

## **PURPOSE BUILT MOUNTAIN BIKE TRAILS RULES OF THE TRAIL**

1. **Ride On Open Trails:** Respect trail and road closures — ask a land manager for clarification if you are uncertain about the status of a trail. Do not trespass on private land.
2. **Leave No Trace:** Be sensitive to the dirt beneath you. Wet and muddy trails are more vulnerable to damage than dry ones. When the trail is soft, consider other riding options. This also means staying on existing trails and not creating new ones. Don't cut switchbacks. Be sure to pack out at least as much as you pack in.
3. **Control Your Bicycle:** Inattention for even a moment could put yourself and others at risk. Obey all bicycle speed regulations and recommendations, and ride within your limits.
4. **Yield Appropriately:** Do your utmost to let your fellow trail users know you're coming — a friendly greeting or bell ring are good methods. Try to anticipate other trail users as you ride around corners. Bicyclists should yield to other non-motorized trail users, unless the trail is clearly signed for purpose-built bike travel. Bicyclists traveling downhill should yield to ones headed uphill, unless the trail is clearly signed for one-way or downhill-only traffic. In general, strive to make each pass a safe and courteous one.
5. **Never Scare Animals:** Animals are easily startled by an unannounced approach, a sudden movement, or a loud noise. Give animals enough room and time to adjust to you.
6. **Plan Ahead:** Know your equipment, your ability and the area in which you are riding and prepare accordingly. Strive to be self-sufficient: keep your equipment in good repair and carry necessary supplies for changes in weather or other conditions. Always wear a helmet and appropriate safety gear.

## **SPURPOSE BUILT MOUNTAIN BIKE TRAIL INFORMATION**

To keep trails from eroding, avoid riding wet trails.

### **WHAT MAKES PURPOSE BUILT MOUNTAIN BIKE TRAILS DIFFERENT?**

There are many types of soils that make up trails such as rock, sand, loam and combinations. When conditions are wet or during freeze/thaw weather events, trail surfaces are susceptible to ruts and packing. All single-track trail systems are concerned with erosion.

### **Land Management**

When mountain bikers partner with land managers to begin a trail project, there are agreements made up front on how the trail will be built and maintained. Sustainable trails reduce impact to nature and reduce cost and time to maintain. If trails cannot be kept sustainable, they cannot exist. If users don't work together to keep the trails sustainable, it costs additional volunteer time to restore damaged trail.

### **Who decides when trails can be ridden?**

Kenosha County Parks staff and volunteer trail advocates from Kenosha Area Mountain Bike Association (KAMBA) work together to determine trail open and closed status. KAMBA and Kenosha County rely on International Mountain Bike Association (IMBA) approved standards. IMBA is the leading organization on sustainable trail design and maintenance standards. All KAMBA's trail leaders attend a multi-day training course including hands-on training. Many have taken additional advanced level IMBA training as well. Only through this training and experience can one be put in charge of building and maintaining trails.

These leaders are the ones that partner with Kenosha County on making decisions such as closing trails. All of these individuals also ride regularly and have a vested interest in keeping the trails open whenever possible. If you want an introduction to the individuals that lead the efforts, join the KAMBA's Facebook page and read up on the ongoing construction and maintenance efforts, groom snowbike trails in winter, and create a great recreational opportunity for all park users.

## **TRAIL SCIENCE**

There are a lot of factors that go into sustainable trails. Here are a few of the key concepts that damage trails, and the science behind building trails that can best combat any negative impact.

### **Freeze/Thaw**

Most mountain bikers understand that riding a trail when wet and muddy can cause rutting, puddles and other forms of trail degradation. However, many of these same users don't understand that trails are at even greater risk during the freeze-thaw process.

During wet fall and early spring months, when the trail becomes saturated and temperatures drop, ice forms in soil voids. Through the night temperatures drop and the freezing process pushes soil grains apart, reducing particle cohesion and soil strength, which makes the soil more erodible. During the day temperatures increase and the trail surface thaws.

Even though the surface has thawed, the ground is still frozen just below the surface. Making matters worse, the frozen ground prevents precipitation from sinking in any further. This means the thawed layer at the surface is absolutely saturated with water so it is very easily damaged. If the area is disturbed by bikers or hikers, the tread will cut through the thawed layer right down to the frozen ground. The thawed layer will end up with ruts, which will persist even when the soil dries out.

This can happen typically between November-December, and again in March-April (and in the months between if we don't get a good snow cover). A number of factors play into how susceptible a trail is to the freeze-thaw process, including the amount of precipitation, the ability for the trail drain, soil type, and elevation. Due to these varying factors, one trail system may experience freeze-thaw when another trail system only 10 miles away may be safe to use.

