APPENDIX G

RAIL-TRAIL MAINTENANCE SOURCES LISTING
INTRODUCTION

Rail-trail maintenance involves more than just cleaning and repair. The issues involved in rail-trail maintenance begin in the development stage of a rail-trail project and last virtually forever. With the constant battle for funding that rail-trail developers and parks and recreation departments face, it is critical that maintenance becomes an important issue from the very beginning. With a critical eye towards site selection and innovative design, rail-trails can become low maintenance havens where safety issues are addressed and crime is controlled.

The effectiveness of addressing maintenance issues can determine the success or failure of a rail-trail system. Therefore, the responsibility of maintaining the rail-trail must lie with every person involved in its development and use. Designers need to take into account the type of use and abuse the rail-trail will endure, either at the hands of man or nature, and employ design aspects that will be able to handle the stress. Politicians need to accept and support rail-trails. This means, in most cases, that the public needs to accept and allow tax allocations. Users need to be involved as well, by respecting and protecting their rail-trails. All of us are responsible for the development and preservation of our nations rail-trails.

The purpose of this section is to provide a listing of references by category for use in further research. Due to the enormity and complex nature of the maintenance issue, all resource material available regarding these categories could not be listed. The following list contains those items which where current, relevant and available. Please refer to the annotated reference list in Appendix G for specific reference information.
IMPORTANCE OF MAINTENANCE

Page 291 Greenways: A Guide ...
    Seven Key Components

Page 195 Greenways for America

Page 9 Park and Rec. Maintenance Mgmt.
    Definition

TYPES OF MAINTENANCE

Page 292 Greenways: A Guide ...

Page 37 Planning Parks for People

FUNDING

Page 3 Green Threads in the Urban Fabric
    Utility Corridors
    6 Intermodal Surface Transportation Efficiency Act

Page 98 Greenways: A Guide ...
    Sources
    305 Types

Page 164 Trails for the Twenty-First Century
    Fee Structures

ADJACENT LAND OWNERS

Page 69 Greenways: A Guide ...
    Concerns

Page 161 & 169 Trails for the Twenty-First Century
PLANNING AND DESIGN

Page 61  Anatomy of a Park
          Designing With Cost In Mind

Page 7  Bay Area Ridge Trail Council
         List of Planning Criteria

Page 113  Ecology of Greenways
           Minimizing Environmental Impact
          139  Defining Boundaries
          154  Design Method List

Page 127  Planning Parks for People
          Special Needs

Page 326  Site Planning
          Carrying Capacity

Page 167  Trails for the Twenty-First Century

ENVIRONMENTAL IMPACT

Page 57  Anatomy of a Park
          Orientation
          95  Site Analysis
          167  Chart of Soil Types and Uses

Page 106  Ecology of Greenways
          Soil
          Vegetation
          Animals
          Water

Page 133  Greenways: A Guide ...
           Corridor Evaluation Checklist

Page 51  Managing Wilderness Recreation Use
          Reducing Human Impact
ENVIRONMENTAL IMPACT CONTINUED

Page 17  Planning Parks for People
          Hydrology
21       Soils
28       Topography
294      Wildlife/Water/Timber

Page 379 Site Planning
          Soils
402      Climate
407      Sun Angles

Page 115  Trails for the Twenty-First Century

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Page 146  Anatomy of a Park
          Recommended Widths

Page 8   Bay Area Ridge Trail Council
          Construction Guidelines

Page 2   Green Threads in the Urban Fabric
          Recommended Widths
          Recommended Surface Material

Page 191 Greenways: A Guide ...
          Grading and Development Guidelines
195      Layout Checklist
200      Recommended Widths
204      Drainage
215      Surface Material Cost Comparison
219      Pros & Cons of Surface Materials

Page 9   Managing Wilderness Recreation Use
          Deterioration - Problems and Solutions

Page 63  Planning Parks for People
          Design Needs
75       Zoning
89       Trail Systems

124
TRAILS CONTINUED

Page 72 Trails for the Twenty-First Century
  Needs of Users
81 Recommended Widths
85 Speed, Slope and Soil
89 & 97 Recommended Surface Material

INFRASTRUCTURE

Page 58 Anatomy of a Park
  Slopes and Turning Radius
63 Structural Materials
71 Circulation

Page 242 Greenways: A Guide ...
  Access and Parking
246 Water Disposal and Management
248 Lighting
251 Bridges
265 Barriers
270 Trash Receptacles

Page 169 Park and Rec. Maintenance Mgmt.
  Standards and Program Structure
225 Waste Disposal
239 Lighting
243 Fencing
255 Parking & Roads

Page 108 Planning Parks for People
  Picnic Areas
157 Play Grounds
183 Camp Grounds

