

# **Trailblazers**

By

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## Trailblazers

From professionals to volunteers, a tremendous amount of deliberation goes into the construction and maintenance of mountain bike trails. Find out just how much work can go into even the simplest dirt path through the woods.

**Watch it here:** <https://youtu.be/sPbY-cwbxmU>

<p>Title card</p>	<p>“Trail maintenance is the process of keeping a trail at or near its original construction or intended standards.” -Trail Maintenance Manual, Department of Parks and Recreation, County Of Santa Clara, California</p>
<p>B-Roll montage of bad trails:</p> <p>Signage at Graham Hills</p> <p>Signage zoomed in</p> <p>Deep muck running down a trail</p> <p>Multiple deep ruts with leaves in them</p> <p>Tom Zumpano tests some rocks on a trail, only to discover that they are loose</p> <p>Trail ruts are made worse as a passing rider goes through them.</p>	
<p>SOT: Erik Mickelson Title card:</p>	<p>Erik Mickelson Field Manager, NYNJ Trail Conference Crew Member, Tahawus Trails</p> <p>“We’re trying to make sustainable trails, or repair trails to a sustainable state, which requires less maintenance in the long run.”</p>
<p>SOT: Jason Cruz Title card:</p> <p>VO + B-Roll- Workers putting mulch down on a trailhead</p> <p>VO + B-Roll- A freshly mulched trail</p>	<p>Jason Cruz Trail Rider</p> <p>“It’s real important to maintain the trails, and you know, keep the upkeep... to keep them in proper riding conditions for us.</p> <p>Trails, with time, get rutted up from riding, you</p>

<p>VO + B-Roll- Multiple ruts along a trail</p> <p>VO + B-Roll- A rider skidding their rear wheel along a trail</p> <p>VO + B-Roll- A stream runs perpendicular to a trail</p> <p>VO + B-Roll-A muddy rut on a trail</p> <p>VO + B-Roll-Another muddy rut on a trail</p> <p>VO + B-Roll- Another rut, this time in drier mud</p> <p>VO + B-Roll- A muddy trail feature</p> <p>VO + B-Roll- Mud and ruts at the bottom of a hill</p> <p>SOT- Back to Jason</p>	<p>know, skidding your rear brakes coming down some of the trails. You get runoff... water runoff; you get ruts in the trails from heavy rains and soil erosion, so all of those things take a toll on the trail, as well as the mountain bike takes a toll on the trail, but those are some of the important things to keep maintained on the trail.”</p>
<p>Title card</p> <p>Title card</p> <p>B-Roll- Jeff Johnson leads the viewer through a trail</p> <p>Title card- “Something like this”</p> <p>Title card- “This is what happens; nature takes over again.”</p>	<p>Without routine maintenance, trails run the risk of causing environmental damage, or becoming completely forgotten, like this one:</p> <p>Jeff Johnson Trail Rider, Builder</p> <p>“Doesn’t look like much of a trail, but... so it used to go around this tree, and then that fell, so then I think I made like a shortcut... something like this. This hasn’t been used at all so this is what happens; nature takes over again.”</p>
<p>SOT: Kathi Krause</p> <p>VO + B-Roll- a wet, muddy trail in Graham Hills</p> <p>VO + B-Roll- a fallen tree</p> <p>VO + B-Roll- a cyclist and their dog</p>	<p>““It’s a nonrenewable resource; once they’re gone, they’re gone. We need to keep the trails clear, we need to make sure they’ll be able to be used by all parties. I wanna ride the same trails... ten years from now I wanna be able to ride these things, I don’t want them to be gone because they’re built poorly and they’ve eroded so much over time.</p>

<p>SOT: Kathi in the parking lot of Kittatinny Valley State Park in New Jersey  Title card: Kathi Krause  Award-winning cyclist, owner of Dirt Rock n Root Training</p> <p>VO + B-Roll- a cyclist riding down a hill</p> <p>VO + B-Roll- fallen trees with up-and-overs on them</p> <p>VO + B-Roll- logs on the side of a trail</p> <p>VO + B-Roll- a chopped log</p> <p>VO +B-Roll- multiple use trail guideline sign</p> <p>VO + B-Roll- Kittatinny Valley State Park in New Jersey, on one of the first warm days of the year</p>	<p>Trail maintenance is keeping up. SOMETimes it's just moving logs out of the way.. removing brush and downed branches from there. But it's making the trails usable by all parties from all levels."</p>
<p>SOT- Gene Paul Arnold III  Title card:  Gene Paul Arnold III  Youtuber, <i>Regular Guy Mountain Biking</i></p>	<p>"You wanna ride, cause that's what you do, but you don't want to ruin the trails."</p>
<p>Armen Tekerian  Title card:  Armen Tekerian  Trail Rider</p>	<p>"Obviously, we're very very concerned about our trails. We've got amazing trails in the New York... in the New Jersey/New York area"</p>
<p>SOT: Shimon Peretz and Harvey Rottenstrch  Title card:  Shimon Peretz  Trail Rider</p> <p>Harvey Rottenstrch  Trail Rider</p>	<p>HARVEY: "So the more the trail is maintained, in ways, it's easier to ride the bike."</p>
<p>SOT: Erik Mickelson</p>	<p>"The main...i guess we could say degradation, or destruction, of trails is through erosion."</p>
<p>Title card:  When using a trail, be mindful of these points:</p>	

