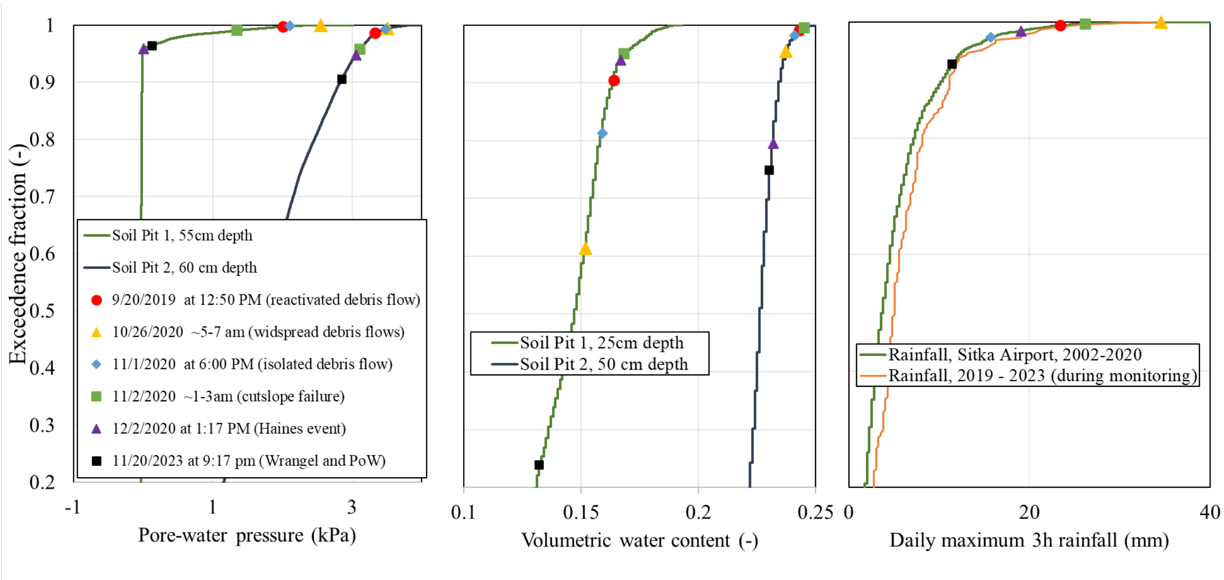
Dear Wei-Li,

Thank you very much for your positive assessment and some very constructive suggestions for improvement. We are glad that you agree about the importance of hydrologic information and given your expertise with hydrological field instrumentation and mathematical modeling, we are grateful for your informed input.

Regarding your first comment on Lines 298-232 (relative wetness): yes, you are correct. Theoretically each individual hillslope may have a critical pore-water pressure (or saturated thickness) that will trigger failure at that specific location. However, it is quite challenging to identify a critical value for a given state variable based on monitoring at only one location, and then that value may not apply effectively for characterizing failure potential throughout the rest of the study area. Indeed, across a heterogeneous landscape there are a multitude of hydrologic responses, not to mention spatially variable rainfall that are a factor. While there is a lot to learn from precise observations at a site that undergoes landsliding (e.g., Montogmery et al., *WRR*, 2009; Godt et al., *GRL,* 2009; Mirus et al., *WRR,* 2017; Liang, *J. Hydrol.,* 2020), there is also some value in long-term monitoring that can survive one or multiple landslide events. In fact, as Wicki et al. (*NHESS,* 2023) and others have demonstrated, it's possible to leverage hydrologic information from non-landslide prone areas to improve hydrometeorological thresholds for landslide triggering. Thus, what we have found through our combined research is that for warning purposes it is more important to understand the *relative change* in wetness throughout a landscape, rather than isolating a critical threshold value of a given state variable. Additionally, precise calibration of sensors to measure accurate volumetric water contents are important for some modeling calculations, but may be of limited value for warnings compared to capturing the range of responses to multiple storms (see Wicki et al., *Landslides*, 2020). As a consequence, we suggest that for LEWS, identifying a monitoring location and selecting measured variables that can best capture the full range of those hillslope wetness dynamics, as this may provide the most informative guide for generalized landslide forecasting. This is one of the main reasons for including our Sitka data example (Figure 1), since the soil moisture data in Soil Pit #2 exhibit very little dynamic responses and are thus of limited value, whereas the piezometer in SP #2 greatly enhances comprehension of the hillslope storage and drainage dynamics. Thanks for your observation, we will revise this section to make our argument clearer and more transparent.

Regarding your suggestion for reformatting Figure 1: OK, we agree that is doable and worthwhile. Probably it makes sense to include three panels with (a) rainfall and temperature, (b) volumetric water content at SP1 and SP1, and (c) pore-water pressures at SP1 and SP2. These revisions will allow readers to directly compare the responses and information between the two soil pits with appropriate y-axis scales. Thanks for this suggestion!

Regarding your observation on information in Fig. 1 and Lines 139-145: yes, the contrast you describe between pore-water pressures and soil saturations in SP1 vs. SP2 is indeed consistent with our intended message. In fact, the ephemeral saturation in SP1, an area that is usually *unsaturated*, has the strongest correlation as an indicator of when landslides are likely (see graphs below), but because of the ephemeral nature cannot provide much lead-time in advance of potential landsliding. We can certainly revise the text to better emphasize the contrasting utility of the two soil pits and types of monitoring equipment at each location.



Discussion Figure 1. Cumulative probability distribution and landslide occurrences near Sitka, Alaska (AK), for different observations of (a) shallow groundwater pressures measured every five minutes by piezometers in SP1 and SP2, (b) volumetric soil-water content measured every five minutes by four probes in SP1 and SP2, and (c) daily maximum accumulation of rainfall during any three-hour period. Note that all landslide events listed from September 2019 - November 2020 occurred within 2 km of Sitka, AK, (Patton et al., *NHESS*, 2023). Note that the November 2023 event resulted in widespread landsliding over 150km to the southeast across Prince of Wales Island and in Wrangle, AK, whereas the December 2020 event occurred 250 km to the northeast in Haines, AK (Darrow et al., *Landslides*, 2022).

Regarding your comment on Figure 2 (contrasting hydrometeorological thresholds): yes, your additional description is helpful. The inference we wanted to make is that despite previous subjective modeling choices, one might generally expect a threshold like the one shown in red, where an increasing antecedent saturation to result in a monotonically decreasing rainfall amount required to exceed the threshold (or for increasing rainfall a corresponding decrease in the required antecedent saturation). Perhaps it was not clear enough that this “general threshold” is merely a suggestion based on this concept, or a hypothesis we propose for further testing with further data and modeling. As you note, additional exploration of contrasting regions, hydroclimatologies, and other factors should help refine what threshold format(s) are more (and less) appropriate in different settings. We can further revise this section to clarify those points.

Once again, thank you for the suggestions, these will help further improve the clarity of our manuscript and emphasize our main points related to the value of hillslope hydrologic information.

Warmest regards,

Ben, Thom, Roberto, and Manfred