

Trail Design: Drainage

Probably one of the most important aspects of a trail's design, regardless of trail type, is that of drainage. Without sufficient drainage a trail is bound to fail within the first five years. Although drainage improvements are site specific, there are some general rules of thumb that should be followed. They include

- The trail should have either a cross slope, or a running slope, that is 2%, with the surface draining towards the downhill side.
- When constructing trails on existing grades of greater than 30%, the trail should be crowned.
- Side swales and culverts prevent water from reaching the trail surface and give water on the trail surface a means to drain the water beneath the trail. Side swales convey water along the trails to a point where culverts can be placed to carry the water under the trail to daylight.
- Rolling dips help to prevent washouts on long running grades and steep grades. Rolling dips must be smooth and integrated into the grade of the trail. Their locations are dependent on the length of the trail above the dip and the size of the watershed that drains onto the trail.

Reference: Beaver County Greenways Plan