

## Responses to Reviewer 1

### General Comments

This paper proposes a new forecast technique for water supply forecasting in Australia designed to allow for more frequent updates as well as to improve forecast accuracy and to make the forecasts more timely. Currently operational forecasts are released 7 days into a forecast target period. This proposed technique would include the entire forecast period in the future. Overall, the paper was logically organized and easy to follow. The verification metrics used were applicable to the problem and applied in a logical manner. The results supported the conclusions in the paper well.

I am curious why the authors did not investigate incorporation of weather prediction into their algorithm. This would seem to be a major area ripe for improvement as the forecast skill at the weather timescale (0-2 weeks into the future) is much larger than at climate time scales and is ever increasing as computer power continues to grow.

Response: The reviewer makes a valid point about the potential for weather forecasts to improve the skill of streamflow forecasts up to two weeks into the future. It is an active area of research within our research group however it is not within the scope of this study. This study considers the forecasting of three-month seasonal streamflow totals using statistical methods where most of the skill comes from initial catchment conditions and limited predictability stems from climate.

It was striking that there was no discussion on how forecast utilization. I recommend including information on how the current forecasts are utilized and how the new forecasts might improve application.

Response: We agree. We are able to include more specific examples about how streamflow forecasts are used by water managers in Australia. We have prepared several paragraphs on 1. Overall forecast use 2. More specific uses, and 3. Advantage of earlier forecasts. These paragraphs will be included in the revised manuscript.

### Specific comments

[page 3; lines 9-11] How is the undesirability of forecasts beyond 1 one month consistent with the premise of this paper of improving 3 month forecasts?

Response: We believe our comment is not inconsistent because it is specifically about the time between forecast issue and the first day of the forecast period. We can make this point clearer.

[page 3; line 13] What is N equal to?

Response: N is used to indicate any number of days or months. We will make this clearer by changing the symbol or being more explicit.

[page 4; line 23] is daily updated subsurface temperatures really necessary for this method? Does it change that much from one day to the next?

Response: The subsurface ocean temperatures will not change much from day to day and, strictly speaking, it would not be essential to have daily updates to use subsurface temperatures in our approach. We believe our comments of subsurface and atmospheric predictors are distracting and can be safely removed.