B-Roll of a tree in the wind, against the sky.	
Fade to black Title card: Trail Erosion	
SOT- Erik Mickelson	“The main...i guess we could say degradation, or destruction, of trails is through erosion.”
Title card	1. Trail Erosion
SOT- Back to erik	“So it’s mostly about managing soil loss from erosion. So the main way to do that is to monitor trail grades.”
Title card B-Roll: Graham Hills trailhead	A trail’s grade represents how steep it is. This value is usually expressed as a percentage.
SOT- Back to erik	“Depending on your soil type, around 15% grade soils tend to erode faster, depending on your soil type.”
SOT- Shepard Grinker  VO + B-Roll: Laura Kelly and Donna and Tom Zumpano navigate tricky mud at a low point in a trail.  SOT- Back to Shepard	“Like we’ve had in the last 24 months... a lot of rain, a lot of snowfall, a lot of freeze-thaw, the trails are more prone to get damaged easily. It’s hard to tell people not to ride bikes on the trails, especially when there’s thaw, when they’re muddy, and you have to take those into consideration when developing a trail network.”
SOT- Erik Mickelson  VO + B-Roll: POV shot of a biker on a wide trail. NAT SOT  SOT- Erik Mickelson  VO + B-Roll: small ruts at the bottom of a small hill  SOT- Back to Erik	“Think of it as road construction but it’s dirt road construction, or mini... mini, you know, narrow road construction. I mean sometimes trails are wider than... or as wide as roads.”          “As you get wider, it’s actually more difficult to maintain or stop soil loss. Soil loss is the primary change from a trail’s original, constructed state. When you first construct a trail, it’ll really never be that again; there’s always going to be a little bit of change. Even if you put artificial surfacing, weathering and

<p>VO + B-Roll: A worker pushes a wheelbarrow along a mulched path at a trailhead.</p> <p>SOT- Back to Erik</p> <p>VO + B-Roll: Laura and Tom investigate a small wooden bridge.</p> <p>SOT- Back to Erik</p> <p>VO + B-Roll: a pile of rocks, wood and dirt stuffed in between a rock and a tree.</p> <p>SOT- Back to Erik</p> <p>VO + B-Roll: Tom inspects some loose rocks on a trail.</p> <p>SOT- Back to Erik</p>	<p>traffic are gonna change the texture of that trail, and if you push grades and don't have enough drainage, you'll certainly lose that original state in which it was constructed."</p> <p>"But how can you keep it close to that original, or whatever was intended? ANd that takes, I guess, some science and art!"</p>
<p>Title Card</p>	<p>Trail Improvement</p>

<p>SOT: Kathi Krause</p>	<p>"Sometimes it's just moving logs out of the way.. removing brush and downed branches from there. But it's making the trails usable by all parties from all levels. It's not just 'hey there's a big tree there, let me put some logs in front of it!' It might be moving it out of the way because your beginners can't deal with it."</p>
<p>Title card:</p> <p>B-Roll: Kathi teaches her clinic a new skill</p> <p>B-Roll: Kathi helps a cyclist hop over an obstacle</p>	<p>Kathi is an award-winning cyclist who runs Dirt Rock n Root Training, a mountain bike skills clinic.</p>
<p>SOT- Back to Kathi</p>	<p>"So we want the trails to be around here forever. Trails are- erode and get, you know..It's a nonrenewable resource; once they're gone, they're gone. We need to keep the trails clear, we need to make sure they'll be able to be used by all parties. I wanna ride the same trails... ten years from now I wanna</p>

