

# Erosion Scavenger Hunt

Assess My Trails



# Why Bother?

When it comes to trail erosion, it's cheaper and easier to prevent or fix problems early before the situation gets bad. Erosion Scavenger Hunt helps you figure out whether your trails are or could be washing away from water running over them.

Use the following pictures and descriptions to look for signs of erosion on your trails. Then use the Recommended Actions slide to get advice on next steps to protect vulnerable spots.

# What You'll Need

Wire flags

Print-out of this presentation

DIY Slope Meter  
(located at the end  
of this presentation)



Pencil



# What You'll Do

1. Choose a section of trail no longer than 300 feet. Focus on areas with steep slopes, near water, or that you travel on most often.
2. Walk up the trail looking for *Erosion Warning Signs*. Place a flag when you find a sign and make a note on your Findings chart.
3. Walk down the trail looking for *Signs of Where Soil Moves From*. Place a flag when you find a sign and make a note on your Findings chart.
4. Walk back up the trail looking for *Signs of Where Soil Moves To*. Place a flag when you find a sign and make a note on your Findings chart.
5. Compare your Findings chart to the Recommended Actions slide to figure out next steps to protect your trails.
6. You can repeat this activity on other parts of your trails to find areas that are in better or worse shape.

# A Few Terms before You Start...

Mild

Erosion **is unlikely to** impact the trail in the future.

Moderate

Erosion **is likely to** impact the trail in the future.

Severe

Erosion **is already** impacting the trail and will likely get worse over time.

# Erosion Warning Signs

All trails have some potential for erosion. The weight of feet and tires presses down the soil and limits the trail's ability to absorb water, resulting in runoff that gradually wears away the trail.

But certain features make some trails more likely to erode than others. By knowing how to spot these features, you can identify and address problems before they start or get worse.

% Slope	Severity
2	Mild
5	Mild
10	Moderate
15	Moderate
20	Severe
25	Severe
30	Severe

**Trail Slope:** Runoff on steeper slopes has more erosion potential because it's moving faster downhill. Use the DIY Slope Meter to figure out how steep your trail is.



A photograph of a tree trunk in a forest. The tree has a thick, textured bark. At the base of the trunk, there is a vertical scar of dead wood, which is a result of machinery rubbing against the tree. The surrounding area is filled with green foliage and ferns.

# Mild

**Tree Damage:** A scar of dead wood found at the base of a tree next to trails. The result of machinery rubbing against the tree. Indicates the presence of compacted soils prone to erosion.



A photograph of a dirt path in a forest. The path is made of dark brown soil and is surrounded by lush green vegetation, including ferns and trees. The path leads into the distance, where it is partially obscured by more foliage. The lighting is bright, suggesting a sunny day, with sunlight filtering through the trees. In the top right corner, there is a yellow rounded rectangle containing the word "Moderate". In the bottom left corner, there is a white rounded rectangle containing the text "Exposed Soil: Bare dirt exposed to the full force of impacting rain drops".

Moderate

**Exposed Soil:** Bare dirt exposed to the full force of impacting rain drops



A photograph of a muddy, rutted path in a field of tall grass and bare trees, illustrating the concept of 'Moderate' erosion. The path is a narrow, muddy trail with deep ruts, winding through a field of tall, dry grass. The background shows a line of bare trees and a hazy, distant landscape. The overall scene is in a natural, somewhat overgrown state.

# Moderate

**Ruts:** Paths worn into a trail by the weight of traffic. They concentrate runoff, increasing the potential for erosion.



A photograph of a forest trail. The trail is a narrow path cutting through a dense forest of tall, thin trees. The ground is covered in a thick layer of brown and orange fallen leaves. The trail itself is a dark, narrow channel that is lower than the surrounding forest floor, which is covered in a layer of dry leaves. The trees are mostly deciduous, with some green leaves still on the branches. The lighting is soft, suggesting a cloudy day or a shaded forest.

Severe

**Inverted Trail:** A trail that is lower than the surrounding land. It concentrates runoff, increasing the potential for erosion.



