

THE TREAD LIGHTLY! GUIDE TO RESPONSIBLE TRAIL BIKING

INTRODUCTION

*We did not inherit the Earth from our parents,
We are borrowing it from our children.
-Native American Proverb*

For many of us, enjoyment of the outdoors is the main reason we recreate – “to get away from it all.” Hunting, fishing, camping, trail riding, photography, canoeing, hiking, biking – you name it – are all very popular.

Off-highway motorcycles, trail bikes, dirt bikes—whatever you wish to call them—can make even back country areas accessible, bringing out the Lewis & Clark in all of us. Exploring can be tremendously satisfying, but we have a responsibility to our outdoor home: to keep it neat and orderly, just as we would our own homes.

The *Tread Lightly! Guide to Responsible Trail Biking* will help you prepare for an enjoyable outdoors experience and at the same time, help you to be a responsible, positive influence on nature and those around you.

Now...off to the wonderful world of responsible trail bike riding, the Tread Lightly!® way.

WHAT IS TREAD LIGHTLY!?

Tread Lightly! is an educational program dedicated to increasing awareness of how to enjoy the great outdoors with minimum impact. It emphasizes responsible use of off-highway vehicles, other forms of travel, and low impact principles related to outdoor recreational activities.

Tread Lightly! was launched in 1985 by the U.S. Forest Service to help protect public and private lands. Shortly thereafter, the U.S. Bureau of Land Management adopted the program. To maximize its effectiveness, program responsibilities were transferred to the private sector in 1990, making Tread Lightly! a nonprofit organization.

Over the years the program has steadily added new dimensions to meet the needs of all types of outdoor enthusiasts. The program’s message was expanded in 1997 to include the promotion of responsible water based recreational activities. These changes brought the USDI Bureau of Reclamation and USDOD Army Corps of Engineers on board as additional federal partners. Most recently the USDI National Park Service joined in partnering with Tread Lightly!.

Tread Lightly! unites a broad spectrum of federal and state governmental agencies, manufacturers of recreational products, media, enthusiast groups, and concerned individuals who

share a common goal of caring for natural resources. Through education and restoration, Tread Lightly! empowers generations to enjoy the outdoors responsibly.

Tread Lightly!'s message now reaches an international audience of outdoor recreationists. Through Tread Lightly!'s services, recreationists learn that opportunities to use the outdoors tomorrow depends on how they recreate today.

The message is simple: Conserve our environment! Make the commitment to follow Tread Lightly! principles as summarized in the Tread Pledge:

Travel and recreate with minimum impact
Respect the environment and the rights of others
Educate yourself, plan and prepare before you go
Allow for future use of the outdoors; leave it better than you found it
Discover the rewards of responsible recreation

TRAVEL AND RECREATE WITH MINIMUM IMPACT

By understanding and practicing proper trail bike techniques you will be reducing the impact you might otherwise have on the environment.

Remember to always . . .

- *Travel only in areas that are open to your type of recreation.*
- *Travel only on routes designated for motorized use.*
- *Do not create new routes or expand existing trails.*
- *Avoid sensitive areas.*
- *Cross streams only at fords where the road or trail intersects the stream.*

Anyone can ride fast, but it is the skilled rider who can ride carefully over challenging terrain with minimal impact to the ground.

Negotiating Terrain

Here are some tips to help you negotiate various obstacles and riding conditions you may encounter:

Slick Trails

- Many riders think that using more throttle will help them through slick or wet trails. Usually just the opposite is true, since high wheel spin merely turns your rear tire into a "slick." It's better to moderate the throttle and use a higher gear to gain maximum traction with minimum wheel spin.

Stream Crossings

- Blasting through streams stirs up the sediment in the stream bottom, making it difficult for fish and other aquatic life to “breathe” and find food.
- Crossing streams at high speed can also cause water to rush into your air box or electrical connections, drowning the engine.
- Cross only at established crossing or fording points, and check water depth carefully.
- Take it slow and steady, and try to identify big rocks or other obstacles *before* you begin crossing. If you fall, shut off the motor before it goes under to prevent it from sucking in water.

Logs

- Ideally, it is best to move a fallen log off the trail. If you cannot move it, go over it. Riding around it merely creates an improper trail.
- After gently popping the front wheel over the log, you will want to carry just enough momentum to get the rear tire over. If you do not, you will dig a rut in front of the log, and spend a lot of time and energy lifting your bike across.
- Again, too much throttle and wheel spin will not help.

