We give our responses to each reviewer query in italic typeface below each comment (reviewer comments in regular typeface), and we thank the reviewer for their comments and suggestions.

Reviewer comments:

Title: Could be made more generic. For example, by removing "remote Greenlandic River" and perhaps including "effective width" and "braided".

We agree with the reviewer that the techniques here speak to more generic applications. However, because we have only investigated this method at this one river, we felt it best to be specific in the title so that we do not mislead interested readers. We do agree, however, that "braided' and "effective width" should appear in the title, so we propose the title: "Semi-automated classification and effective width extraction from time-lapse RGB imagery of a remote, braided Greenlandic river"

P1313 L16: Add Young et al. (2015) to the references and you may wish to discuss the results from this paper.

As requested, we will cite this paper and include discussion of its results in our revisions: this paper is quite relevant, but was published after the draft was submitted. In the Young paper, the Icelandic river was of a much different scale and the authors used supervised classification/edge detection in conjunction with photogrammetric estimates of river slope and Manning's equation to estimate flow, which is an interesting and exciting technique. However, the need for a channel geometric assumption (to relate changes in height as observed photogrammetrically to depth), limits the approach to rivers where bathymetry is known or where channel geometry may be simply described. This description is certainly relevant and will be included.

P1313 L18: Add aerial photography to the list of techniques (e.g. Williams et al., 2013)

We agree that aerial photographs can provide similar data to the terrestrial time lapse platforms we discuss here, although they cannot acquire nearly as large a data volume and are more expensive to collect. We will add this point about aerial photography and this citation to our revision, as requested.

P1314 L16: After "methods" you could mention, as an example, the Structure-from-Motion techniques of Javernick et al., 2014.

SfM techniques are indeed a viable means of tracking river planform, but, like supervised or manual classification, are impractical for the data volume in this study. However, the technique does remain relevant for comparison and we will mention these techniques and this citation (among others, e.g. the work of Mark Fonstad) in our revisions, as requested.

P1318 L4: State "RMSE" acronym in full.

We thank the reviewer for pointing out this oversight, and will include the expansion of the acronym in our revisions.

P1318 L5: Provide more explanation of the "pairwise permutation".

The pairwise permutation tests all possible image pairs for similarity. That is, for image A, the histogram bin counts in each of its RGB bands is compared against bin counts of every other image and the RMSE (across all bins) of each comparison is recorded. Then, the process is repeated for every other image in the set, which yields (n^2-n)/2 RMSE values, where n is the number of images. The mean of an image's ensemble RMSE estimates are taken as its similarity index: essentially that image's similarity to every other image. Our reasoning (which was validated by the classification) was that images with a low value of this index would tend to be similar to one another and to 'mean' light conditions on the river, and thus easily classified from lumped training data.

As mentioned in our response to reviewer 1, there are other groups of images similar to one another that are not similar to all images as a whole that are removed by this process, and each of these groups could also be classified using their own lumped training data (and maybe require additional classes). This would extend the temporal coverage of the record, but since the similarity filter we propose yielded near daily coverage of the river we felt this simplest case to be sufficient for the river in this study and did not identify further groups of similar images. We will include this description in the revisions, as requested.

P1318 L14: Would a reference to Figure 1c be useful here?

Yes, this is an excellent suggestion that we will include in our revisions.

P1320 L2: "Magenta polygon": are these the two dotted lines on Figure 2?

"magenta polygon" refers to both the quadrilateral and the dotted polygon in Figure 2. The dotted lines are in fact connected on both banks by two additional lines, forming an irregular polygon. It is our hope that this will be visible when the figure is formatted for publication and enlarged, as we agree it is difficult that there is in fact a magenta polygon in the current pdf. We will attempt to thicken the dotted lines so that the shape is easily seen as a polygon and not two roughly parallel lines if needed after publication formatting.

P1320 L24: The system cannot be described to have "remarkable resilience" when 50% of the equipment was lost due to the wildlife attack. Change to climatic resilience and comment on need for wildlife proof housing.

We agree with this assessment, and will amend the text exactly as the reviewer recommends.

Figure 3: Units needed on x-axes of all three plots: m?

We thank the reviewer for noting this oversight: the units are indeed meters and this will be amended to the plots.