# Signs of Where Soil Moves From

Rain turns into runoff when it isn't absorbed into the soil. Runoff causes erosion when it flows on a trail. The more runoff there is and the faster it flows, the more soil washes away.

In severe cases, it can be difficult and expensive to repair eroded trails. In the worst case scenario, repairs are impossible, and you'll lose access to a portion of your land.

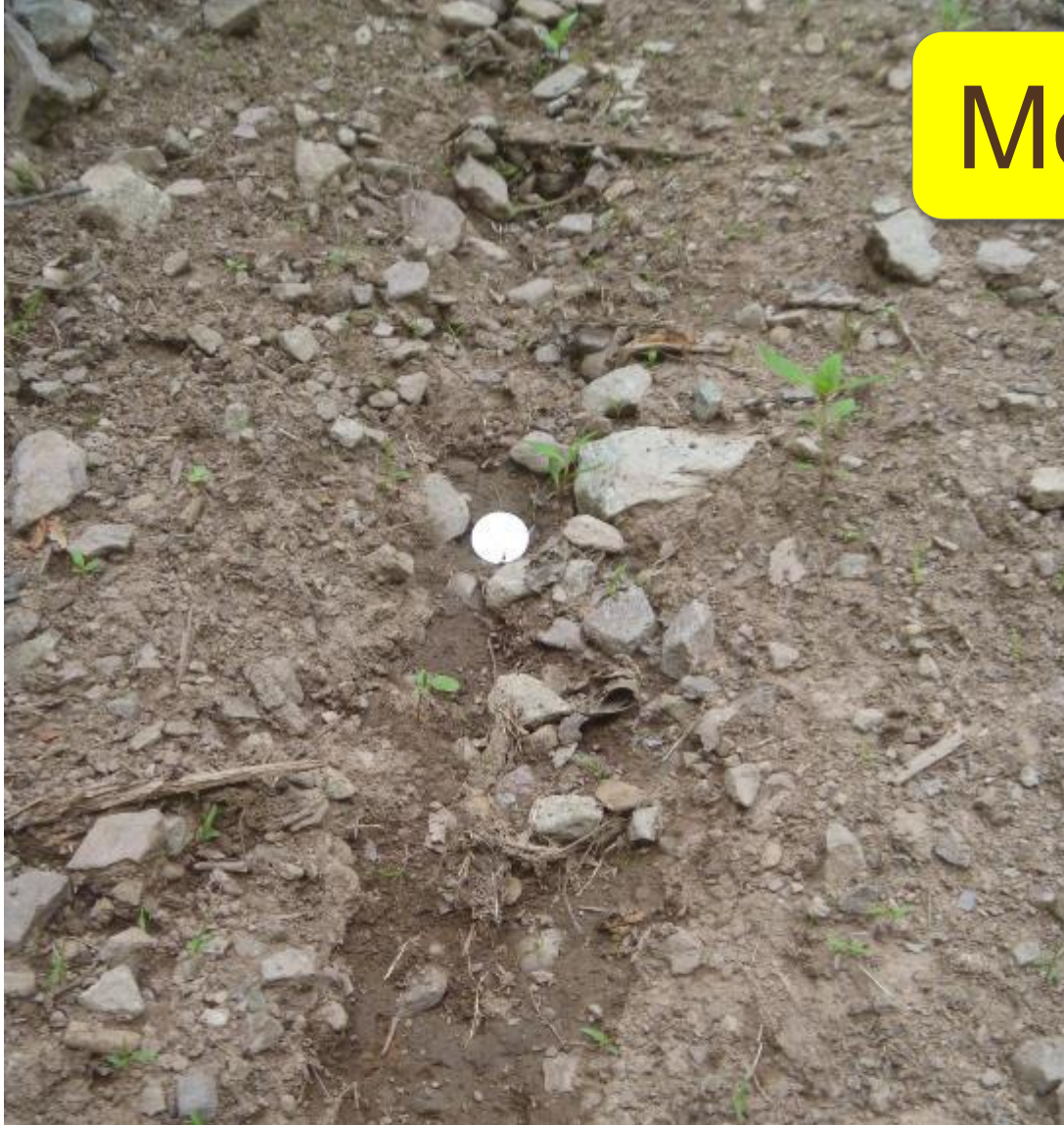
A close-up photograph of a rocky, eroded trail surface. The ground is covered with small, dark brown soil particles and numerous small, green, leafy plants. A silver coin, likely a US quarter, is placed on the ground for scale. A red circle highlights a specific pebble, which is a light-colored, elongated rock fragment. The word "Mild" is written in a green box in the top right corner.

