COLORADO BICYCLING MANUAL

A GUIDE FOR USING ROADS AND TRAILS

Colorado Department of Transportation
Bicycle / Pedestrian Program
This edition of the Colorado Bicycling Manual is dedicated to Jerry Nagel in appreciation of his many years of service and commitment to the bicycling community in Colorado.

Thank You Jerry!
# Table of Contents

**Introduction** ................................................................. 1

**Rules of the Road** ........................................................... 2
  - Summary of Colorado Bicycle Law .......................................... 2
  - Road Hazards ..................................................................... 11
  - Roundabouts ................................................................... 13
  - Riding on Sidewalks and in Crosswalks ................................. 13
  - Right-of-Way .................................................................... 14
  - Activating Traffic Signals .................................................. 14
  - Bicycles and Traffic Violations ............................................ 15
  - Tips for Motor Vehicle Drivers ........................................... 15
  - Tips for Bicycling and Walking Near Large Trucks and Buses .. 17

**Rules for Shared-Use Paths** .................................................. 19

**Riding for Different Reasons** ............................................... 22
  - Bicycle Commuting .......................................................... 22
  - Effective Bicycling Skills ................................................... 27
  - Route Selection .................................................................. 31
  - The Employer Guide to an Employee Commuting Program ....... 33
  - Bicycle Touring .................................................................. 38
  - Bicycle Racing ................................................................... 39
  - Mountain Biking .................................................................. 40

**Equipment and Accessories** .................................................. 41
  - Identification and Medical Information ................................. 41
  - Helmet .............................................................................. 41
  - Bicycle .............................................................................. 43
  - How Safe is Your Bicycle? .................................................... 43
  - Flat Prevention ................................................................... 44
  - Does Your Bicycle Fit You? ................................................... 45
  - Optional Accessories .......................................................... 46
  - Climate and Clothing ............................................................ 48

**A Guide to Bicycle Parking** .................................................... 54

**Theft Prevention** ................................................................. 59

**Crash Information** ............................................................... 60

**Children** ........................................................................... 64
  - What Parents Should Know .................................................. 64
  - When Should a Child Start Riding a Bicycle? ......................... 65
  - When Should a Child Begin to Ride in the Street? ................. 66
  - Transporting Children ........................................................ 67

**Everyone is a Pedestrian** ....................................................... 68
  - Crossing Advice for Pedestrians ............................................ 68
  - The Signs of Safety are Everywhere! .................................... 69
  - Select a Safe Path Through Work Zones .............................. 71

**Glossary of Terms** ............................................................... 73

**Colorado Statutes Referencing Bicycling** ............................... 74

**Resource Directory** ............................................................. 77
This compendium of bicycling information has been prepared by the Colorado Department of Transportation (CDOT) Bicycle/Pedestrian Program. It is designed to encourage the use of bicycles for transportation by providing information about bicycling in Colorado to make it an easy, safe, and satisfying experience. All levels of government in Colorado are participating in engineering, enforcement, education, and encouragement efforts to make bicycling a practical transportation choice, and the Colorado Department of Transportation continues to encourage the development of facilities and programs to accommodate safe and efficient travel options.

Bicycling is a very energy efficient form of transportation and includes many benefits such as improved health, less stress, and reductions in air pollution, traffic congestion, and energy consumption. In addition, bicycles are affordable and inexpensive to maintain, and driving a bicycle is a lot more fun than sitting in traffic on a congested roadway.

The State of Colorado recognizes the benefits of using bicycles as an alternative form of transportation and highly recommends their use for commuting, errands, and recreation. Many trips normally taken by car can be pleasantly and efficiently done by bicycle. Bicycle transportation is particularly efficient for short trips of ten miles or less and can be combined with other alternative modes for longer trips.

Using a bicycle for one ten-mile trip results in the following savings:

- .5 gallons of gasoline
- $.75 saved on gasoline costing $1.50 per gallon
- .328 pounds of carbon monoxide are not produced
- .044 pounds of nitrous oxides are not produced
- .039 pounds of hydrocarbons are not produced

While these numbers may seem small when broken down into one ten-mile trip, they are significant when viewed statewide. For instance, Colorado’s population is approximately four million, and if one quarter of our population (one million people) replaced just one ten-mile motor vehicle trip per year with one bicycle trip, it would result in the following savings:

- 500,000 gallons of gasoline
- $750,000 would be saved on gasoline costing $1.50 per gallon
- 328,000 pounds of carbon monoxide would not be produced
- 43,000 pounds of nitrous oxides would not be produced
- 39,000 pounds of hydrocarbons would not be produced

NOTE: The calculations above are based on the following figures from the Colorado Department of Health:
- An average commuting vehicle gets 20 miles per gallon of gasoline
- An average commuting vehicle carbon monoxide emission rate is 14.9 grams per mile
- An average commuting vehicle nitrous oxide emission rate is 1.98 grams per mile
- An average commuting vehicle hydrocarbon emission rate is 1.79 grams per mile

Every person’s transportation choice counts! We all need to be conscious of and courteous to other individuals when sharing our roadways. Remember, streets and trails are for everyone and sharing is more than good manners!