of the use of economic development information; an introduction to the concept of sustainable economic development; a description of the more common methods of analysis; examples of analysis used on actual sites and issues that should be considered when developing and analyzing rail-trails.

### **History Of Greenway Inspired Economic Development**

The rail-trail movement began very slowly in 1965 and has yet to really become a popular practice. Economic analysis is limited to a few of the larger, older trails with research of any kind scarce and difficult to find. Due to the relatively new nature of this topic, the history noted here will relate to urban green space in general.

Parks and parkways have been implemented for economic reasons since Fredrick Law Olmsted designed Central Park in New York. Olmsted understood the financial impact a park and parkway system could have on the local economy (Kalfus, 1990). This understanding was

passed on from city leader to city leader with the successes enjoyed by New York due to Olmsted's work used as an example.

In October, 1893, the Board of Park and Boulevard Commissioners (BPBC) of Kansas City, Missouri used both Central Park and the city of Chicago as examples of financial success in their published recommendation for a park and boulevard system for Kansas City (BPBC, 1893). According to the BPBC, the Chicago south park system, which was designed by F. L. Olmsted and Company for the 1893 World's Columbian Exposition (Newton, 1978), was an attempt to artificially replicate nature at its best. The native land did not have a diverse topography, heavily wooded areas or, in general, any place considered to be of the "high order" of natural beauty (BPBC, 1893). In spite of this perceived "lack" of natural beauty, and in direct response to the man-made park and boulevard system, Chicago was considered prosperous and successful with new businesses flocking to the tree lined boulevards (BPBC, 1893). According to the BPBC, not only was the park and boulevard system considered a major attribute by new businesses looking for a home, these businesses were paying twice as much for boulevard sites as for sites on unplanted business streets (BPBC, 1893).

The BPBC also used Central Park as an example of economic success. From 1856, the year prior to the design of the park, to 1873, property values in the three wards adjacent to Central Park increased by approximately 893%. During this same 17 year period, property values for the rest of the city increased 100%. In 1886, New York declared a net gain of \$17 million over the cost of land, interest, maintenance and improvements due to the increased property values adjacent to Central Park. (BPBC, 1893)

Obviously these examples, to a young city with visions of grandeur, were taken seriously and were instrumental in the decision by city leaders to accept and promote a park and boulevard plan for Kansas City. The park and boulevard system for Kansas City, which was designed by George Kessler in 1893 with implementation beginning in 1900, was considered to be the beginning of the City Beautiful Movement (Wilson, 1989). The nationwide City Beautiful Movement ran from 1900 to 1910 and was aimed at influencing the "heart, mind, and purse of the citizen. Physical change and institutional reformation would persuade urban dwellers to become more imbued with civic patriotism and better disposed toward community needs. Beautiful surroundings would enhance worker productivity and urban economics." (Wilson, 1989)

In 1930, the Superintendent of Parks of Kansas City stated that "conservative real estate men estimated the present value of the ground frontage on the Kansas City boulevards, less building improvements. They compared this valuation with that of ground fronting on adjacent streets which were not boulevards. They found that the difference in favor of the boulevard real estate was a quarter of a million dollars more than the entire cost to taxpayers of all the parks and boulevards embraced in the system." (Nolen and Hubbard, 1937)

Figure 3  
RELATION OF BOULEVARD CONSTRUCTION COSTS TO RISE IN  
LAND VALUES, KANSAS CITY, MO.

BOULEVARDS	VALUE PER FRONT FT BEFORE CONSTR	VALUE PER FRONT FT AFTER CONSTR	COST OF CONSTR PER FRONT FOOT	AVG GAIN IN VALUE/FRONT FT ABOVE CONSTR COST
Benton	\$15 - 20	\$45 - 60	\$8.53	\$26.50
Linwood	50	80 - 100	7.99	32.00
Harrison	8 - 15	70	6.17	52.30
Gladstone	40 - 45	85 - 100	8.88	41.00

(Nolen and Hubbard, 1937)

This increase in real estate value is reflected in Figure 3. The comparison of land values before and after the installation of boulevards further justifies the prudent decision by city leaders to accept and implement a city wide park and boulevard plan, allowing Kansas City to be used as a successful example by other cities.

Unfortunately, Kansas City followed the national trend from the 1930s through the 1980s by ignoring the economic benefits of a park and boulevard system. Only recently have Kansas City leaders begun to realize again the impact parkways and boulevards have on attracting business. They are however, primarily focused on the issues of maintenance and transportation, rather than the economic benefits of planted traffic corridors. The use of statistical analysis to prove or disprove the economic benefits of an urban green space has been predominantly used over the past 30 years by the recreation industry to promote tourist attractions. (Rolley, 1994) Only recently has interest in this aspect of promotion begun to catch on again in the park and parkway areas.