Switchbacks

- Switchbacks are sharp, zigzag trails going up steep mountainsides. They are there for a reason—to keep grades low and prevent the trail from becoming a miniature river during a storm.
- Skilled riders work their way through these challenging features with minimum wheel spin.
- When riding switchbacks, avoid roosting around the apex of the turn when climbing, and brake-sliding while heading down. Both of these techniques can gouge out the trail, causing unnecessary trail damage.
- If the turn is tight (going up), skilled riders can try lofting the front wheel slightly while pivoting on the rear tire. It is a tricky move. Do not try it in a dangerous spot.
- When going down extremely tight turns, you may find it easier (and safer) to get off the bike (to the *inside* of the turn) and pull it around. First, shut the engine off, put it in first gear, and use the clutch like a hand brake for the rear wheel.

Ruts

- Stay relaxed over the bike to allow for any sudden direction changes the ruts may cause.
- Look ahead, and use smooth throttle control.
- Avoid digging the ruts deeper than they already are, and be wary of tree roots or rocks spanning the ruts.

Meadows and Marshy Areas

- These areas deserve special protection—it is best not to go through them at all.

- Look for trails around the edges where the soil is more firm and dry. Ruts made in meadows leave a “lasting impression” on the environment and everyone who sees them.
- When you cross a meadow on a trail, stay on the existing track. If the trail is too muddy, find an alternate legal trail to your destination or turn around. Do not make new trails across meadows or marshes.
- Sensitive wildlife habitat (i.e. wetlands, streams, meadows, or fields) should be avoided. Riding through undergrowth or across meadows can destroy nesting sites and other sensitive habitats. Stay on only designated trails and roads.

Rocks

- Ride loose rocks with your rear end slightly off the seat, looking ahead, easy on the throttle and in one-higher gear than you normally would use. This, together with a slight pull on the clutch lever, softens the power delivery to the ground, making for a smoother ride with less deflection.
- For big, stationary rocks, the technique is a bit different. Rise farther off the seat, knees bent, feet high on the pegs, and pick your line very carefully.
- Again, a finger on the clutch lever can soften the blow when you hit a well-anchored rock at the wrong angle.
- Take care not to let your feet hang down too far over the pegs, and beware of rocks on the side which could break your shift and brake levers, or worse yet, punch a hole in the engine case.

Sand

- Sand presents a challenge: you must stay relaxed, yet have a tight grip on the bars. Look far ahead, sit or stand with your weight toward the rear of the bike, gently squeeze the tank with your knees, and avoid chopping the throttle abruptly to keep the front end from “diving.”
- Easing off the throttle in loose soft sand can act as a natural brake for slowing down.
- Also, because of sand’s power and momentum-robbing characteristics, you may find it helpful to accelerate a little sooner and brake a little later than you normally would. This will help keep you on top of the sand and keep your movements more fluid. Practice this technique only in an area with no obstacles or hazards, and watch out for other riders.
- Avoid going at accelerated speeds where there is limited visibility. Even a slight mound of sand, immediate steep slope or abrupt change of angle can cause the front tire to drop abruptly into the sand, resulting in a loss of control.

Machine Tuning

- If your bike is not set up properly, it can make otherwise simple obstacles more difficult to overcome.
- To compensate for a poorly tuned motor, you may have to rev the engine at a much higher rpm just to keep it running—endangering yourself and potentially digging a rut around the turn. Gearing can have the same effect; if first and second gears are too high for tight trails, you will not have much fun.

- Riding an improperly prepared bike is not only tiring, but can cause extensive damage to the terrain while trying to make up for poor performance.

RESPECT THE ENVIRONMENT AND THE RIGHTS OF OTHERS

By respecting the environment, wildlife and the rights of others, you ensure that you and others will be able to continue to go trail biking and enjoy the great outdoors to the full extent possible.

Remember to always . . .

- *Respect and be considerate of other users so that all can enjoy a quality experience in the outdoors.*
- *Be courteous when riding and yield to horses, hikers and mountain bikers.*
- *Respect wildlife. Be sensitive to their life sustaining needs by keeping your distance.*
- *Comply with all signs.*
- *Obtain permission to cross private land.*

Rules and Common Courtesy on the Road or Trail

Be considerate of others on the road or trail or camping in the area. A friendly “Hi!” goes a long way to building a positive image and relationships with other trail users. Be a goodwill ambassador for trail bike riders.