Page 60 Rec., Park and Open Space Standards
  Facility Development Standards
109 Vehicle Parking Standards
VEGETATION CONTINUED

Page 271  Park and Rec. Maintenance Mgmt.
          Turf Grass
          Shrubs and Trees

Page 24  Planning Parks for People
          Uses and Effects

Page 183  Site Planning
          Maintenance Considerations
          Trees, Hedges, Ground Covers

Page 142  Trails for the Twenty-First Century
          Planting Guides

WATER

Page 163  Greenways: A Guide ...
          Maintaining and Enhancing
          Recreation
          Carrying Capacity & Conflicts
          Sources of Information
          Facilities

Page 15  Managing Wilderness Recreation Use
          Pollution - Problems & Solutions

Page 102  Planning Parks for People
          Boat Ramps
          Beaches

Page 45  Serving Infrastructure Needs in the 21st Century
          Quality Issues

SAFETY

Page 75  Anatomy of a Park
SAFETY CONTINUED

Page 280  Greenways: A Guide ...
           Public Access
           281  Safety Checklist
           297  Emergencies

Page 333  Park and Rec. Maintenance Mgmt.

Page 50   Planning Parks for People

Page 157  Trails for the Twenty-First Century

CRIME

Page 76   Anatomy of a Park
           Discouraging Undesirables

Chapter   Elements of Park and Recreation Administration

Page 76   Greenways: A Guide ...
           Concerns
           284  Liability
           287  Insurance
           294  Management

Page 56   How to Vandal-Proof Your Restrooms

Page 42   Managing Wilderness Recreation Use
           Visitor Behavior Modification

Page 358  Park and Rec. Maintenance Mgmt.
           Vandalism

Study     Vandalism Control Mgmt. for Parks & Rec. Areas
           Listing of Types and Possible Solutions

SIGNAGE

Page 12   Bay Area Ridge Trail Council
SIGNAGE CONTINUED

Page 239 Greenways: A Guide...
283 Recommended Signs
295 Systems

Page 281 Planning Parks for People

Page 122 & 159 Trails for the Twenty-First Century

SAMPLE MAINTENANCE LISTS

Page 9 Bay Area Ridge Trail Council

Page 298 Greenways: A Guide...

Page 59 & 154 Trails for the Twenty-First Century

RESOURCE LISTS

Page 146 Anatomy of a Park
148 Park Area Size Standards
163 Park Use Survey Forms

Page 151 Ecology of Greenways
153 List of Journals by Category

Page 4 Green Threads in the Urban Fabric
 Rails to Trails

Page 189 Trails for the Twenty-First Century
 Annotated Resource Directory
APPENDIX H

ANNOTATED REFERENCES

This guide includes a brief outline of important factors involved in the planning, management, construction and maintenance of a multi-use trail.


Monty Christiansen is a landscape architect who completed this study at the request of the National Park Service. The study contains numerous examples of the different types of vandalism with suggestions for reducing or eliminating vandalism.


This problem solving handbook begins by identifying problems common to public parks. Several solutions to these problems are then analyzed.


Includes a historic overview of parks and recreation. Impacts of war and the great depression are also included. A detailed chapter on safety and law enforcement with an outline for training of park and recreation law enforcement personnel is still relevant today.


A persuasive article regarding the aging infrastructure challenges facing the U.S. during the next 25 years and the ways in which greenways are being used to solve some of these problems. Includes results of government studies.


"A 'how-to' guide for planning and designing greenway projects. The guide takes a step-by-step approach to greenway development and addresses many issues that face greenway planners and designers" (Ryan, 1993).


A detailed "how-to" book describing ways to design parks to handle human use and environmental factors in the most cost efficient and environmentally effective way. Illustrations and photos are used extensively throughout the book. Examples are given for most problem/solution scenarios.
A guide for establishing park and recreation standards. Listing of nationally recognized standards for areas of park, recreation and open space development.

Contains a limited history of Railroads and trail development. The thesis analysis is based on the results of a survey regarding suitability, political and social issues and the legal aspects of developing a rail-trail.

"Traces the history of the greenway movement and its efforts to preserve and restore linear open space. Describes many benefits of greenways, particularly those used as bicycle and pedestrian trails, and includes a valuable bibliography of published and unpublished sources" (Ryan, 1993).

A comprehensive guide for site analysis, planning, development and construction. This book takes the reader through the entire process of developing a site; from site selection and analysis through circulation and planting concerns, to construction of buildings. Guidelines and standards are noted for each topic and are recapped in appendixes at the end of the book.

Stuart Macdonald is the State Trails Coordinator for the Colorado State Parks. He is also chair of both the National Recreational Trails Advisory Committee and the National Association of State Trails Administrators. This article covers the diversity of trail users with valuable information on developing interest and finding for multi-use trail corridors. A listing of creative ways to include trails and greenways in comprehensive plans is also included.