Within the past twenty years, statistical analysis methods have become easier and more sophisticated due to advancements made in the area of personal computers. It is now possible to use realistic and graphically dynamic financial presentations to promote the positive economic development aspects of a proposed green space addition (Bergstrom, Cordell, Ashley and Watson, 1990).

## **SUSTAINABLE ECONOMIC DEVELOPMENT**

An increased awareness of the environment in which we live, and a greater appreciation for the scarcity of many natural resources has also improved dramatically over the past twenty years. This enhanced appreciation of the impact we have on our surroundings has encouraged the popularity of a new term: sustainable development. “[S]ustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Burr and Walsh, 1994).” A new definition, for the purpose of this report, is then created by combining this concept with the concept of economic development defined earlier:

**Sustainable Economic Development** - The development of wealth in terms of real dollars and employment, which is achieved without compromising the ability of future generations to continue this development, for a specific area due to the establishment of a rail-trail.

Rail-trails create a wonderful focal point for the establishment of a sustainable economic development plan. A popular form of economic development centered around rail-trails involves their ability to attract tourism. The natural resource base that supports most rail-trails, combined with an emphasis on tourism, provides an ideal setting for sustainable economic (tourism) development.

### **Tourism**

“[S]ustainable tourism development can be thought of as leading to the management of all resources in order to fulfill both present and future economic, social and aesthetic needs of tourists and host regions, while maintaining cultural integrity,

essential ecological processes, biological diversity and life support systems. Sustainable tourism development implies limits such as carrying capacities, saturation points or limits of acceptable change that require future management and use limits if a viable tourism industry is to be sustained. (Burr and Walsh, 1994)”

With many existing rail-trails traveling through, or near, rural communities, tourism offers a possible alternative for local economic development efforts. To create an economically sound foundation for both today and tomorrow, rural communities should look to their strengths. The symbiotic relationship that rural communities already share with their natural environment can prove to be a powerful asset in the creation of sustainable economic development through tourism.

To support this potential for a viable tourism market in rural communities, “[r]ecent studies in the United States,... suggest that the nature of outdoor recreation trips is changing with an increasing emphasis on shorter trips closer to home. This change in the spatial distribution of trips means that rural areas are likely to be the setting and destination for many of these visitors. In addition, the aging of the population together with better levels of education suggests that appreciative or non-consumptive forms of recreation and tourism are going to grow in popularity. As a result, there will be an increasing desire for visitors to gain an understanding of their environment and not simply to be entertained by it. (Swinerton and Hinch, 1994)”

This growing trend is supported by significant financial data. “Recreation-related multipliers estimated for gross output, employment, and income are relatively large, which

suggests that the direct, indirect, and induced effects of recreational expenditures stimulate a considerable amount of economic activity in rural economies (Bergstrom, Cordell, Ashley and Watson, 1990).” “Although it has been said that tourism is a maturing industry, expenditures on ecotourism’s share of the \$30 billion industry will demonstrate an annual growth in demand from 10 - 15 percent by conservative estimates to 30 percent by liberal accounts in the mid 1990s (Seidl, 1994).” “In addition, outdoor recreation development, for example, park development, can be undertaken in such a way that natural resources are conserved and environmental quality improved. Outdoor recreation development may also be complementary with established rural enterprises such as agriculture. (Bergstrom, Cordell, Ashley and Watson, 1990)”

### **Manufacturing**

Tourism can also have a direct impact on attracting quality manufacturing jobs. By developing an attractive amenity package while creating a healthy place to live, the community is better able to compete for manufacturing companies which will complement the goals of the community. This theory is supported by studies conducted in two tourism oriented cities in Missouri. Between 1967 and 1982, manufacturing payrolls increased in the US by 187%. In the state of Missouri this increase was 263%. In Branson, MO, the increase in manufacturing payrolls was 451%, and in the Lake of the Ozarks, MO, the increase was 580%. (Blank, 1991)

“It may be hypothesized that combinations of at least three factors are operating to stimulate rapid growth of manufacturing in the two tourism-producing areas: In the first



place, manufacturing activity was at a relatively low level at the start of the period under comparison in both areas. Secondly, rapid growth of the resident population, plus retail and hospitality services generates the need for locally-fabricated items. Finally, the influx of new residents brings people with many new talents. They not only constitute a labor pool to be tapped, but they also act as catalysts for industry -- perceiving opportunities and needs both locally and for export that they act upon. (Blank, 1991)"

What is directly implied here is that a community does not necessarily have to choose between tourism and manufacturing. With a strong natural resource base and an emphasis on sustainable development, a community may, theoretically, plan for both.