Please be patient and please stay off of the trails until the trails are declared "OPEN." If you must ride, please ride the multi-use trails and stay off the single-track. Plan accordingly so that you can complete your ride before the temperatures rise and the trails start thawing out.

### **Outslope**

To avoid erosion, Kenosha County's trail designer used a proven formula: the trail tread should always be slightly higher on the uphill side so that water can easily drain off. A gentle outslope of at least 2%, preferably 5%, is ideal. Trails without this outslope catch, hold, and channel water, helping erode and destroy the trail. Proper outslope encourages water to sheet across and off the trail.

## **The Story of Good Trail Design**

Water will flow down a trail when it's trapped. Trail builders create proper outsoles and rolling grade dips to help push the water off the trail and avoid erosion. These rolling grade dips also provide that nice flowing feel to the trail. When people ride on wet trails, the rolling grade dips get blocked by ruts and by eroded and bermed soil. Moisture then starts to build up and either creates a muddy area, or eventually finds its way down the trail causing further erosion. If allowed to dry before riding, this would not happen.

When berms form, volunteers have to go out and fix these areas. These are the same volunteers that have built the trail and all the fun features we all enjoy. When the crew has to focus on fixing, that means they don't get to build new trails and features. One rider on a wet or melting frozen trail can damage many miles of trail in one ride.

## **The Science of Spring Thaw**

Trails are dynamic and change with the seasons and weather conditions. Most of the season the mineral soils that make up good hardened trails are fairly stable, but spring is the most sensitive time for trails, making them vulnerable to erosion and long-term damage.

As frost works its way through the upper soil cap, the soil moves and shifts. The organic/mineral soil mix eventually re-hardens and makes for a primo path through the woods, but it's critical to let this process happen on its own.

## **LET'S WORK TOGETHER**

Kenosha County and KAMBA would like trail users to become a part of the sustainable trails community and help show others that mountain bikers are respectful of the land, of those who make the trails possible, and of their fellow riding community.

There is a lot of effort that goes into making mountain bike riding possible in Kenosha County so please consider your fellow riders and the volunteers. Please join KAMBA to help build and maintain your trails.

## WINTER SAFETY & ETIQUETTE

Without a bit of packing, snow riding can be nearly impossible. On a normal year we simply get too much snow to ride on without the help of grooming.

- Only ride when temps are below freezing. If you ride above freezing you leave ruts in the trail that will re-freeze. Frozen ruts are no fun and tend to last all winter. You may also harm the underlying or exposed dirt trail, which will then need to be repaired before it can open in the spring.
- While we don't discriminate on tire size, 3.7" tires or wider are recommended. The thinner your tires, the more your bike will dig in. If you find yourself creating a deep rut please turn around and ride another day.
- In order to get everyone back riding as soon as possible, allow groomers and fat bikers to ride first after a 2" or more snowfall. They will create the base that everyone else needs to ride without destroying the trail for everyone.
- Groomed double track hiking trails are open to all users. Please avoid hiking and riding groomed single track trails when tires, boots and paw prints leave 1" tracks.
- Allow the trail time to set-up after grooming. 12-24 hours for fat bikes, 48 hours for everyone else.
- Watch for ice! It is common to have ice on the trail. Use studded tires as necessary.
- If you find yourself having trouble riding in a straight line, consider riding another day.
- Yield to other trail users as you cross their trails (hikers, skiers). STOP and look both ways before crossing other trails.
- Always wear protective gear, even in winter.
- Riding is allowed on the multi-use trails. Please be mindful to leave no ruts on the groomed sections of trail.
- If you have to get off your bike and push (common in the snow) keep your boot tracks off to the side and your bike tracks in the center of the trail. This will help groom the trail for the next person rather than rutting it up.
- Snow often provides opportunities to ride obstacles we normally would not in summer. Try not to unnecessarily cut the trail, however. Keeping to the path helps pack the trail and keeps the land manager happy.

## **Fat-Bikes**

Originating in Alaska, fat-bikes can handle sand, snow and singletrack all year long. “Fat-bikes” have wide enough tires to be able to float on top of the snow while still having enough traction to pedal.

## **Ruts**

One of the biggest enemies of winter riding is frozen ruts. These are caused when riders are out in above freezing temps. Tires dig into the snow and then freeze up. Often these ruts become permanent, as there is really no way to fix them unless we get enough snow to completely pack them over. Often tires reach below the snow and ice layer into the surface of the actual trail causing damage. This damage needs to be repaired before the trail can re-open in the spring. Please DO NOT ride when temps go above freezing.

## **Tracks**

Bikers aren't the only people who can quickly wreck a winter trail. Boot tracks cause the same issue and often are deeper and more random, creating a very bumpy trail.