

Interactive comment on “Determining the susceptibility of soils materials to erosion by rain-impacted flows” by P. I. A. Kinnell

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Responses to Anonymous Referee #2

As noted in my responses to Anonymous Referee #1, the objective of the manuscript is to describe a method that can be used to determine the susceptibility of erosion to rain-impacted flows without including an in depth review of the mechanisms involved in erosion by rain-impacted flows. Arguably, the title should begin with “A method for” to make this objective more clear at the outset. The paper is in a sense a Technical Note (a category that does not exist in many journals these days) and, as such, the material presented is directed at describing the method and illustrating the product of the method. The need to know what is new and not new is not necessarily important to a reader who may be interested in using the method.

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Eq (5) does, as noted by the reviewer, follow from Eq(2) [not Eq (1)] and the fact that water discharge is given by the product of flow depth (h) and flow velocity (h) and the paper was written based on the assumption that the reader knows that fact.

The comment made in the about the use of the method having a “potential to be used in studies on how surfaces eroding by rain-impacted flows mobilize carbon and chemical pollutants to flows that transport them across the landscape” was not intended to be associated with the qualitative ranking of the susceptibility soil surfaces. The comment was meant to suggest that “the high degree of control of the factors that affect the erosive stress means that the equipment may also have the potential to be used in studies on how surfaces eroding by rain-impacted flows mobilize carbon and chemical pollutants to flows that transport them across the landscape”.

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