### **Sustainable Development Comments**

To conclude this section in support of sustainable economic development, the six guiding principles for sustainable rural tourism, published in the form of a pamphlet by the English Tourist Board and Countryside Commission, has been included (Swinerton and Hinch, 1994):

- 1) Enjoyment - The promotion of tourist enjoyment of the countryside should be primarily aimed at those activities which draw on the character of the countryside itself, its beauty, culture, history and wildlife.
- 2) Development - Tourism development in the countryside should assist the purposes of conservation and recreation. It can, for example, bring new uses to historic buildings, supplement usage and incomes to farms, aid the reclamation of derelict land and open up new opportunities for access to the country side.
- 3) Design - The planning, design, siting and management of new tourism developments should be in keeping with the landscape and wherever possible should seek to enhance it.

- 4) Rural Economy - Investment in tourism should support the rural economy, but should seek a wider geographical spread and more off peak visiting both to avoid congestion and damage to the resource through erosion and over use, and to spread economic and other benefits.
- 5) Conservation - Those who benefit from tourism in the countryside should contribute to the conservation and enhancement of its most valuable asset - the countryside, through political and practical support for conservation and recreation policies and programs.
- 6) Marketing - Publicity, information and marketing initiatives of the tourism industry should endeavor to deepen people's understanding of and concern for the country side, leading to fuller appreciation and enjoyment.

All of these steps require foresight and planning. All of these steps can be tied directly to the vision of a rural community. All of these steps support the concept of sustainability and preservation. Sustainability and preservation are not just nice ideas. They are the "needed answer to many problems the United States faces in providing housing, saving energy, protecting our environment, creating jobs, and producing more stimulating surroundings. (Flink and Searns, 1993)"

The next section will provide various statistical analysis methods available to place a value on a rail-trail. This value will provide the support needed to determine the economic impact a rail-trail has had on a community.

## **ANALYSIS METHODS**

Attempting to place a value on a rail-trail can lead to subjective and confusing results if you are not extremely careful and don't conclusively back up every number presented (RTCA, 1990). Placing a value on a rail-trail could be compared to placing a value on a company name. The company itself is easy enough to value because the components making up the

company are tangible. When it comes to the name however, everything becomes subjective. Two different rail-trails that are technically the same could be valued differently due to the difference in perceptions of the people living near or using them. The same is true of company names. How much more is a customer willing to pay for an athlete endorsed product compared to a similar product with out the athlete connection just because of the name association?

The purpose of this example is to show how vulnerable rail-trail valuations are to public perceptions. Negative advertising due to a crime related incident on a rail-trail can have a substantial impact on the value of that rail-trail. The opposite is true as well. A successful festival or craft show linked to a rail-trail can improve the trail's perceived value (Turco and Kelsey, 1993).

The most popular methods of valuation are listed below. It is important to note here, that while these methods are accepted and used as important tools in the process of green space promotion, they are not fail proof. Public perception is a fickle thing and can change virtually over night. All of the methods listed are based on historic or current information. They are not flexible enough to adapt easily to future changes. (RTCA, 1990)

In the examples listed beneath each analysis method, only the results of the analysis is noted. In a promotional campaign, the details of the analysis are typically not revealed. While it is important to be able to substantiate all numbers used, usually only the results are presented. In addition, due to the infrequent use of financial analysis methods on rail-trails, the following

examples represent a variety of green space situations. Each of these examples represents a way in which the supporting analysis method could be used.

### **Travel Cost Method**

The economic value is equivalent to the cost of travel to and from the green space (McPherson, 1992). With this method, green space users are asked how far they traveled to visit the green space. The value is then assumed to equal the cost of travel. This method works best for large recreation centers. It does not work well for local parks, parkways or limited use rail-trails. (More, Stevens and Allen, 1988)

#### ***Example:***

Elroy, WI. - Users of the Elroy-Sparta Trail traveled an average of 228 miles to reach the trail in 1989 and spent an average of 1.43 nights and \$25.14 per person (Wengert, 1989).

### **Contingent Valuation Method**

The economic value is equivalent to the difference between what people are willing to pay and what they are actually paying (McPherson, 1992). With this method, green space users are asked how much they would be willing to pay to use the green space. The value is then assumed to equal the variance between what the user is willing to pay and what they are actually paying. Questions have been raised regarding this method because expressed attitudes do not always correspond with actual behavior (More, Stevens and Allen, 1988).

