

Impervious Surface Restrictions in the Critical Area The Whys & Wherefores

A recent visitor to our Web Page asked us the following question:

I live within the buffer zone and Critical Area and was surprised that (river)rock mulch and impervious pavers are not allowed. What are the facts about impervious surface restrictions?

Our investigations revealed the following:

THE SHORT ANSWER:

Critical Area Impervious surface restrictions were established not only try to reduce runoff, but also to reduce habitat destruction. So while pervious pavement and other similar materials may initially generate less runoff than grass over time they do not; additionally, they are not considered an acceptable habitat for wildlife. Always check with appropriate organizations before proceeding with your project.

ADDITIONAL IMPORTANT DETAILS:

Stone ground covers and pervious pavers always count as lot coverage under the Critical Area law. The principal reason the State of Maryland legislature revised the law in 2008 was that many landowners were using the "pervious" ratio to install greater than 15% lot coverage. The reduction of habitat was an issue but just as important was the finding that over time all man-made surfaces and the soils under them become compacted through use, settling of materials, and clogging of the pores by sediment deposition. Testing of "pervious" surfaces has revealed that in a relatively few number of years compaction reaches 80% or more. This means that storm water that falls has little chance to soak in and the resulting runoff overwhelms the ability of adjacent pervious surfaces to infiltrate the water. The increased runoff sheet flows and picks up the chemical pollutants, fertilizers, and sediment that have landed on all the surfaces and these are carried away in the surface runoff via sheet flow, drains, swales, ditches, and stream channels to streams and surface waters.

The only man made surface that does not count per the law as lot coverage is a wooden deck with spaces to allow water to pass freely--this is presumably because wooden decks have little soil contact and therefor the soils below them do not become compacted from use over time. Wood decks do however reduce natural habitat and ground cover and are considered to be structures. New structures cannot be placed in the Critical Area Buffer without a variance, this is because the Buffer is required by the law to be fully established in natural habitat and structures of any kind reduce the Buffer habitat.

Areas that have natural plant material growing on them, particularly plants with deep roots have a great deal of surface area, above ground leaves, on the ground leaf litter and underground roots and biological activity that keep the soils pervious; preserve or enhance infiltration rates;and, perform chemical and biological processes that filter, break down, or take up pollutants. These areas capture and hold runoff, transpire or evaporate significant amounts of water, and slowly release infiltrated water not taken up by plants through the ground as base flow for streams and other surface waters.

Land in the RCA and LDA overlay zones can have no more than 15% lot coverage. Landowners in the IDA may exceed 15% but must install BMPs to mitigate all new coverage and reduce pollutant runoff by 10% from the current load.