***Authors Response to Interactive comments on* "Shallow water table effects on water, sediment and pesticide transport in vegetative filter strips: Part A. non-uniform infiltration and soil water redistribution"** *by* **Rafael Munoz-Carpena et al.**

RC3- Anonymous (Referee)
Thank you very much for the encouraging comments and careful review of the manuscript. Below we address the specific comments raised on the initial submission. Please note that we uploaded the revised manuscript as a supplement to RC1 response comments, with your suggested changes also there. [comment #; AR-#: Authors response to comment #).

1. The research in this specific manuscript, "Part A", is not specific to VFSs, other than the notion the riparian buffers in particular are likely to often be affected by a shallow water table that can impact infiltration. This paper has greater applicability beyond just VFS modeling, and has great value to hydrologic modeling in general. I would suggest that the authors consider modifying the title, abstract, and certain aspects of the introduction and conclusion to emphasize the broader relevance of this work as a step forward in improving the science of hydrologic modeling in general, beyond the simulation of filter strip processes.

> AR-1. Thank you! We have added this suggestion to the introduction and conclusions. "As SWINGO was accurate, fast, and robust when analyzing a variety of conditions, it is appropriate to couple with currently available hydrological models to gauge the influence of the presence of WTs on other landscape processes beyond the simulation of filter strips. The proposed integral equation has broader relevance as a step forward in improving the science of hydrologic modeling in general in many other settings, to study shallow water table effects on surface runoff, infiltration, flooding, transport, ecological and land use processes."

2. Figure 3: The symbology for the different soils and model simulations are a bit difficult to discern. Some improvement in differentiation would be helpful.

> AR-2. Symbols represent Richards eq. (RE) and lines the proposed model, where the different types of each represent the 4 soil types compared. We then revised the figure caption to clarify this.

3. Figure 4: Silty loam and sandy loam line symbols could be more distinct.

> AR-3. We originally used a different color and longer dashes for SandyLoam, but this might not be clear when printing in black and white. We now changed the line types to improve contrast and redid the legend to clarify this. The new version of Fig.4 is attached to this comment.

4. Figure 6: The caption says that RE simulations are shown on this figure, however, it appears that both model simulations shown in the figure are the new "simplified" method.

> AR-4. Yes, RE lines were not showing and are now added back in the revised manuscript. The new version of Fig.6 is attached to this comment.

5. Figure 7: "i" in the figures should be defined in the figure caption as the other variables are.

> AR-5. Yes, added to the caption as suggested.

6. Figure 9: It is not immediately clear what the different line symbology in this figure is meant to represent.

AR-6. The lines describe the trends in change of cumulative infiltration with water table depth for the same rainfall rate (i). We added definitions for K_s, D, h_b and i to the Figure caption.