*Example:*

California - In 1984, campers in California State Parks spent an average of \$8.25 in travel related costs. These same campers valued their camping experience at \$22.25. The \$14 value of this camping experience is therefore considered a benefit to the camper. (Loomis, 1989)

**Tree Pricing Method**

The economic value is equivalent to the sum of all individual plant prices within the green space. Due to the use of a cost association for replaceable items, the tree pricing method is primarily used for insurance valuation. For promotional use, this method is typically expanded to include the environmental benefits of the plants. For example, energy savings from shading, wind speed reductions and cooler air temperatures resulting from trees would be included. These expanded benefits are considered environmental externalities because they are not paid for, which means they are not reflected in the consumer price index. The expanded method is therefore, difficult to substantiate. (McPherson, 1992)

**Hedonic Pricing Method**

The economic value is equivalent to the costs and/or prices of related market transactions (McPherson, 1992). This is the most popular valuation method. In it's most common form, land and property prices near the green space are compared to similar land and property prices situated a specific distance away from the green space. On parkways, boulevards and urban rail-trails, sales volume can also be compared. This method is considered the best because it uses actual data and is the least subjective. (More, Stevens and Allen, 1988)

### *Examples:*

Boulder, CO. - Property values are 32% higher adjacent to the local greenbelt compared to property values 3,200 feet away (RTCA, 1990).

Salem, OR. - Property values are \$1,200 higher per acre adjacent to the greenway compared to property values 1,000 feet away (RTCA, 1990).

Seattle, WA. - Property near but not immediately adjacent to the Burke-Gilman Trail is valued 6% higher than comparable property further away. Values of property immediately adjacent to the Burke-Gilman Trail are not affected. (Seattle Engineering Dept., 1987)

### **Resource Evaluation Method**

The economic value is equivalent to the sum of direct, indirect and induced benefits related to the green space. In this method, the Hedonic Pricing Method is expanded. Not only are property values examined, all green space related product sales, employment and economic appeal are valued and included. With this method, the total economic effect would equal the sum of direct benefits (property values and purchases made specifically for use on the green space), indirect benefits (purchases of materials and supplies by the producers of green space related products and services) and induced benefits (purchases by households who receive wages from producers of green space related products or services). The ability of the green space to draw new business into the area would also be considered.

This method is extremely complicated and time consuming. Sophisticated models using the consumer price index and multipliers are required to substantiate the numbers. While it is primarily used for large recreational greenways and parks, and for business related parkways and boulevards, it can be used for limited use, local rail-trails and parks as well. (RTCA, 1990)

### *Examples:*

California - In 1985, approximately \$620 million was spent by urban recreationists. This spending generated an estimated \$500 million in personal income and supported 22,800 jobs. (Loomis, 1989)

Elroy, WI. - Elroy-Sparta Trail visitors spent approximately \$1,257,000 in the area during 1989 (Wengert, 1989).

Georgia - In 1986, the Unicoi State Park supported more than 1,400 jobs, generated more than \$14 million in income for the local region and increased property values by \$4.6 million (Bergstrom, Cordell, Ashley and Watson, 1990).

Tallahassee, FL. - Average travel expenditures made per person due to the St. Marks Trail equaled \$15.18 per trip. Average amount spent per trail user on durable goods in direct response to the St. Marks Trail during a 12 month period was \$250.64. (Moore, Graefe, Gitelson and Porter, 1992)

Wisconsin - The estimated amount spent by Sugar River Trail users, in the surrounding area in 1985 was \$429,400 (Lawton, 1986).

### **Issues To Be Considered Regarding Valuation**

Developing a successful promotional campaign involves more than just crunching numbers or passing out surveys. There are countless issues to be considered when attempting to establish a value for a rail-trail. Each rail-trail under consideration will have a different set of important issues.

An issue, for the purposes of this report, can be defined as a topic of interest to a specific rail-trail project that may or may not affect the value of that space. Some of the issues that could influence the value of a rail-trail are listed below. Due to the unique nature of each specific rail-trail valuation, all issues can not be noted here.

**Aging** - Baby-boomers comprise 33% of the population. As this group reaches retirement age, the need for leisure activities for the elderly will increase. Currently the national average annual income for a couple over 65 years of age is approximately \$16,000 with \$4,500 being spent on health care. Increased recreational activities for the elderly, at a modest cost is needed. (Kelley, 1993)

**Crime** - What measures can be taken to protect against crime and vandalism prior to construction of a rail-trail? How can the fears of adjacent land owners and rail-trail users be calmed in regards to crime and vandalism? (Flink and Searns, 1993)

**Income** - Possible forms of income for rail-trails include grazing leases on open space (RTCA, 1990), festivals and other large scale special events centered around the rail-trail (Turco and Kelsey, 1993), leased right-of-ways for utility companies, community garden plots (Flink, Lagerwey, Balmori and Searns, 1993), park fees, hotels, restaurants, bars and locally provided transportation services (i.e., taxis, buses, small planes and boats) (Seidl, 1994).

**Maintenance** - How will maintenance of the rail-trail be paid for? Who will be responsible for maintaining the rail-trail? Can the rail-trail be designed to cut down on maintenance while still providing what is needed to draw the necessary economic base? (Flink and Searns, 1993) (See Appendix F for a maintenance source listing.)