# Mild

**Exposed pebbles:** On uneroded trails, pebbles will either be buried or only have their tops visible. The impact of raindrops washes away soil from pebbles and leaves them exposed.



# Moderate



**Rills:** Small channels ( 1 to 6 inches deep) resulting from a large amount of runoff. Rills concentrate runoff in a smaller area, increasing it's erosive power.



A photograph of a forest floor covered in brown pine needles and fallen leaves. Several large, dark, horizontal tree roots are exposed on the surface. In the background, there are several tall, thin trees with green foliage. A yellow rounded rectangle in the top right corner contains the word "Moderate".

# Moderate

**Exposed roots:** roots that become exposed after soil is compacted or washed away





# Severe

**Stoniness:** The loose stone remaining after runoff erodes smaller soil particles. It can be expensive and time consuming to fix stoniness once the smaller soil particles are washed away.



A photograph of a forest floor showing a deep, narrow gully that has formed in the soil, surrounded by fallen leaves and tree trunks. The gully is filled with dark, moist earth and some small plants. The surrounding area is covered in a thick layer of brown and yellow autumn leaves. Several tree trunks are visible in the background, some with light-colored bark and others with darker bark. The overall scene is a natural, undisturbed forest environment.

# Severe

**Gullies:** large channels ( < 6 inches deep) resulting from a large volume of runoff. Gullies concentrate large volumes of runoff, increasing it's erosive power.



# Signs of Where Soil Moves To

Soil doesn't disappear when runoff washes it away. When runoff slows down, such as when the land becomes less steep, it deposits the soil it washed away farther uphill.

Sometimes soil doesn't have a chance to deposit on your trails. Instead the runoff reaches a stream or pond and deposits the soil there. In these cases the added soil pollutes the water, harming plants and animals.



A photograph of a dirt trail in a forest. The trail is a narrow path of brown soil and small debris, surrounded by green grass and various green plants. Five red ovals are drawn along the trail, highlighting areas where the soil appears disturbed or eroded. In the top right corner, there is a green rounded rectangle with the word "Mild" in black text.

Mild

**Debris Waves:** Fine soil particles and debris deposited by sheets of water flowing down trails





# Mild

**Sediment Pool:** A collection of fine soil particles deposited after the absorption or evaporation of a puddle



A photograph of a soil erosion site. The ground is a mix of brown soil, small grey rocks, and green weeds. A yellow label with the word 'Moderate' is in the top right. Three red circles highlight specific areas: one around a piece of weathered wood in the upper right, and two around rocks on the right side, one of which has some white lichen or mold on it. A small white object, possibly a coin, is on the ground in the center.

# Moderate

**Buried materials:** plants, sticks or rocks buried by the deposition of eroded soil. The bigger the object buried, the more severe the erosion.

# Findings

[illegible]

# Recommended Actions

Based on your erosion findings, MyWoodlot recommends these next steps:

