



# BAYFIELD AREA TRAILS

## Basics of Trail Maintenance & Building

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Siskiwit River Preserve, Cornucopia WI





## Basic Trail Maintenance:

Clear the corridor for easy passage:

Remove woody and herbaceous growth that encroaches on the trail

Remove tripping hazards

Clear debris from drainage structures

Pack out litter

Brownstone Trail

# The Partial Prune

Unattractive

Cuts won't heal well

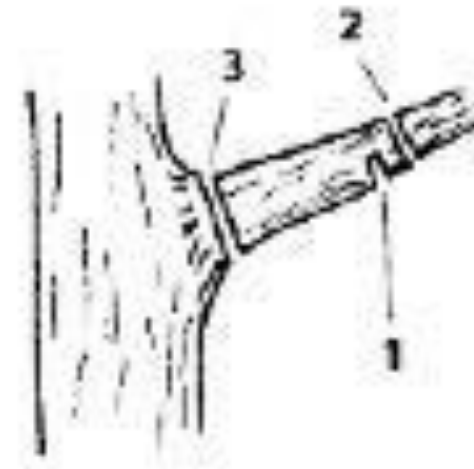
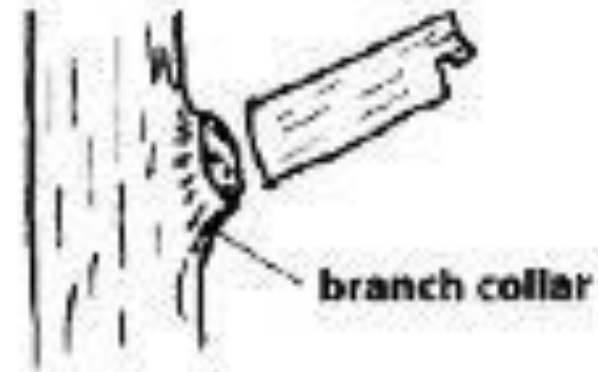
Frog Bay Tribal National Park Trail



# How to Prune Branches

Source: Foundations in Gardening,  
UW Madison Extension  
Horticulture Program, p. 216

**FIGURE 4. Branch collar (above) and 3-point cut**





Cut at the base of the branch  
Preserve the growth collar

Striped Skunk Trail on West Rim

Properly pruned!

Striped Skunk Trail on West Rim





Cut at ground level

Martin Rd Trail on West Rim

Don't leave brush on trail

Striped Skunk Trail on West Rim





Scatter brush off the trail

Striped Skunk Trail on West Rim

# Grass & green plants

Grass will grow and crowd the trail here  
Can use garden shears or a weed whip

Bear Cub Trail on West Rim





WOOD ANEMONE  
*Anemone quinquefolia*

Lost Creek Falls Trail

# Keeping Water off the Trail

Too much water causes soil loss, trail widening, and environmental degradation

Goals:

- Control the volume of water
- Slow the flow on the trail
- Prevent soil erosion

Lost Creek Falls Trail



# Water Diversions:

Drainage – the most important feature of any trail.

Keeps or directs water off the trail.

Ditches beside a raised treadway are in use here.



- Leaves and other debris obstruct drainage
- Drainage features need to be kept reasonably clean
- Leaves fall well into winter
- Makes both fall and spring maintenance important



## Water Diversions: Covered Box Culvert

- Leaves obstruct grate
- Raking needed



## New Box Culvert 2024

- Area previously flooded & eroded
- Protects lower trail



# Water Diversions: Conventional Culvert

Directs flow under trail

Brownstone Trail



Water Diversions:

Knick

– Gives water an exit

Brownstone Trail

# Water Diversions:

## Water Bars

- wood or stone
- not preferred

### How they fail:

Too short – water goes around

Too porous – water goes through

They rot away

#1 reason – they silt up and  
water goes right over them

Overlook Trail at Jerry Jay Jolly Trails





# Water Bars

- Sometimes your best choice
- Bars should extend beyond trail on both sides and carry water away from trail

Pileated Woodpecker Trail descending from plateau

A photograph of a gravel path in a forest. The path has a slight dip in the middle, which is highlighted by the text. The ground is covered with fallen leaves and small rocks. The trees are thin and bare, suggesting an autumn or winter setting.

## Water Diversions: Rolling Grade Dip

Preferred over water bars  
Built more quickly  
More effective  
Longer lasting

A photograph of a gravel path in a forest. The path is made of grey gravel and has a noticeable dip in the middle. The surrounding area is covered in brown and yellow leaves, indicating autumn. There are several thin tree trunks visible in the background. The text 'Rolling Grade Dip' and 'Leaves removed' is overlaid on the upper right part of the image. The text 'Ideally offset ~45°' is overlaid on the lower right part of the image. The text 'Brownstone Trail' is overlaid in the bottom right corner.

Rolling Grade Dip  
Leaves removed

Ideally offset  $\sim 45^\circ$

Brownstone Trail

Water diversions with a dozer – this can happen if a trail has become more of a gully where water flows – best avoided if at all possible. Can this be ‘fixed’?



Pileated Woodpecker Trail



Not too bad here  
with a dozer-made  
water diversion –  
a less extreme  
correction.

Pileated Woodpecker Trail

# Water Diversions: Grade Reversal

Least obtrusive

Takes advantage of  
natural dips in terrain

Keeps water flowing  
across rather than  
down the trail

Pine Bluff Trail on East Rim

LARGE-FLOWERED TRILIUM  
*Trillium grandiflorum*

Mt Ashwabay Sugarbush Trail



# Trail Hardeners:

- Reduce impact of foot travel through wet areas difficult to drain
- Protect soils and vegetation

## Rock Treadway

Hemlock Heights on the West Rim



A dirt trail winds through a wooded area with many thin, bare trees. A section of the trail is reinforced with smooth, yellowish-brown stones, creating a rock treadway. The ground is covered in dry leaves and twigs. A fallen log lies on the trail in the background.

Rock Treadway

Pileated Woodpecker Trail

A photograph of a forest trail. In the foreground, a wide path is covered in dark gravel. The path leads towards a wooden boardwalk bridge that crosses a small stream. The forest is filled with thin trees and a thick layer of fallen leaves on the ground. The lighting is natural, suggesting a sunny day with some shadows.

## Trail Hardeners: Gravel & Boardwalk

Striped Skunk Trail on West Rim



## Trail Stabilizers:

- Stabilize the tread, especially in steep areas
- Retain soil on the trail

## Rock Steps

Gil Larsen Trail near Sweeney Switchback



# Trail Stabilizers:

## Crib or Box Stairs

Siskiwit River Preserve

Trail Stabilizers:

Wood Steps



Hemlock Heights on West Rim

## Trail Definers: Keeping Users on the Trail

Prevent short cuts  
which compact soils,  
trample vegetation, and  
hasten trailside erosion

Pine Bluff on West Rim





Lost Creek Falls Trail



DWARF GINSENG  
*Panax trifolius*

Lost Creek Falls Trail

# Building the Pileated Woodpecker Trail

Short bridge to  
allow under-flow of  
water.

Pileated Woodpecker Trail





Pileated Woodpecker trail - Boardwalk over lateral waterflow – we ended up raising this another 3.5” (a LOT of work) to allow more water to flow unimpeded under the walkway.

It worked! 😊



Pileated Woodpecker Trail

Box steps changed to raised box-steps to allow for water to flow under the segments from the drainage coming off the trail.



Pileated Woodpecker Trail



Nice “Flow” to the trail – as it allows a nice flow of water underneath!

Pileated Woodpecker Trail



Pileated Woodpecker Trail



Houghton Falls Trail

*Thank You!*