

We would like to thank Dr. Grathwohl for his effort in managing this manuscript and the two anonymous reviewers for their time in reviewing the discussion paper, and their positive and helpful comments. Their comments are addressed in detail in the “reply” following their comments

Reviewer 1 noted that we were not careful in writing the set of equations from 5 to 7 and since this is significant for understanding the discussion manuscript, we address it below.

**Page 9023 starting at line 19–25 the text should have been:**

The authors argue that the value  $b=0.4$  can be derived by assuming that the velocity and the concentration are linearly related in the stream power equation. Then by applying Manning’s equation and assuming that the width of the rill is larger than the depth of flow, the velocity,  $V$ , is related to the runoff depth per unit area as:

$$V = kR_d^{0.4} \quad (5)$$

where  $k$  is a constant. Thus, the sediment concentration,  $C_w$ , is related to the discharge per unit area to the 0.4 power.

**Next on page 9025 line 11 to 20 should be replaced by:**

..... Thus the concentration per unit crop land  $C_c$  (averaged over a 14-day period) is

$$C_c = a_c^{P_{ce}} R_d^{0.4} \quad (6)$$

where  $a_c^{P_{ce}}$  a function of the cumulative effective precipitation,  $P_{ce}$ , since the beginning of the rainy phase of the monsoon and  $R_d$  is the 14-day average storm runoff. Assuming that the remaining area of the watershed is well protected and does not contribute significantly to the sediment load, the concentration at the watershed outlet,  $C_w$ , can then be written by combining Equation 4 and 6, related to the  $C_c$  as

$$C_w = A_c a_c^{P_{ce}} R_d^{0.4} \quad (7)$$

where  $A_c$  is the fractional crop land area in the watershed. This fraction.....