This thesis contains a limited history of linear parks in the U.S., opposition to rail-trails and adjacent landowner concerns. The analysis was based on surveys done at the Root River Trail and the Luce Line Trail. Results of this analysis includes comparisons of owner/property characteristics, trail desirability, landowner/professional opinions and adjacent property values.
A detailed study which compares the economic and social characteristics of the Heritage Trail, St. Mark’s Trail and the Lafayette/Moraga Trail.

This comprehensive guide provides an introduction and detailed explanation of the ISTEA program, as well as information on NRTFA and reauthorization. This is also available free on the world wide web.

This economic development handbook offers valuable guidelines and examples for determining the economic feasibility of a trail project. Included is information on real property values, resident expenditures, tourism, commercial influences, public cost reduction and benefit estimation.

A short, solution packed article regarding the reduction of damage due to vandalism in park restrooms.

A general guide book for implementing rail-trail policies into long range plans. This book offers policy recommendations and examples with an outline of planning activities. An updated version is available free on the world wide web.

"This book lays bare the essentials of park design." The author and illustrator (Donald Molnar), who are both landscape architects, have defined the keys to creating a successful park by examining the elements of design. These elements include ways to reduce maintenance and vandalism. Illustrations are valuable for quick reference. Contains useful charts, lists and survey forms in appendixes at end of book. Update available.

A how-to guide for planning, designing and building multi-use trails. This guide includes information on making your trail unique, involving the public, management and safety concerns and a plan for marketing and expanding your
trail. Includes a valuable annotated resource directory of published and unpublished sources.


This very valuable book contains "how-to" tips on beginning a citizen based coalition; developing feasibility studies; how to determine when a line will be abandoned and what to do when it is and funding issues. It also has several appendices containing extensive reference and resource information.


A detailed handbook for understanding environmental concerns regarding greenway development and use. Includes "how-to" information for planning, development and maintenance of a greenway with minimal damage to the environment. This book is written for use by the general public. It does not, for example, try to educate the reader on every aspect of soil impaction. Instead, the authors have only provided information important to greenway development. A valuable all-in-one resource.


A detailed handbook specifically written to address the maintenance concerns of urban green space including parks, parkways, trails and athletic fields. Designed to help establish a maintenance business. Although this book was written in 1977, the information it contains is still relevant today.


A handbook covering many aspects of park and public space construction. Includes a considerable number of detail drawings and photos. Excellent idea resource.
APPENDIX I

RESOURCES
RESOURCE LIST

American Trails
P.O. Box 200787
Denver, CO 80220
(303) 321-6606 Phone

Bicycle Federation of America
1506 21st Street, NW
Suite 200
Washington, DC 20036
(202) 463-6622 Phone
(202) 463-6625 Fax

Center of Excellence for Sustainable Development
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Denver Regional Support Office
1617 Cole Boulevard
Golden, Colorado 80401
(303) 275-4826 Phone
(800) 357-7732 Toll Free
(303) 275-4830 Fax
E-mail: sustainable.development@hq.doe.gov
World Wide Web: http://www.sustainable.doe.gov

Kansas Horseman Foundation
Mike Engeman, Director
1895 East 56 Road
Lecompton, Kansas 66050
(913) 887-6391

National Bicycle and Pedestrian Clearinghouse
1506 21st Street, NW
Suite 210
Washington, DC 20036
(202) 463-8405 Phone
(800) 760-6272 Toll Free
(202) 463-6625 Fax
E-mail: nbpc96@bikefed.org
National Park Service
Mary Mae Hardt, Regional Trails Coordinator
1709 Jackson Street
Omaha, NE 68102
(402) 221-3350 Phone
(402) 221-3465 Fax

National Transportation Enhancements Clearinghouse
1506 21st Street, NW
Suite 210
Washington, DC 20036
(202) 463-0641 Phone
(888) 388-6832 Toll Free
(202) 463-0875 Fax
E-mail: ntec@transact.org

National Trust for Historic Preservation
(202) 673-4000 Phone

Prairie Spirit Rail-Trail Management Office
Trent McCown, Trail Manager
134 E. Fifth Ave.
Garnett, KS 66032
(913) 448-6767 Phone
(913) 448-5877 Fax
http://www.usa.net/~garnetks/trail.html

Rails-to-Trails Conservancy
1400 16th St. NW
Suite 300
Washington, DC 20036
(202) 797-5400 Phone
(202) 797-5411 Fax
Attn: Transportation Enhancements Clearinghouse

Rivers, Trails and Conservation Assistance
National Park Service
Economics Clearinghouse
600 Harrison Street
Suite 600
San Francisco, CA 94107-1372
(415) 744-3975 Phone

Surface Transportation Policy Project
(202) 939-3470 Phone