- Yield the right of way to mountain bikes, horses, and hikers. When encountering pack animals, stop and ask the handler how to proceed. Do not make sudden movements or noises, which may startle the animals. Move to the edge of the road or trail and stop. If possible, shut the engine off. Be courteous and helpful.
- Yield the right of way for drivers or riders on the uphill grade or overtaking you.
- Do not be a trail hog. Respect others regardless of their means of transportation; everyone deserves to enjoy the outdoors.
- Keep noise and dust down.
- Cross streams at fording points only. Driving up and down a stream bed disturbs fish, destroys habitat, and can damage your vehicle.
- Avoid “spooking” livestock (horses, mules, cattle, sheep, llamas) you encounter. Slow down and keep your voices low. Proceed with caution when encountering range animals.
- Ride only where permitted and always stay on the trail or road. Do not make your own short cuts, switchbacks, or trails. Others will think it is ok to follow your tracks, resulting in user created trails.
- Respect private land. Obtain the landowner’s permission before entering private land.
- If you encounter a gate on public or private land, leave it as you found it unless otherwise posted.

EDUCATE YOURSELF, PLAN AND PREPARE BEFORE YOU GO

Getting the most out of trail bike riding is a matter of preparation, knowing local rules, riding safely and exercising common courtesy. Taking time to plan for your trip will make it a more enjoyable and safe outdoor experience.

Remember to always...

- *Know local laws and regulations.*
- *Know which areas and routes are open for your type of recreation.*
- *Have the right information, maps, and equipment to make your trip safe, and know how to use them.*
- *Be sure your vehicle is compatible with road and trail conditions.*

Preparing for your Trip

- Be sure your motorcycle is properly tuned. Refer to the Tread Lightly! Trail Bike Checklist on page 10 of this booklet.
- Contact the land manager for additional information such as seasonal closures or special permit requirements.
- Obtain a travel map of where you are going. Determine which areas are open to off-highway vehicle (OHV) use and if there are any special rules to be aware of.
- Make a realistic trail plan and stick to it. Let someone know where you are going and when you expect to be back. Leave them a map and trail itinerary in case of an emergency.
- Expect the unexpected. Know the weather forecast for your destination and dress accordingly. Trail bike riders are exposed to the elements, and a great ride can turn into misery if you are caught unprepared. It is always better to have more clothing than you need than less.
- Check local regulations for sound levels, spark arresters, age limitations, or training prerequisites, and necessary registration requirements. Some states may require a temporary user permit for out-of-state visitors.

Safety on the Trail

Safety on the trail will get you through the day and leave you with a smile. Follow these tips to protect yourself and the environment.

- Know limitations – yours, your vehicle's and your companions'.
- Ride with a partner. Riding solo can leave you vulnerable in an accident or breakdown.
- Always wear a helmet, eye protection, long-sleeved shirt, sturdy pants, over-the-ankle boots, and gloves. Specialized riding jerseys and pants keep you cool and dry to combat

premature fatigue, while a chest protector and kneepads can be cheap insurance against injuries.

- Be certain each rider in your party has a map and knows where the group is going. Select predetermined rest stops and designate meeting places in case of separation. If you become separated, stay where you are on the correct trail and let the group find you. Taking different trails could result in you or someone in your party becoming lost. Go prepared in case you breakdown and have to spend the night.
- Avoid running your trail bike completely out of gas.
- Trail bike riding requires a high degree of skill and judgment. Using drugs, alcohol, or over-the-counter prescription drugs with “vehicle operation” warnings will impair your skills and may lead to an accident. Do not ride under the influence of drugs or alcohol.
- Be sure you know the location and operation of all the controls your trail bike has, including brakes, engine stop switch, throttle, shifter, and clutch. Learn how to find and use the controls without looking down at them. You will not have time to look for controls when riding, especially in an emergency situation. Control locations may vary from model to model. If you switch to another vehicle, take the time to familiarize yourself with its controls prior to riding it.
- Always maintain a safe following distance between riders. Tailgating cuts down on reaction time and can lead to collisions and injuries.
- Pace yourself. Trail bike riding is physically demanding and can be compounded by high altitude, heat, or cold. Drink plenty of water before and during the ride to avoid dehydration. Do not be too proud to take a less challenging route if you feel tired.
- If your bike is equipped with a headlight, riding with it ON at all times will allow other trail users to see you sooner.
- Tell someone where you are going and when you expect to return.

