

Great Trails:

Providing Quality OHV Trails and Experiences

A resource guide for the design, planning, construction, maintenance, and management of quality off-highway vehicle trail systems which are sustainable and fun to ride.

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In association with the National Off-Highway Vehicle Conservation Council (NOHVCC)



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Riders enjoy spending time with their friends and family while riding





Table of Contents


GREAT TRAILS

Providing Quality OHV Trails and Experiences

Table of Contents.....	III
Dedication	IX
Disclaimers	X
Contributors	X
Acknowledgements	XI
Introduction	XII

Part 1: The Building Blocks of Great Trails

Chapter One: Principles of Successful OHV Management	1
The Need for Management	
The Three Key Elements for Success	
Effective Application of the 4Es	
Design and Management Strategies for the 4Es	
The 3Ds: Dispersal, Dispersal, Dispersal	
Seat Time and Recreation Activity Time	
One-Way Trails	
Using Existing Infrastructure—Roads and Trails	
Variety	
Quality	
A Look Back	
Chapter Two: Planning: The Foundation of a Successful Project.....	17
Develop the Vision	
Conduct a Site Assessment	
Refine the Vision	
Build a Resource Map	
Develop a Trail Concept Plan	
Develop TMOs	
Perform Any Required Environmental Analysis	
Scoping and Stakeholder Involvement	
Build Broad-based Support	
Assemble the Remaining Foundation Building Blocks	
A Quick Review	
A Look Back	



Chapter Three: Developing the Trail Concept Plan.....	33
Section 1: Compile and Refine the Data	34
Examine the Constraints	
Identify the Control Points	
Examine the Opportunities	
Understand the Human Element	
Section 2: Assemble the Data into a Trail Concept Plan.....	41
Examine the Trail Inventory	
Examine the Road Inventory	
Establish a Perimeter Trail	
Connect the Remaining Pieces	
Establish Difficulty Levels	
Take a Break	
Develop Trail Data	
Send It Out for Review	
Develop Alternatives	
Develop Generic Design Guidelines	
Develop Generic TMOs	
A Look Back	
Chapter Four: Engineering and the Natural Environment	51
Section 1: Trail and Engineering Terms	51
Understanding Trail Terms	
Design and Management Implications of the Trail Prism	
Understanding Engineering Terms	
Design Implications of Horizontal and Vertical Alignments	
Guidelines vs. Rules	
Section 2: Physical Forces Affecting the Trail.....	59
Compaction, Displacement, Erosion	
The Interaction of Compaction and Displacement	
Special Considerations for Four-Wheeled Vehicles	
Erosion	
The Interaction of Compaction, Displacement, and Erosion	
Section 3: Understanding Tread Materials	69
Soils	
Rocks	
Design Implications of Rocks	
Section 4: Understanding the Dynamics of Water	75
Tread Watersheds	
Tools to Manage Water	
Design Implications of Water Dynamics	
Management Implications of Water Dynamics	
The Elements of Sustainability	
A Look Back	
Chapter Five: Preparing for the Field	83
Section 1: Gearing up for the Field	83
Safety and Risk Management	
Basic Field Instruments	
Flagging and Pin Flags	
Section 2: Finding the Way in the Field	87
Using Topographic Maps in the Field	
Using Aerial Imagery in the Field	
Using GPS Technology	

