
WHITE SALMON BIKE PARK

“Spoke Park”

2020 Update

Goals:

There have been minor changes or repairs done to the park since opening in 2013. Since our initial design and build, there has been no major maintenance issues. New updates are needed and being requested by the community to keep it fresh and keep in pace with how riding is evolving and increasing in popularity. These new updates were part of the original plans back in 2013 and are now being executed. The main goal stays the same: “A community bike park for everyone”.

The skills area will receive updated features that progress from easy to more difficult. The goal is to allow riders to have a place to build and hone their skills by having features that are progressive in nature. The newly updated features will be 60% accessible for all rider abilities, 30% will be focused on intermediate riders, and 10% will be expert only. We expect that as kids reach their teens, most accomplished riders will be able to ride everything in the skills area. These features will include: updated pump track, updated jump lines, step-ups and step-downs and various “skinny” lines. The overall focus is for **all levels of riders** with a major emphasis on the new, younger, riders who are just learning to ride bike park features. (age 2-12) Nothing else changes about the park and it will remain a “hidden gem” for those who make the effort to explore this amazing place. It’s a bike park for everyone including walkers, runners and hikers.

Timeline:

We expect to begin work in early spring and after we have accomplished our fund raising goals and only when the conditions allow. We are currently fundraising and seeking donated services and resources. (Machine rentals, lumber, and clean soil) We are submitting an updated SEPA Checklist to the City of White Salmon as suggested by Pat Munyan. We will work closely with the Gun Club for road access and we will need major community support.

Budget Estimations:

Lumber:

63	10'	4x6	\$315	
60	8'	2x8	\$150	
260	12'	2x4	\$1300	Total: \$1500-2000

Dirt:

Clean, debris free, rock free, soil
900-1000 yards soil
100-130 truckloads **Total: \$25,000**

Machine Rental:

4 weeks at 130-180 hrs **Total: \$12,000**

Designer and Execution Manager:

Gary Paasch (Expert trail and park builder. 160-200 hours @ \$90 per hour
Total \$15,000

Volunteer Hours: Total \$0

120-200

Estimated Funds Required: \$30,000 - \$50,000

Funds required from the City of WS: \$0

It has been a pleasure and a challenge designing the White Salmon Bike Park. With the constraints created by the steep side slopes and the location above Jewett Creek the guidelines of the International Mountain Bicycling Association (IMBA) and other trail building industry members have been strictly followed in an effort to both minimize erosion and maximize the user experience. The environmental sustainability of a trail is of the utmost importance in to any trail builder and has been a priority throughout the process of designing and building the White Salmon Bike Park.

Here is an outline of a few of the guidelines created by IMBA in partnership with the USFS, BLM and other trail building industry members. If this brief outline interests you I would encourage you to take a look at IMBA's publication "Trail Solutions" which can be found at www.imba.com

IMBA has 5 essential elements for building sustainable trails.

1. Half rule.
2. The ten percent average grade.
3. Maximum sustainable grade.
4. Grade reversals.
5. Outslope.

Half Rule:

A trails grade should not exceed half the grade of the sideslope the trail is traversing. If the trail's grade exceeds half the slope's grade, it's considered a fall-line trail. Water will be focused to travel the fall line, the path of least resistance, rather than flowing across it.

Ten percent average grade rule:

Generally, a 10% average grade is the most sustainable. This does not mean that all trail grades should be kept under 10%. In many situations, the trail may undulate, creating areas that have short sections steeper than 10%. But overall, the trail's average grade should be maintained at a sustainable grade of 10% or less. Short sections can exceed 10% as long as the half rule is still used (15% trail grades can be used for short sections as long as the sideslope is greater than 30%).

8' / 100' x 100 = 8% Average Grade is 8%

Maximum sustainable grade

Maximum grade, usually around 15% to 20%, is the steepest allowable grade based on several site-specific factors, which include: **Half Rule** (the trails grade is less than half the sideslope grade); **Soil Types** (some soils support steeper grades than others); **Rock** (solid rock or rock embedded slopes can be steeper); **Annual Rainfall** (heavy rainfall leads to water caused erosion, low rain leads to dry loose soils); **Grade Reversals** (a short dip followed by a rise forces the water to drain off the trail); **Types of Users** (low impact users, hiking and biking, can sustain a steep grade. While higher impact users, horses and motorized should

have lower maximum grades); **Number of Users** (higher anticipated use leads to lower grades); **Difficulty Level** (trails with a higher degree of technical challenge tend to have steeper grades, grade reversals and armoring are necessary to ensure sustainability).

Grade Reversals:

A grade reversal is a spot at which a climbing trail levels out for about 10 to 50 feet before rising again. This change in grade allows water to exit the trail tread at the low point of the grade reversal. Grade reversals are recommended every 20 to 50 feet. Grade reversals are also known as: grade dips, grade brakes, drainage dips and rolling dips.

Outslope

As the trail contours across a hillside, the downhill, or outer edge of the trails tread should be slightly lower than hillside, or inside edge by 5 percent. Outslopes encourage water to sheet across the trail rather than traveling down the trails center. Outslopes can be difficult to maintain in loose soils. Constant impact from users tends to compact the center of the trail and push soils to the sides. Frequent grade reversals are essential in order to drain water from the trail in this situation.

Considering all the guidelines from the international Mountain Bicycling Association I feel we have designed a very sustainable bike park. The park has a beginner friendly trail that loops the perimeter of the property. This trail was designed and built at a 3% to 5% grade with many grade reversals which aid in proper drainage and reduced erosion. There is an advanced trail designed and partially built where the two potential new bridges will be located. The proposed bridges span a seasonal drainage from a city culvert and will decrease any potential impacts to the seasonal "stream" bed. The final trail in the park is a Jump trail that is built at a 6% grade with many grade reversals.

Minimizing erosion is very important to me for many reasons. As a trail builder minimal erosion equates directly to minimizing maintenance and the success of a project. As a conservation minded individual I strive to make sure the projects that I'm involved in are both environmentally and socially sustainable. As a leader in the trail building industry I have extensive experience in mitigating erosion issues and designing trails so as to avoid such issues. It's common, even with the best efforts to avoid wetlands and streams that the most sustainable location for a trail is near the water, and with proper design and maintenance we have worked through this challenge on hundreds of projects. I feel the park is designed to maximize user experience and minimize erosion and impact to the land.

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Bike Park





