



WATER RESOURCES AND MOUNTAIN ROADS

Most of the impervious surfaces in low-density mountain areas is from roads. Runoff from roads becomes concentrated in ditches and culverts and causes erosion as more water leaves the watershed.



Managing road runoff begins during construction by using dirt berms and brush barriers, which are more effective than a silt fence.



Access roads such as the erosive driveway cut in this photo can be a source of large sediment loads.

Revegetation is the best BMP to help control soil erosion, sedimentation and slope stability. The County has adopted a revegetation policy and recommended seed mix.



Ditches need maintenance. When ditches fill with sediment, there is no capacity for runoff in the ditch and excess flow can cause scour downstream.



....or at an outlet

The Solution is to slow down stormwater flows, spread them out, and let the water soak in.

Please contact Clear Creek County staff at (303-679-2421) to discuss stormwater runoff reduction practices applicable to roads and driveways.



Slow it down



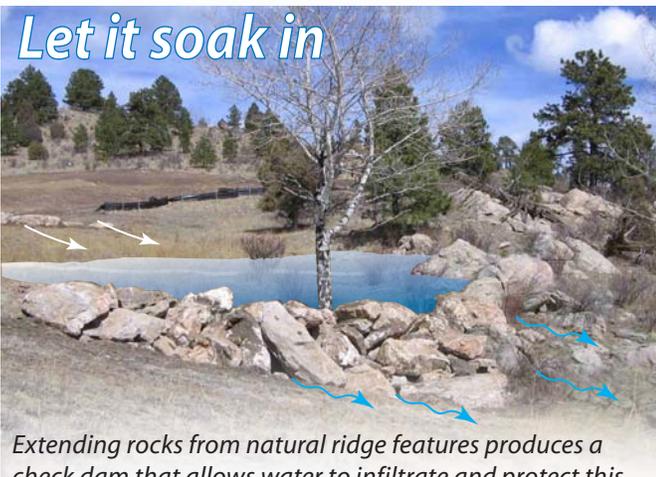
Placement of boulders and planting vegetation in the flow path help to diffuse the flow and slow it down.

Spread it out



- ↑ Culvert outflow can be routed to a buried level spreader to promote sheet flow.
- ← Concrete cistern seepage rings can be used as a flow diffuser. Large rocks are placed around the structure for stability and to allow the water to soak into the surrounding area.

Let it soak in



Extending rocks from natural ridge features produces a check dam that allows water to infiltrate and protect this drainage valley from erosion.



A series of rock check structures in the ditch line can provide many benefits including creating capacity and slowing runoff to promote infiltration, reducing scour, and allowing sediment to drop out in an area that is convenient to maintain.



Detention ponds provide temporary volume storage from larger storm events and allow excess water to infiltrate.