	<p>be able to ride these things, I don't want them to be gone because they're built poorly and they've eroded so much over time. I want to be able to get out and ride basically the same things."</p>
<p>SOT- Jeff points out an old line he had in a trail system. Title card: "These are massive trees; there's no getting around that!"</p>	<p>"I used to have a line that went down that way, but then look at all this stuff that fell! I mean those are massive trees; there's no getting around that!"</p>
<p>SOT- Shepard Grinker</p> <p>VO + B-Roll: a freshly-mulched trail</p> <p>VO + B-Roll: a trail section that goes over a large rock</p> <p>VO + B-Roll: a section of smaller rocks and more dirt</p> <p>SOT- Back to Shepard</p> <p>VO + B-Roll: trailbuilding equipment being leaned against a map at a trailhead</p> <p>VO + B-Roll: Two workers engage in conversation while looking at the map</p> <p>SOT- Back to Shepard</p> <p>VO + B-Roll: A bridge goes over a small stream that intersects the trail</p>	<p>"I'm a co-chair of Palisades MTB, which is the palisades mountain bike organization, and we're working on some potential programs to actually develop the land. The biggest challenge is the northeast, specifically New Jersey from the Hudson River to almost all west is very rocky, very technical terrain; it doesn't offer very many options for beginner level riders. Right now, the trails we're... are mostly hiking trails, and follow fall lines and erode very quickly and don't hold mud very well so we're creating a program, and a strategy, to create more bike programs locally, for the kids."</p> <p>"So right now, we're looking at existing trail network without completely rebuilding, and looking at areas that are normally difficult to maintain because they're either just inherently muddy or difficult to pass, and we're looking at different trail techniques to either, you know, reroute those trails, or improve them, so they're more passable and less prone to damage, long term."</p>
<p>SOT- Erik Mickelson</p>	<p>"With the trail conference, my primary role, well, many roles, but a good part of the year in the field season is training Americorps members. We have a conservation corps."</p>
<p>Title card</p>	<p>AMericorps is a national public service</p>

<p>B-Roll: Tom, Donna and Laura walk down a trail.</p>	<p>program aimed at maintaining and sustaining parks.</p>
<p>Title card</p> <p>B-Roll: a worker uses a tamper to make the dirt more firm, thus increasing durability.</p>	<p>Millions of americans volunteer with the organization, and according to the Corporation for National and Community Service, it reached a record high worth of \$167 billion in 2018.</p>
<p>SOT- Back to Erik</p>	<p>“We’re trying to make sustainable trails, or repair trails to a sustainable state, which requires less maintenance in the long run.”</p>
<p>Title card</p> <p>B-Roll: a rocky trail with a tree in the middle</p> <p>Title card</p>	<p>Americorps is not the only trail conservation program concerned with maintaining a connection to nature.</p> <p>Tahawus Trails LLC works with land owners, trail stewardship organizations, municipalities and parks to improve access to natural areas.</p>
<p>Title card</p> <p>B-Roll: A garden rake and shovel rest in a wheelbarrow after a hard day’s build.</p>	<p>Tahawus won the Trail Project of the Year award in 2010 and 2013, one of the most coveted awards in the industry.</p>
<p>Title card</p> <p>B-Roll: Workers use garden rakes to spread and aerate the mulch.</p> <p>Title card</p>	<p>They hold workshops covering construction skills and trail design for volunteers, operations staff, and landowners.</p> <p>Volunteers then take those skills back to their local trails, making vital changes to keep them sustainable.</p>
<p>Title cards</p> <p>Tom Zumpano Trail Rider, Maintenance Organizer</p> <p>Donna Zumpano Trail Rider, Maintenance Organizer</p> <p>Laura Kelly Trail Rider, Maintenance Organizer</p> <p>SOT- Laura Kelly, Tom Zumpano, Donna Zumpano at a trailhead</p> <p>VO + B-Roll- Tom ties off a trail marker.</p>	<p>LAURA: “You have to kind of remember, a lot of these trails have to be environmentally sustainable. If it’s through an area that cannot be sustained, you have to make changes to it, and it’s not necessarily dumbing it down, so much as it’s making sure we will have this trail going forward.”</p> <p>DONNA: “Not just easier but making it possible!”</p>



