Anonymous Referee # 1, 29 Mar 2023

Thank you for the opportunity to review this paper, it was an engaging exercise. Overall this paper presents an interesting and technically sound approach to develop, calculate, and predict seasonal flow metrics using available hydro-climatic data to facilitate adaptive water management for an upcoming spring and summer season. The results suggest this could be a very useful approach for local water managers and stakeholders in the study watershed.

A few major issues to be addressed: I am not sure that this study really took a functional flows approach as the authors suggested. In the conclusions these hydrologic metrics are framed as decision-support metrics, which seems a more appropriate couching for what has been done. It is reasonable to state that the metrics are linked with ecological functions, but that is not the same as applying a functional flows approach or the functional flow metrics developed for CA. Next, this study focused on a single watershed, but I would encourage the authors to try to broaden the paper discussion and limitations sections to how this can or can’t be applied in other settings. For instance, the analysis relied on long climate records and a detailed hydrologic model. Are these data always needed for such an analysis? Are the findings transferable to other systems? Additionally, there are a lot of great ideas that are raised in passing that could use additional thoughtful discussion and citations to really bring to light.  My remaining concern is the quality of writing in the manuscript, including terminology, grammar, sentence and paragraph structure issues. I must note that the repeated references to other chapters of your dissertation feels unprofessional. As a reviewer I would like to know that you have put in your best effort to make this a clean, standalone manuscript and not simply submitted your dissertation chapter to a journal directly. I look forward to reviewing a revised version with these changes addressed so the reader can really focus on the interesting research and implications.

**Specific comments:**

Abstract: In general, I would suggest to provide more general, compelling information and not include variables, multiple units, HUC#, etc in an abstract. See additional in-line comments.

1-2 sentences should not be standalone paragraphs, as is currently done several times (L51, L72, L124, L369, etc). Please revise your paragraph and section structures accordingly.

Please use “functional flows” throughout to be consistent with the published literature

Tense issues throughout manuscript, particularly in the Results - past, present, and "have been...". Choose one (I suggest past tense to be consistent with most journal articles) and use consistently throughout.

Some steps in the methods remain unclear. For instance, 2.3.1. is the first mention of a “model” and there is no indication of what type of model you are trying to develop or why (e.g. linear regression modeling to predict X as a function of Y…).

There are some grammatical and spelling issues to be addressed (see inline comments)

Some terms could be more clearly defined or concepts more clearly described (e.g. echo effect, partial one-year holdover, GSP).

Please provide a more clear explanation for the selection of the Q spill threshold. Looking at Panel A in Figure 4, since individual hydrographs cannot be clearly distinguished I find myself struggling to fully understand how you visually determined this threshold.

Figure 8 and other map figures – add scale bar, north arrow, and in Fig 8 additional points of reference in the Scott watershed (e.g. gage locations, etc). Also, there are a lot of figures. Could any be combined or moved to SI to simplify the message?

See other inline edits in PDF.