

Response to review comments from Anonymous Referee #2

We appreciate the comments by the reviewer and the positive assessment of the manuscript. Below we respond (in blue text) to the individual comments (in black text).

General Comments: This manuscript uses field-mapped stream extent and flow-routing from a digital elevation model to derive travel time distributions considering varying extents of the flowing stream network. The dynamic expansion and contraction of the stream network is not typically considered in this type of work. The manuscript makes a strong case for the acknowledgement of these processes in future travel time distribution work. I think the analysis is elegant and compelling and the manuscript is very well written. I have just a few questions and potential wording issues, which are noted below.

Thank you for these positive comments.

Specific Comments:

Page 6, Line 13: "in our study did ." I can't quite figure out what this means, it may need to be reworded.

We agree that this sentence wasn't very clear. We meant to say that the travel times in the referenced studies were much longer than our calculated travel times (shown in Figures 4-6). We will rewrite this sentence.

Figure 2: Definitely not critical, but it could offer helpful context to note the elevations of the lowest and highest contours in one of the maps.

We will add the lowest and highest elevations to the map.

Figure 4: I had a hard time interpreting the pie charts. From reading the caption, it seems like the blue in the pie chart represents the portion of the catchment sourcing water to the stream in 0-2 days (I think?). But then it doesn't seem like the pie charts match up with the corresponding maps. Are they somehow mismatched? If not, I'd suggest being more explicit what the pie charts represent. Another suggestion: I think they would be clearer just from a visualization perspective if instead of pies, they were rectangles...kind of like a progress bar on a computer. I think these would be easier to read and compare than the pie.

Thank you for pointing us to this issue. Unfortunately, the pie charts changed when the document was converted to a pdf. The white part of the pie chart became blue, the darkest blue part of the pie chart disappeared, and the blue parts became white. This of course made it difficult to interpret the pie charts and caused the mismatch of the pie charts and the maps. We agree that a bar chart could also be nice but the space in the figure is limited and better suited to a pie chart.

We will export the figure differently and double check that pdf displays the figure correctly (see the figure below for the correct pie charts).