Section 3: Applying Engineering in the field	91
How to Measure Grade	
How to Find the Lowest Point in a Grade Sag	
How to Lay Out a Circular Curve without Instruments	
A Look Back	
Chapter Six: Tools in the Toolbox: Soil Stabilization and Trail Hardening	95
Section 1: Geosynthetics 101	95
Geosynthetics Defined	
Common Geosynthetic Shapes	
Section 2: Soil Stabilization Techniques	98
Soil Stabilization Materials	
Section 3: Trail Hardening Techniques	101
Gravel and Stoning Reinforcement	
Other Trail Hardening Materials	
The Good	
The Bad	
The Ugly	
A Look Back	
Chapter Seven: Tools in the Toolbox: Structures	115
Water Control Structures	
Erosion Control Structures	
Retaining Structures	
Structures for Controlling and Directing Access and Use	
A Look Back	
Chapter Eight: Tools in the Toolbox: Equipment	145
Heavy Equipment	
Hand and Mechanized Tools	
A Look Back	
Chapter Nine: Tools in the Toolbox: Communicating with the Public	161
Signing	
Need	
Simplicity	
Clarity	
Quality	
Consistency	
Placement	
Monitoring	
Maintenance	
Types of Signs	
Things that Harm Signs	
Trail Maps	
Websites and Social Media	
Agency Staff	
Contracted Site Hosts	
Volunteer Trail Ambassadors and Rangers	
A Look Back	
Chapter Ten: Tools in the Toolbox: Management	177
Adaptive Management	
Closure Options	
Mitigations	

Vehicle Restrictions
Equipment Restrictions
Relocation and New Construction
Reconstruction
Utilize Existing Infrastructure
Entrance Management
Administrative Tools
Implement all of the 4Es
A Look Back

Part 2: Applying the Building Blocks in the Field

Chapter Eleven: Conducting Assessments.....	189
Routine Assessments	
Formal Assessments	
How Do I Know if I Have a Problem?	
A Look Back	
Chapter Twelve: What Makes a Great Trail Great?.....	205
Capitalize on the Physical Elements	
Understand and Design for the Human Elements	
Human Perception	
Human Feelings	
How the Human Elements Affect Design	
Create Trail Flow	
Provide for the Riders' Needs	
Create Variety	
A Look Back	
Chapter Thirteen: Trail Location and Design	223
Know the Complete Picture	
The Trail Location Process	
Work with the Landscape	
Layout and Design Fundamentals	
Speed Is An Issue	
Topography Is Good	
Vegetation Is Good	
Water Causes Issues	
Create a Recreational Experience, Not a Transportation Experience	
Avoid Point A to Point B Location	
Head for the Rocks	
Manage the Riders' Eyes	
Special Design Situations	
Road Crossings	
Creek Crossings	
Bridge Sites	
Ridges	
Meadows	
Climbing Turns	
Switchbacks	
Trail Junctions	
Sound Intrusion to Residents	
Grade Reversals	
Turnouts	
Troublesome Spots	

- The Fall Line
- Using Natural Surface Roads for 50-inch Trails
- Using Flat Ground
- Inability to Relocate Existing Trail
- Some More Tips
- Watch for the Red Flags
- Water, Water, and More Water
- Too Steep, Too Long
- Is There a Good Line?
- Is It a Fix or a Solution?
- Take a Trip
- Design for the Riders' Eyes
- Get Help
- A Look Back

Chapter Fourteen: Designing for Challenge.....255

Section 1: Challenge versus Sustainability 255

- Providing Sustainable Challenges
- Utilize Natural Features
- Utilize Design Features
- Utilize Manufactured Topographic Features
- Utilize Natural Topographic Features
- Utilize Manufactured Design Features
- Avoiding Too Much of a Good Thing