<p>SOT- Back to Laura, Donna and Tom</p> <p>VO + B-Roll- a small bridge over a perpetually muddy trail section</p> <p>SOT- Back to Laura, Donna and Tom</p> <p>VO + B-Roll- built up fallen tree</p> <p>VO + B-Roll- fallen tree that has been cut</p>	<p>LAURA: “Exactly. There’s other areas where, maybe people are thinking it’s been dumbed down because you move a rock or whatever.”</p> <p>DONNA: “Well if a tree goes down, there’s not really too many options, you have to...”</p> <p>LAURA: “Well, there’s always that option of, do you build it up or do you cut it? Right?”</p>
<p>SOT- Jeff shows the viewer the result of an awkwardly fallen tree on a trail</p>	<p>“This is off-camber, it’d be really hard to build an up-and-over on this because... it would be better if you had a straighter approach to it like this.”</p>
<p>SOT- Laura Kelly, Donna Zumpano, Tom Zumpano</p> <p>VO + B-Roll: Jeff and Ian go over two log-overs, one right after the other.</p> <p>SOT- Back to Laura, Donna and Tom</p>	<p>And so a lot of people are gonna say if you cut it- DUMB! Right? There’s other people who just want to build it up endlessly, but I can tell you there’s places where you then end up with, like, just constant log-overs, and you dont have enough time. Especially as newer mountain bikers, you dont have an opportunity to really, kind of, learn how to do something if you’re constantly thrown into this fray.</p> <p>DONNA: “I think that those people... that say that about the trails, should join us, cause then you could have some say in what we’re doing.”</p>
<p>Title card</p>	<p>Why It Matters</p>
<p>SOT- Kathi Krause</p> <p>VO + B-Roll: Kathi’s clinic at Kittatinny Valley State Park in New Jersey.</p> <p>VO + B-Roll: A trail splits in two at Graham hills. More experienced riders can hop over the fallen log if they wish.</p>	<p>“Changes to the trail need to be done for a purpose, not just because ‘Hey, I couldn’t get over that rock so I removed it.’ People need to upgrade their skills sometimes. But, there need to be go-around options, so everybody can get through. You can’t just put a 30 foot drop in there and expect everybody to go off there. Even a three foot drop- you need to have options, from beginners on up, and keep it so there’s something that makes all</p>

SOT- Back to Kathi	trail users happy, and it's hard finding that balance sometimes.”
SOT- Jeff Johnson	“Well I've always ridden bikes as a kid. I grew up in upstate New York, where we had lots of access to fire roads and the woods, and we were always just outside playing in the woods, riding our bikes, building jumps... that was before mountain bikes, and mountain bikes became a thing. You know, I was riding like a Schwinn Vista with a banana seat in the woods, and then mountain bikes became a thing, and it was sort of a natural... ‘yeah I might as well try this with the proper equipment.”
VO + B-Roll: Jeff rides down a trail, with his narration playing over it	“and so I really got into it in like the early 90s, when the bikes really started to become more specific to trails, and then I've just been with it ever since.”
SOT- Jeff and the viewer arrive at the dam  SOT- Medium shot of the dam	“Kind of nice with all the rain we just had. Pretty!”  “In the winter it freezes, it's kind of interesting over here.”
SOT- Back to Jeff  VO + B-Roll: Jeff rides with his son, Ian.  VO + B-Roll: Ian takes two jumps.  VO + B-Roll: Jeff navigates him and his bike across a narrow creek.  SOT- Back to Jeff  VO + B-Roll: Jeff and Ian climb a hill on their bikes.  VO + B-Roll: Ian takes another jump.  SOT- Back to Jeff	“I wanted my kids to be able to go with their friends and experience some of the things I did from my own childhood, I think, which was going out into the- just being outside... There's such a screen addiction going on nowadays with kids, like, they go inside, they sit on their devices... and they just... even my son, who's doing mountain bike racing now, will still go inside after school, and if I dont say something to him, he'll usually spend an hour or two just watching videos on his phone, which I guess is like watching TV when we were kids, or when I was a kid.”  “I want kids to get outside and enjoy, you know, the woods and nature, and have fun while they're doing it, cause hiking is fun, but biking is a lot more fun.”

<p>SOT- Kathi Krause</p> <p>VO + B-Roll: Clinic students practice hopping over something small with their bikes.</p> <p>VO + B-Roll: Gene Arnold III pops a wheelie.</p> <p>SOT- Back to Kathi</p>	<p>“A beginner rider is scared of anything. A slight little hill, a roll down that an advanced rider...’Hey, this is a piece of cake!’ They may stop, and be terrified and walk down it. But it’s really for beginner riders, and especially now there’s been such a growth of clinics, it’s taking advantage of the skills clinics and getting your basics down. It cuts years off your learning curve, so it really gets you up and being more confident, sooner.”</p>
<p>SOT- Armen Tekerian</p>	<p>“I’ve just... I’ve just been enjoying the trails that other people have been riding, but it’s time to give back.”</p>
<p>SOT- Shimon Peretz and Harvey Rottenstrch</p>	<p>HARVEY: “You know as bikers, we love everything because every trail is so different than another. Some have steep slopes; some have worse and you need legs, so really... you know it’s like you have three kids, which one you love the most? I love them all the same.</p>
<p>SOT- Trail crew poses for a group photo</p>	<p>“Mulch!”</p>
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	Ian Johnson Laura Kelly Donna and Tom Zumapno Shimon Peretz Harvey Rottenstrch Jason Cruz
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