Minimum Impact Camping

Packing for a trip on you bike requires a bit more preparation than a day trip, but the rewards can be tremendous. Here are a few tips to enhance your trip and help you be more environmentally responsible.

- Use existing campsites whenever possible. Choose sites with durable surfaces such as sand, gravel, slick rock, or dry grassy groundcover.
- Camp at least 200 feet from water to avoid contaminating the water resources.
- Set up your tent and cooking areas in places where vegetation cover has already been lost in order to minimize further disturbance. Remember, good campsites are found, not made.
- When camping in a remote area, select a campsite approximately 200 feet away from the trail with boulders or vegetation to screen you from others.
- Avoid camping at or near historical, archeological, or pale ontological sites, or in areas of sensitive wildlife habitat. Travel and camp away from other campsites. Respect the desire of others for solitude.
- After breaking camp, make sure nothing is left behind.

- Plan meals before you leave. Repackage food into reusable containers or plastic bags. This will reduce the amount of waste that must be packed out.
- Select lightweight equipment such as backpack stoves and collapsible water containers. These are easy to pack, take less space, save weight and help reduce the impact on the environment.
- Consider selecting tents and camping gear with earth-tone colors that will blend into the surroundings.

ALLOW FOR FUTURE USE OF THE OUTDOORS, LEAVE IT BETTER THAN YOU FOUND IT

By leaving an area better than you found it, you have a positive impact on the land. Being responsible is a small price to pay for the rewards that come from visiting the outdoors.

Remember to always . . .

- *Take out what you bring in.*
- *Properly dispose of waste.*
- *Leave what you find.*
- *Minimize use of fire.*
- *Restore degraded areas.*

Trail Biking and the Environment

With the number of trail bike operators is increasing every year, the repeated and often unintentional misuse of trail bikes can quickly create environmental damage. By using common sense and taking a few precautions, trail bike operators can assure that the backcountry they frequent will remain available and in good condition for future use.

- Do not litter on the trail or anywhere else.
- If you brought it in, bring it back out - including used toilet paper.
- Do more than your share. If you see litter, pick it up.
- Clean your trail bike and all of your gear right after every ride to prevent the spread of noxious weeds. Weed seeds can be very small and easily hide in parts of a bike and stick to your gear.
- If you notice an outbreak of noxious weeds in an area, report it to the local manager or landowner.

DISCOVER THE REWARDS OF RESPONSIBLE RECREATION

By using common sense and courtesy, what is available today will be here to enjoy tomorrow. Do all you can to help preserve the beauty and inspiring attributes of our lands and waters for yourself and future generations.

Rewards

- Riding your trail bike provides the opportunity to get away from it all and build family traditions.
- Remember- if you abuse it, you'll probably lose it! Careless operation of your trail bike can cause damage and may result in closing areas to trail bike enthusiasts.
- Respect the environment and other trail users. By using common sense and common courtesy, what is available today will be here to enjoy tomorrow.

TRAIL BIKE CHECKLIST

Use the following list as a guide. Always consult your Owner's Manual for information specific to your trail bike. An ounce of prevention is the best way to ensure that your trail bike performs reliably.

Frame and Suspension

- ❑ Check for cracks, loose bolts, and sloppy steering. Tighten to specification. Make sure that the handlebars are straight with the grips securely fastened.
- ❑ If your bike has lights, make sure that they work, that the lenses are free of cracks, and that the headlight is aimed correctly.
- ❑ Check suspension for smooth operation. On a bike stand with the rear wheel off the ground, try lifting the rear wheel slightly. There should not be more than 1-2 mm of free play.
- ❑ Check for any fluid leaks from the fork or shocks. If they are the rebuildable type, replace seals and fluid as required. If they are not rebuildable, the leaking fork or shock must be replaced.
- ❑ On trail bikes with adjustable suspension, make sure the settings (rider sag, compression and rebound damping) are set to your weight and riding style. Suspension settings greatly affect traction and handling.