Section 2: Use the Trail Already There or Create a New One? 267

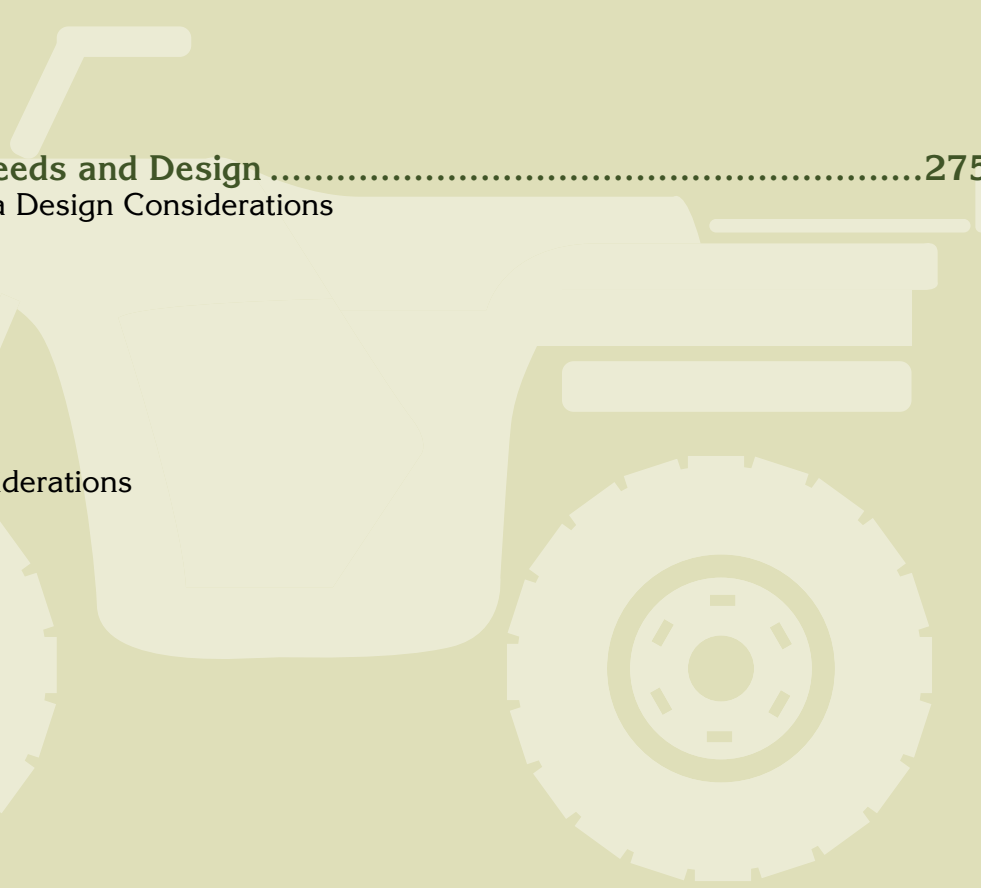
- Four Components of Sustainability
- Erosion
- Options to Consider

Section 3: A Different Approach to Challenge 271

- Design Easy-outs
- Design Technical Options
- Design with Multiple Lines
- A Look Back

Chapter Fifteen: Facility Needs and Design275

- Trailhead and Staging Area Design Considerations
- Site Signing
- Trail Access
- Parking
- Toilets
- Kiosks
- Loading Ramps
- Miscellaneous Structures
- Campground Design Considerations
- Mix It Up
- Grade
- Turning Radius
- Vertical Clearance
- Lateral Clearance
- Back-in Spaces
- Pull-Through Spaces
- Objects Hidden from View
- Group Sites and Areas
- Site Protection
- The Kiddie Effect



Skill Development Areas Design Considerations
 Kiddie Tracks
 Tot Lots
 Youth Training Areas
 Technical Terrain Courses
 A Look Back

Part 3: Building a Great Trail

Chapter Sixteen: Construction	295
Section 1: Preconstruction	298
Determine Construction Option	
Determine Construction Method	
The Packet	
Pitfalls	
Section 2 :Construction	300
The Process	
Management	
Pitfalls	
Post-construction Management	
A Look Back	
Chapter Seventeen: Conversion and Closure Techniques	309
Converting Natural Surface Roads to Trails	
Using Snowmobile Routes and Trails as OHV Trails	
Effective Closure and Rehabilitation Techniques	
A Look Back	

Part 4: Preserving the Trail Continuum

Chapter Eighteen: Managing and Maintaining a Great Trail	323
Section 1: Management	325
Management Focus	
Managing the Riders	
Managing the Trail	
Managing the Facilities	
Managing the Program	
Successful Management	
Section 2: Maintenance	328
Maintenance Objectives	
The Maintenance Process	
Required Skills for Maintenance Personnel	
Maintenance Frequency	
Maintenance Tips	
A Look Back	
Glossary	339
Bibliography	344
Index	348
About the Author	353

Dedication

This book is dedicated to those people who strive to provide, promote, and protect off-highway vehicle recreation opportunities. Thank you for what you do for the OHV community.

