Thank you to the editors and reviewers for their helpful suggestions. We believe we have addressed all of them in full with our comments below and changes in the paper text, figures and table. Our responses are in red and all line numbers refer to those in the clean version of the revised manuscript.

Reviewer #1

Spence and Hedstrom provide a third update to data from Baker Creek in Canada's Northwest Territories. This is a remarkable sentinel site and I commend the authors for the hard work to keep this remote and hard to access site going. As the authors point out, data from this site can be used for many purposes by many people There are few other sites with such long term data sets in a cold and rapidly changing environment. The authors highlight recent studies that have used their data, which shows considerable update. I have reviewed the manuscript data and it is clear with metadata and appropriate labelling. There are a few comments that the authors may consider:

Figure 3 shows average daily net radiation. Could this figure show more of the 'variability' in the energy fluxes? So perhaps a solid line for the average and shading for some range (SD, IQR, etc) just to get an idea of the variability. The same comment for Table 3

We tried the reviewer's suggestion and the variability on any specific calendar date is so high that it overwhelms the figure. We added ± one standard deviation to Table 3, which lists monthly values and is a bit smoother.

Figure 4 is very small and difficult to read. Axes, labels, etc., should all be made much larger.

The axes and labels have been enlarged as part of changes suggested by both reviewers.

For Figure 5, would it be worthwhile to indicate when there were sensor issues with a shaded region. This is different than 'no data', but for example it seems 2008 had no rainfall, but obviously this was because of some instrumentation problem (which is normal). This isn't critical I suppose, but the same goes for the total precipitation figure. Something to consider.

There were several instances when there were 'no data' because it was winter or because of sensor inoperability. Some of these are as short as a week, or in the case of 2008, an entire year. We tried shading these areas and it overwhelmed the time series. Because the plot was drawn as a line rather than a bar chart, any gap is due to some kind of break in the data. We have edited the caption to include: "Gaps in rainfall and precipitation time series because of sensor inoperability or inactivation during winter are evident from breaks in the time series."

Figure 6. I think this is volumetric liquid water technically, not total soil moisture.

The caption has been adjusted accordingly.

Reviewer #2

The authors have done a formidable job of maintaining a long-term hydrometeorological dataset in the Baker Creek catchment. As noted in the manuscript, datasets of this quality and continuity are extremely rare in cold region environments and are critical to understanding how climate change has and will continue to impact the North. Data papers such as this one allow for scientists to understand instrumentation set up and gain an understanding of the environment that is being studied. I commend the authors for their dedication to this site and their efforts to update this dataset.

Minor comments:

Lines 33 and 34: Can the authors provide a reference for this statement? Line 77 shows that Baker Creek produces mean annual runoff of 45 mm, which is extremely low. The Mackenzie River basin produces mean annual runoff of 170 mm (Mackenzie at Arctic Red River; 10LC014). I'm not convinced that the subarctic Canadian Shield produces a disproportionate amount of streamflow relative to its size. I would point to the mountainous headwater regions for that.

We understand the reviewer's comment. We think we should have been clearer with our point, which is areas with shallow shield geology occupies a large portion of the area draining to the Arctic Ocean and so will have a large impact on the amount of runoff that flows there. This is not disproportionate, however. We have revised the sentence to read: "Areas with shallow shield geology occupy ~20% of the area that drains water to the Arctic Ocean so changes here can have influence elsewhere." on line 33.

Line 74: Awkward wording, consider revising the precipitation sentence.

This has been changed to: "Thirty-nine percent of the 294 mm of annual unadjusted precipitation falls as snowfall." on lines XX

Figure 1: Can the authors include the % cover of each land cover in the legend? (i.e. Exposed bedrock (40%)).

Yes. Done.

Figure 4: I would recommend splitting this figure into two panels: a) Mean annual air temperature at Yellowknife A; and b) Mean summer (01 Jul to 15 Sep) at Yellowknife A and Bedrock.

This has been done and the text referring to it has as well on Line 155: "A ~0.5°C/decade warming has been observed in average annual temperatures at Yellowknife, with the trend extending to the beginning of the record in the mid-20th century. The most intact air temperature record at Baker Creek is from mid-summer (July 1 to August 15). The shorter record from the bedrock tower implies faster recent summer temperature warming but this is tempered when compared to the longer record measured at Yellowknife A." The figure caption has also been updated to recognize the two panels.

Figure 5: Include an overlay title to make it easier to read which sensor or measurement method is being used (in addition to caption). Fix the y-axes so they are the same scale for (a) and (b) (have both scales from 0 to 60 mm); and also for (d) and (e) (have both scales from 0 to 100 mm).

Done.

Figure 5: I would also be very interested in seeing a figure compare total annual SWE between the Geonor, SSG, and manual snow surveys. This would be a great venue to show an instrument intercomparison.

We understand the reviewer's suggestion. When we attempted a figure that included the whole (2003 – 2024) period of record with the Geonor, snow scale and the snow surveys, it became too crowded and difficult to discern the different curves from one another. There are only two years in the record with all three methods, and we feel that is not long enough for a good intercomparison.

Table 6: Can this table be updated to include data for 2023, 2024, and 2025? Based on Figure 8, it appears that these data are available.

There were brief interruptions in data at Baker Creek above Vital and Baker Creek at Vital Narrows these last few years that prevent the annual values from being calculated.