**Public Perceptions** - How important is advertising? What kinds of advertising works best? How can public perceptions of the rail-trail be improved?

**Transportation** - Will the rail-trail cross a traffic corridor? Considerations include the speed of the traffic, access across the corridor and to the trail, signage, trail right-of-ways and the width of right-of-ways.

**Use** - What kind of rail-trail will it be? Will the trails be multi-use or specifically for walkers, joggers, bikers, roller bladers or horses? Should the rail-trail be designed to include recreation? If so, would it be active, passive or water recreation? Are there related services provided? A few service options might include indigenous art displays, music and pottery shows, guided hikes and wildlife viewing, written publications, natural history lectures, photographic opportunities, a sampling of local culinary fare, a wide variety of sporting activities and wilderness survival experiences, to name a few (Seidl, 1994). Other use issues include wildlife concerns, open space options and traffic, circulation and access problems.

**Youth** - Using local youth to build/develop a rail-trail helps to promote pride, reduces crime and vandalism and encourages long-term loyalty (RTCA, 1990).

**Quality of Life** - There are many issues surrounding the quality of life topic, and the definition of what the essential components are regarding quality of life changes over time. The things that were important to Fredrick Law Olmsted when he designed Central Park



are probably not going to be the same things that will be considered important today. Interest in promoting the development of parks and open space dwindled between 1930 and 1980. This was due to a shift in what the public considered important for their quality of life. With increased public awareness regarding the benefits of green space, the public sentiment is shifting back to where it was earlier this century when urban crowding pushed the need for open space to the forefront. Green space is now in a prime position to be considered when quality of life issues are discussed.

### **Economic Development Comments**

Using rail-trails as a tool for promoting economic development can be cumbersome and time consuming. Most of the issues regarding the rail-trail need to be addressed prior to its development, or at least before it is completed. The analysis methods mentioned in this report require not only the completion of the rail-trail, but also establishment within the community to be able to reflect it's full benefit. Rail-trails can take many years to complete, so how can this difference in timing be resolved?

Of the analysis methods mentioned earlier, the resource evaluation method is the most complete. This method holds the most potential for securing a positive economic appearance for the largest variety of rail-trail types. Adjusting this method to deliver future results rather than historic results however, would prove to be difficult, if not impossible, due to the use of certain historic multipliers.

Chapter 3 covers the methodology used within this report to achieve a statistically based opinion regarding the Prairie Spirit Rail Trail.

## ISTEA (Intermodal Surface Transportation Efficiency Act)

*"The future is not someplace we are going to, but a place we are creating.  
The paths to it are not found, they are made."*

Jane Garvey, Deputy Administrator, Federal Highway Administration  
(RTC, 1996)

In December, 1991, "Congress initiated a new era in federal transportation policy with passage of the Intermodal Surface Transportation Efficiency Act (ISTEA). A landmark provision of this new law -- the Transportation Enhancements provision -- established a major funding source for rail-trails and other types of bicycle and pedestrian facilities. (RTC, 1996)"

### Transportation Enhancements

The Transportation Enhancements program (TE), which is a provision within ISTEA and is associated with the Surface Transportation Program (STP), has established ten eligible Transportation Enhancement Activities (TEAs) (NBPC #1). Rail-trail projects typically fall within category number 5. The ten eligible TEAs include:

- 1) "Bicycle and Pedestrian Facilities
  - 2) Rehabilitation and Operation of Historic Transportation Structures or Facilities
  - 3) Acquisition of Scenic Easements and Scenic or Historic Sites
  - 4) Scenic or Historic Highway Programs
  - 5) Preservation of Abandoned Railway Corridors
  - 6) Landscaping and Scenic Beautification
  - 7) Control and Removal of Outdoor Advertising
  - 8) Historic Preservation
  - 9) Archaeological Planning and Research
  - 10) Mitigation of Water Pollution Due to Highway Runoff'
- (NBPC #1)