Great trails don't just happen. They are created, managed, and maintained through vision, passion, and sound engineering.





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Disclaimer

The photographs used in this book are just that; photographs. They are used as an example to clarify text. Unless otherwise noted, the photos do not represent a particular site nor are they intended to reflect on the management, operation, or maintenance of any site. The photos are taken out of context and merely show conditions that can be and are anywhere.

Any brand names used or depicted do not represent an endorsement of the manufacturer.

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Introduction

In our fast-paced hectic society, it has never been more important to recreate; to immerse ourselves in an activity other than work with our family and friends and plunge ourselves into a different realm. Indeed, recreation is really re-creation: the act of rejuvenating our minds and bodies. Most people who recreate in the great outdoors utilize trails to enhance their experience, and they especially enjoy a great trail. A great off-highway vehicle (OHV) trail offers an outstanding recreation experience, but it can trigger something deeper than that; an emotion, an inspiration; the WOW, that invigorating, re-creating feeling. What made that trail so great and what created that feeling? A multitude of physical, subliminal, and emotional elements triggered that WOW feeling. How can it be re-created?

This book offers guidance on the planning, design, and construction process, using proven principles and techniques, to create a great OHV trail on the ground. But it goes beyond that. Creating a great OHV trail is one thing, but keeping it great for the long term is another. How can the trail be managed and maintained to preserve that special quality? What can be done with an existing trail to make it the best that it can be?

While it is difficult to teach creativity, managers can learn about the elements, tools, and techniques they can incorporate into a project to help ensure its quality and success. With the right mix of those elements and with the right frame of mind, the outcome just may be creative.



Traditionally, trail planning, design, construction, maintenance, and management are separate processes. Most agencies fund these steps separately and often different departments within the agency handle each one. However, to have a truly great trail system, it is important to realize that

THE GREAT TRAIL CONTINUUM



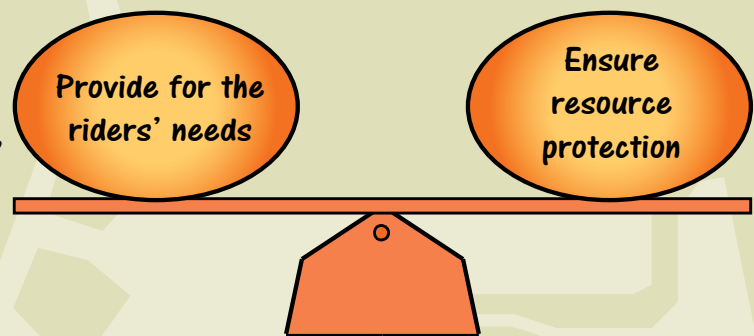
all of these steps are really components of one process: the process of creating a great OHV trail. Each component must be implemented effectively or the whole project could fail. There have been trails planned and designed well, but poorly constructed; and there have been trails planned, designed, and constructed well, but poorly maintained or managed. The result may not be failure in all cases, but it isn't total success either. The trail may not meet the riders' needs, may not be sustainable, and may be costly to maintain. The outcome is dependent on the sum of its parts. This book integrates those components into one process and one thought pattern.

