

Response to Reviewer Comments

Dear Editor,

Thank you for providing valuable feedback from the reviewer on our manuscript "High-Resolution Snow Water Equivalent Estimation: A Data-Driven Method for Localized Downscaling of Climate Data." We have carefully addressed all of the comments and suggestions to improve the clarity and overall quality of the paper. Below, we provide a point-by-point response to the reviewers' comments.

Reviewer 2

1. Comment: The authors answered most of my concerns in their revision. I would maybe recommend an effort to make the text (and particularly newly added paragraphs) more concise (hence clearer), for instance: minimizing repetitions, making sure corrections from first revision have been applied everywhere (e.g. "meteorological" instead of "climate inputs" l. 56), proofreading the text (e.g. "underscores highlights" l. 339), etc.

1. Response: We thank the reviewer for the valuable suggestions. We carefully addressed the requested adjustments as follows:

- **Consistent terminology**

Since we use CMIP6 and downscaled CMIP6 data (WRF-CMIP6), the correct terminology for our study is climate data, as we do not use meteorological data, which generally refers to observational datasets. Accordingly, in the few instances where referring to meteorology is appropriate, we use that term; otherwise, we consistently refer to the data as climate data.

- **Proofreading of text**

We addressed the grammatical inconsistencies noted by the reviewer. For example:

Page 6, Line 165: Removed redundancy in the phrase "including such as."

Page 16, Line 354: Corrected the repetitive phrase "underscores highlights."

- **Improved clarity**

We also improved clarity. Minor edits were made to reduce wordiness and enhance readability, for example:

Abstract: Removed unnecessary repetition and improved sentence clarity.

Lines 72, 118, 127, 137, 168, 185, 216, 289, 474, 495, 550, 558, 561, 564, 583, 604, 619, 623, and 625: Improved sentence clarity.

Lines 489, 509, and 525: Removed repetitive wording.

Page 13, Lines 295–310: Revised for improved clarity and coherence.

We believe these changes resolve the reviewer's concerns regarding clarity, conciseness, consistency of terminology, and proofreading. We sincerely appreciate the reviewer's attention to detail and constructive suggestions, which helped us improve the quality of the manuscript.