Wheels and Tires

- ❑ Check condition of tires. Replace badly "chunked" knobbies or tires with noticeable cracks in the sidewall area. Inflate to proper air pressure and tighten rimlocks. If you need to replace a tire, a good rule of thumb is "new tire, new tube."
- ❑ Check axle nuts for tightness, check for loose or broken spokes, and cracks in the bus or rims.
- ❑ Check that wheels turn freely without binding. Check for excessive free play by grabbing each wheel at the 9 o'clock and 3 o'clock positions and rocking side-to-side.
- ❑ Check chain and sprockets for excessive wear. Adjust chain to proper tension and lubricate.
- ❑ Check condition of master link.

Brakes and Controls

- ❑ Replace brake pads/shoes if you are not sure they will last the trip. Check hydraulic fluid level(s).
- ❑ Check rotors/drums for cracks or excessive wear. Replace those with any cracks, no matter how small.
- ❑ Check cables for smooth operation by disconnecting both ends and then moving the cable end back-and-forth. Look for any kinks, rust, or frayed ends. Lubricate or replace cables as required.
- ❑ Check that all control levers (hand and foot) move freely without being too loose. Apply a small amount of grease to all pivot areas. Adjust according to the owner's manual, and position to suit your riding style.

Engine

- Check for oil leaks. Repair or replace gaskets or seals. Change engine and transmission oil if needed. Adjust the jetting for the altitude of the riding area.
- Check to ensure that oil and other fluids are at proper levels.
- Be sure the air filter is clean and properly oiled.
- Check for crisp return of throttle with handlebars in any position. Clean and lube throttle assembly. Lube or replace cable as necessary, and check carburetor return spring for breakage or fatigue.
- Check spark plugs for carbon buildup, proper heat range, and gap. Replace if necessary.
- Check coolant level.
- Fill the gas tank with the correct type of fuel. For 2-strokes, follow the Owner's Manual for proper fuel-to-oil premix ratios.
- Check condition of exhaust pipe, muffler, and spark arrester. Repack muffler if excessive oil or soot is visible at the outlet; your bike will run better.

Tools and Emergency Items Checklist

Without a basic tool kit, a minor problem can mean an end to your trip. Many innovative aftermarket products are available, such as compact tool packs, fanny packs with special tool holders, and even tools designed for compactness and multi-function. You cannot carry a whole toolbox with you, but if you choose carefully, you can have a fairly complete kit that should suffice. Trailside repairs help you continue your ride, not rebuild your engine, so keep that in mind. Start by examining your trail bike for bolt/nut sizes. Only carry wrenches that will fit fasteners on your trail bike!

Tools

- Adjustable wrench (should be big enough to fit on each axle nut)
- Open end or box wrenches of appropriate sizes
- Slot & Phillips head screwdrivers
- Spark plug wrench
- Pliers or Vise-Grips (also useful as an emergency shift lever)
- Pocket knife
- Tire irons
- Air pressure gauge and pump or CO₂ cartridges

Optional tools

- Compact chain-breaker
- Hex-key or Allen wrenches
- Coiled "cable" saw for cutting deadfall

Supplies & Spares

- Patch kit (including 1-2 tire "boot" patches)
- Nylon sip-ties & safety wire
- Hose clamps (1 sm. – 1 lg.)

- ❑ Headlight bulb
- ❑ Master link for chain
- ❑ Nuts & bolts common to your bike
- ❑ Clutch & brake levers
- ❑ Front inner tube (can be used in rear tire for temporary emergency use)
- ❑ Silicone or quick-set epoxy glue
- ❑ Duct tape

Emergency Items

- ❑ Drinking water (16-32 oz. per person- increase amount for long or hot rides)
- ❑ High-energy food
- ❑ Map, compass, and signal mirror
- ❑ Rain jacket
- ❑ Tow strap
- ❑ Compact “space” blanket
- ❑ Waterproof matches or lighter
- ❑ Pencil & piece of paper
- ❑ High-power penlight or other flashlight w/spare bulb & batteries
- ❑ Small first aid kit
- ❑ Water purification tablets
- ❑ Toilet paper (plain white)
- ❑ Portable CB radio or cell phone

REMEMBER

If you abuse it, you will probably lose it! Careless recreational practices can cause damage and may result in the closing of an area. Respect the environment and other trail users. By using common sense and courtesy, what is here today will be here to enjoy tomorrow.

Tread Lightly!
&
Leave A Good Impression