Many books are available about trails, but from an OHV perspective, the information out there is: a) not relative to OHVs; b) out of date since technology or best management practices have changed; or c) not current since off-highway vehicle types and the vehicles themselves have changed. What was state-of-the-art technology 20 years ago may or may not be valid today. Certainly, the vehicle types have changed. Thirty years ago, motorcycles dominated the market and all-terrain vehicles (ATV) were an emerging market. Over time, motorcycle sales have flattened, ATV sales have soared and flattened, and recreational off-highway vehicles (ROV) are the booming emerging market. Trail planning, design, construction, maintenance, and management techniques all need to change to adjust to the changing market and ensure that what is on the ground provides quality, sustainable recreation opportunities. Change will always occur, but the principles presented in this book will provide resiliency to that change.



Creative vision: Is this just a tree to be cut out of the way of the flagline, or is it an opportunity to create a technical challenge feature for an ROV trail?

In starting to write this book, the question was: Is an OHV-specific design guide needed? The answer was a resounding “Yes.” Off-highway vehicle modality is vastly different than any other recreation trail modality. Motorized vehicles have motors and this is a critical difference. With the motor comes the desire to use it. With power assistance, OHV riders can climb, tackle technical terrain, and travel farther in a single day than any other user group. Most also desire to challenge their vehicles as well as themselves. All of this creates trail system planning and design considerations unique to OHVs. More physical, displacing forces are being delivered to the ground making trail design and durability a critical factor. Most OHV trails are wider than non-motorized trails and they collect and channel more water, which needs to be mitigated through proper location, design, and engineering. All of this necessitates more emphasis on effective OHV management, maintenance, and thorough trail system planning. The wide variety of motorized vehicle types and activity types generates the need for multiple sets of design parameters to address trail width, clearing, grade, obstacles, drainage, hardening, etc. While many design principles and techniques may be similar to those for non-motorized trails, the scope and complexity of those applications is much broader with OHVs.



Across the country, each trail has a unique combination of soil, topography, vegetation, and climate, so there cannot only be one tool in the tool box to solve a problem. Also, the tools used in one place may not be the same tools used on another trail in a similar situation. The need for a variety of tools and options is also driven by the huge regional diversity in OHV use types, numbers and concentration of riders, private and public land ownership mix, state and provincial laws, and agency policies. Rather than offer charts and tables filled with values that may be meaningless to a manager’s situation, this book offers a thought process to help the technician or manager understand the use, the riders’ needs, the natural environment, and the physical forces being applied to any given trail. With this understanding, the technician or manager can predict effects and make informed decisions. There are principles and guidelines, but few absolute rights and wrongs. Rather, there are choices: If I do this, what will be the effect? Because we all live in the real world, the best solution might not be possible.



There is a main theme running through this book: provide for the riders' needs while ensuring resource protection. Applying this theme from planning to maintenance will help OHV managers achieve success, provide a high-quality recreation experience for the riders, and ensure resource protection.

The WOW factor is an important aspect of trails. WOW is relative depending on the age, skill level, and the desired recreation experience of the rider. When managers create a high-quality trail, thousands of people will ride that trail and have smiles on their faces at the end of it. That is a WOW for them and for the OHV manager. WOW generates energy,

What makes a great trail great? Understanding, knowledge, engineering, passion, vision, creativity and conscientiousness.

project support, compliance, volunteerism, and increased funding opportunities; all key elements in a successful project and successful OHV program.

Please note that for the purposes of this book, the term "OHV" refers to off-highway motorcycles (OHM), all-terrain vehicles (ATV) or quads, recreational off-highway vehicles (ROV), also known as utility vehicles or side-by-sides, and four-wheel drive vehicles (4WD). The term does not include snowmobiles or other over-snow vehicles.

Each chapter contains at least one of several insets:

A Look Back – a summary of key talking points

A Second Look – a photo or subject that has been brought up before, but is discussed again with a different option or viewpoint

A Closer Look – a subject that is brought up in the chapter, but is highlighted in more detail

A Case in Point – an actual example of a talking point discussed in the chapter

Tips, Tricks, or Traps – key points for success or failure

Need More? Learn More Here – key references that are applicable to the chapter material

Now, let's start down that trail to success...



Plan trails the right way or your riders may take a bad turn