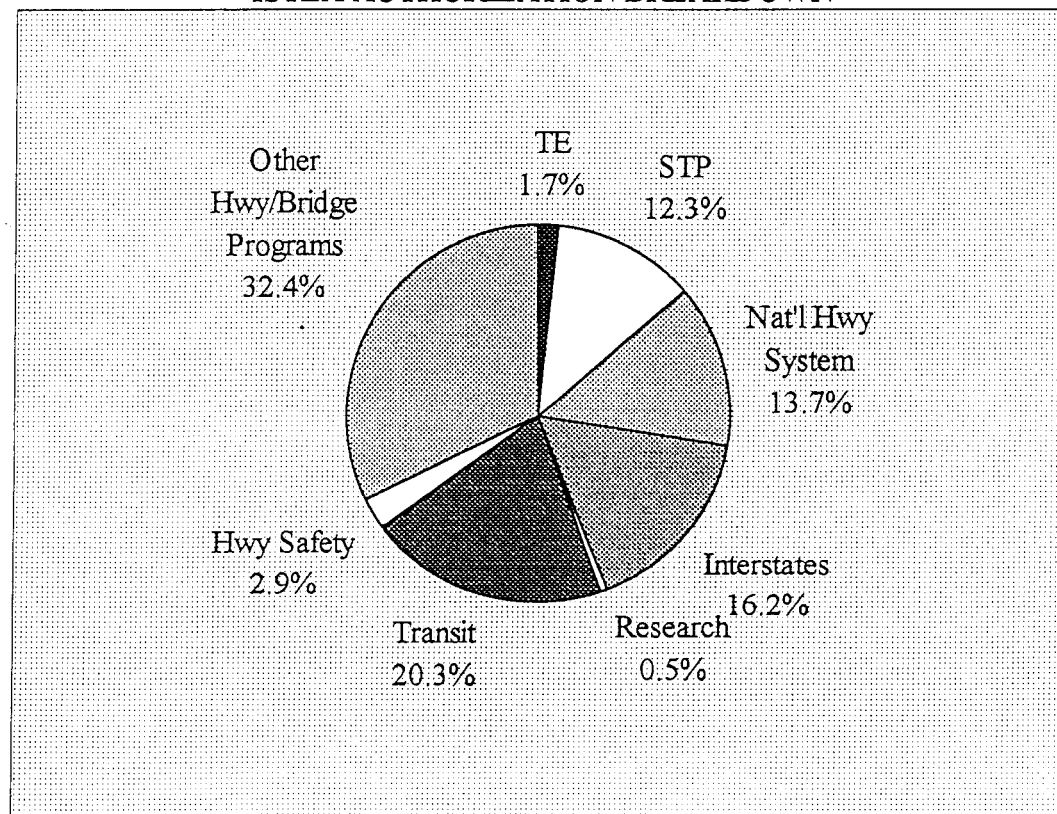
“Funding levels for the Enhancements program are determined by taking 10 percent of the larger Surface Transportation Program (STP) (RTC, 1996).” While STP is the primary source of TE funding, there are two other sources which provide funding for TE projects as well. One-half of the State’s share of 90 percent Payments and Hold Harmless funds, and one-half of the Interstate reimbursement funds are also subject to the 10 percent requirement (USDT, 1993).

“Contrary to popular understanding, the enhancements program is not a grant program. The federal government does not grant money to the state and the state does not provide grants to project sponsors. At the beginning of each fiscal year [the Federal Highway Authority], FHWA, using formulas established by ISTEA and past federal transportation laws, calculates the amount of each state’s available enhancements funds and informs the state [Department of Transportation] DOT. In essence, enhancements funds, ... like all federal-aid highway funds, are given to the state on paper. State DOT’s use revenue in the state treasury to pay contractors, vendors and consultants for their transportation work and then receive reimbursements from FHWA for the federal share of the project, as well as payment from local governments for non-state local matching funds. The federal shares are based on pre-agreed funding levels, called obligations, and corresponding project scopes. For this reason the federal aid highway program is often referred to as a cost-sharing, reimbursement program. (Patten, 1994)” For TEs, the cost-share split is 80/20. With this formula, the Federal share is 80% and the 20% share is made up of State, local government and private funds. (USDT, 1993)

## ISTEA Category Breakdowns

The TE program however, is only a small portion of ISTEA (Figure 4). "ISTEA established funding authorizations totaling \$155.3 billion for highway, transit and other surface transportation programs for six federal fiscal years, 1992 - 1997 (RTC, 1996)." As of February, 1996, over 820 million dollars had already been appropriated for just the two bicycle, pedestrian and trail categories (#1 and #5 noted previously) (RTC; TE, 1996). This figure represents a "whopping 8,000 percent increase in funding from the pre-ISTEA era (RTC, 1995)." Figure 5 reflects the distribution breakdown of funding appropriated for bicycle, pedestrian and trail projects.