**Mild**



No action needed now,  
monitor erosion over time

**Moderate**



Complete Activity:  
Understand Best  
Management Practices

**Severe**



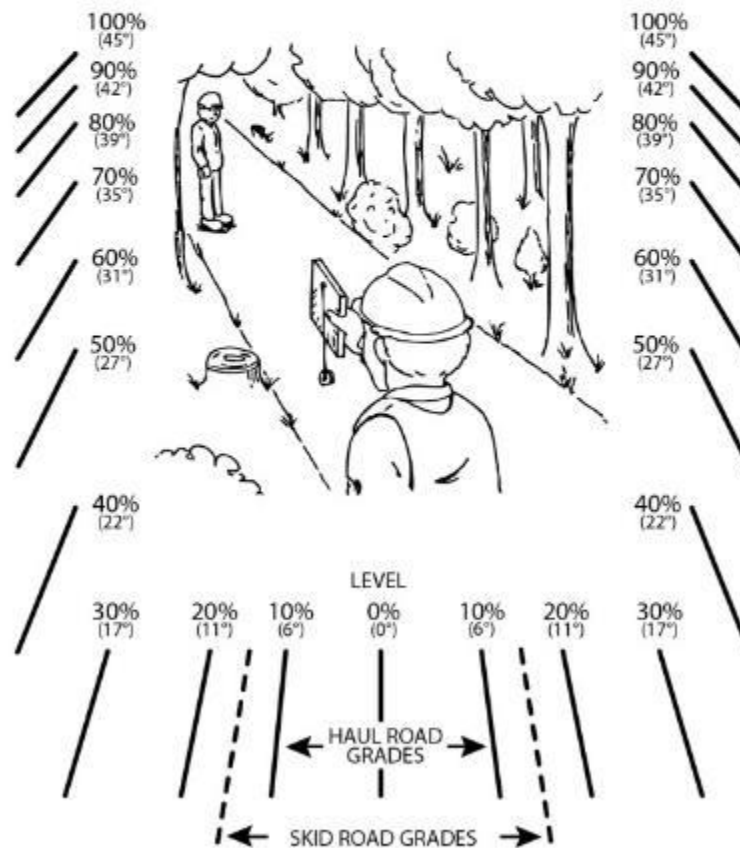
Get professional help from  
a forester, logger, or  
excavator

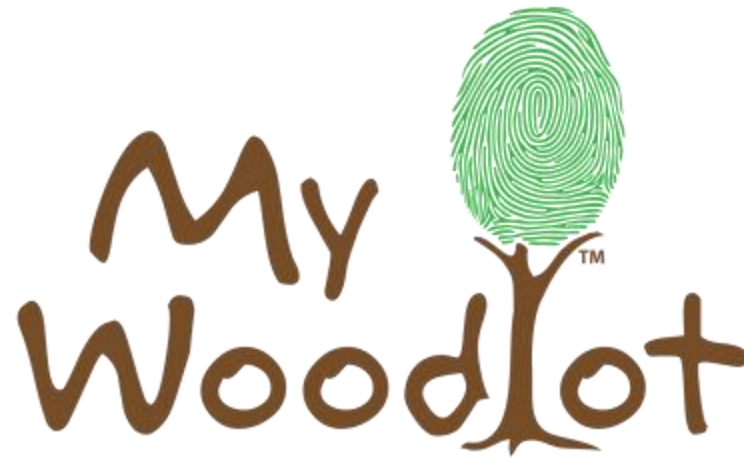
Remember! The key to controlling erosion is reducing the amount and speed of runoff. Removing small amounts of runoff from a trail at frequent intervals using Best Management Practices can prevent mild and moderate erosion from becoming severe. Once erosion becomes severe, it's expensive to fix, if it can be repaired at all. Often severely eroded trails must be abandoned, reducing your access through your property.



# How to Make Your DIY Slope Meter

1. Print out the slope meter on the next slide.
2. Cut out the slope meter and tape it to a piece of cardboard.
3. Where the crosshair appears on the meter, use a pen to poke a hole through the meter and cardboard.
4. Run a string through the hole and tie a knot in the back to hold it in place. The string should be long enough that it dangles past the bottom of the meter when held vertically.
5. On the unknotted end of the string, tie a small weight like a washer or nut.
6. Out on the trail, use the top of the meter to sight to a spot at eye level farther up the trail. If you're doing this activity with another person, you can sight to their head.
7. Keeping the meter steady, pinch the string against the meter to find out your trail's slope.





**Is an educational website created to help forest landowners become active stewards of their forestland. MyWoodlot is brought to you by the Watershed Agricultural Council in partnership with**



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