Figure 4  
ISTEA AUTHORIZATION BREAKDOWN



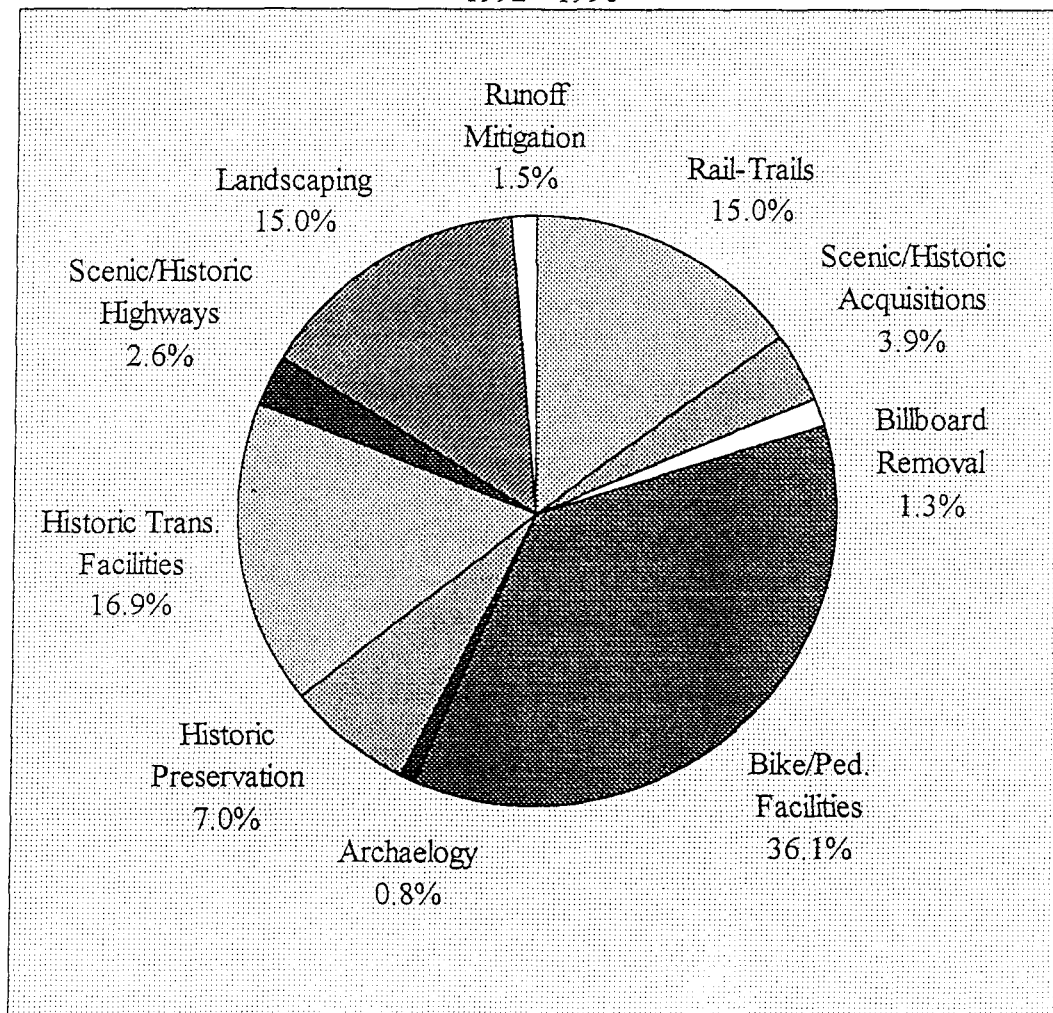
(Source: RTC, 1996)

Figure 5  
TRANSPORTATION ENHANCEMENT FUNDS AWARDED  
TO NON-MOTORIZED TRANSPORTATION FACILITIES  
(Reported in \$1,000,000)

As of February, 1996: Facility Type	Federal Share	Match Share	Match Percent	Total	# of Projects
Rail-Trails	\$239.7	\$90.1	27.3%	\$329.8	654
Greenway Trails/Other Paths	\$356.8	\$128.7	26.5%	\$485.5	1286
On-Road Bicycle Facilities	\$81.7	\$30.5	27.2%	\$112.2	400
Sidewalks/Other Ped. Facilities	\$131.9	\$43.6	24.8%	\$175.5	551
Bike/Transit Integration/Parking	\$10.1	\$2.8	21.7%	\$12.9	63
<b>Total</b>	<b>\$820.2</b>	<b>\$295.7</b>	<b>25.5%</b>	<b>\$1,115.9</b>	<b>2954</b>

Source: RTC/TE, 1996

Figure 6  
DISTRIBUTION OF ENHANCEMENT FUNDS  
1992 - 1996



(Source: RTC, 1996)

Of the total TE funds distributed, rail-trail projects have received 15% exclusively (Figure 6). Of the remaining TE funds distributed, rail-trails have supported, or been a part of, nearly every category represented. (RTC, 1996)

### **Categorical Exclusions and Federal Regulations**

“The National Environmental Policy Act (NEPA) review process can be a cumbersome hurdle for TE project sponsors as well as for administering agencies. In establishing the ten TEAs, ISTEA did not include any special provisions for excluding Enhancements projects from NEPA compliance. Section 316 of the [National Highway System] NHA Act, however, directs the U.S. DOT Secretary to develop categorical exclusions for TEAs. This initiative will allow projects to proceed without lengthy environmental documentation. (NTEC, 1996)”

“The proposed FHWA Guidance Memo on the subject notes that a number of items included in the ISTEA definition of TEAs (as listed in 23 CFR 771.117(c) as categorical exclusions) are not subject to project-specific NEPA approval by FHWA, including: *non-construction related activities* (studies or publications relating to one of the TEA categories); *construction of bicycle and pedestrian facilities*; *landscaping*; and *acquisition of scenic easements*. The intended effect of this Guidance is to exempt most TE projects, either on a project-by-project, or programmatic basis, from detailed environmental documentation requirements under NEPA, and therefore allow these projects to be implemented with minimal Federal environmental oversight. (NTEC, 1996)”

NEPA is not the only hurdle for TE projects to jump however. Projects which are funded through the TE program may be subject to regulations related to a wide range of Federal laws. The most common laws which affect TE projects, other than NEPA, include: "Section 106 of the National Historic Preservation Act, Section 4(f) of the US Department of Transportation Act of 1966, Davis-Bacon Act, the Brooks Act, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act (NBPC #1)."

Potential sponsors of rail-trail projects must be aware of the various laws, regulations and possible categorical exclusions which may apply to their proposed project. Failing to comply, or prove the right to exclusion, of any of these laws could substantially delay, or even undermine, a rail-trail proposal.

### **Other Funding Sources**

"Another program in ISTEA is the National Recreational Trails Fund Act [NRTFA] (sometimes referred to as the Symms Act). ISTEA authorizes up to \$30 million annually for this program, and explains in some detail how the funds are to be administered and which type of projects are eligible. Although the legislation called for a trust fund to finance the Act, and the Treasury Department created the fund, Congress failed to give the program contract authority, thus necessitating a yearly trek to Congress for annual appropriation. Funds from this program can be used for trail maintenance projects as well as trail planning, acquisition, construction, reconstruction, trailhead facilities, education and administrative costs. (Patten 1994)"

NRTFA “differs from the Enhancements Provisions in many ways, but primarily in three facets: 1) its separation from the reimbursement and cost-sharing provisions that govern all of the ISTEA Title I programs; 2) the likelihood that the program is administered by the state’s parks or natural resource agency (not the DOT); and 3) its focus on recreational, rather than transportation trails. Eligibility requirements for the NRTFA [also] do not include the function/proximity/impact text that exists for enhancements. (Patten 1994)”

Another significant difference between NRTFA and TE is in the funding requirements. “NRTFA is not subject to the twenty percent non-federal match requirements which are common for most ISTEA funding programs. NRTFA funds are dispersed to states on an annual basis according to the formula set forth in the Act; funds are distributed to projects and project sponsors as ‘straight’ cash grants. The Act [also] made private individuals, organizations, local governments and other state and federal government entities eligible to receive grants of NRTFA funds. (Patten 1994)”

In addition to NRTFA, ISTEA offers several other programs which rail-trail sponsors can tap into for funding. Several of these programs include:

National Highway System  
Bridge Program  
Scenic Byways Program  
Federal Transit Funding  
Highway Safety Programs  
Surface Transportation Program & Enhancements Set-Aside  
Congestion Mitigation and Air Quality Improvement Program  
Federal Lands Highway Program  
(RTC, 1992)



## ISTEA - 2

"The funding provided by ISTEA runs out on September 30, 1997", requiring the program to be reauthorized (Kientiz, 1996). The original program promoted three primary areas of focus. These areas included the involvement of metropolitan planning organizations in decision making, focusing federal funds on solving air quality problems and making communities more "livable" (Kientiz, 1996). Public forums, professional conferences and legislative agenda setting took place throughout 1996 to review the success that this program has had in these areas. Debates will continue throughout most of 1997 as Congress prepares for the authorization of ISTEA - 2. As of December, 1996, there appears to be little doubt among the various ISTEA authorities that ISTEA - 2 will receive congressional approval. The question, therefore, lies in the structure of the new program. Will it be easier to facilitate? Will it change the funding formula to increase the amount of a funds available for rail-trail projects?

## ISTEA Comments

This section provides only a brief overview of the complex ISTEA program. ISTEA is an innovative breakthrough in transportation legislation. "For the first time in the history of federal transportation law, ISTEA made rail-trail acquisition and development specifically eligible for federal highway funds (Patten, 1994)." For many states, this was also the first opportunity for DOTs to work directly with trail oriented agencies and advocates. This newly formed partnership is still fragile in Kansas, but is continuing to grow in its strength and level of understanding. Due to the exponential

growth in rail-trail development created by the existence of ISTEA, public awareness and education in the area of rail-trail benefits and opportunities has also risen significantly.

The establishment of ISTEA has provided a substantial public service, and has opened the door of opportunity for further advancements in the areas of preservation, conservation, recreation, alternative transportation and environmental education.