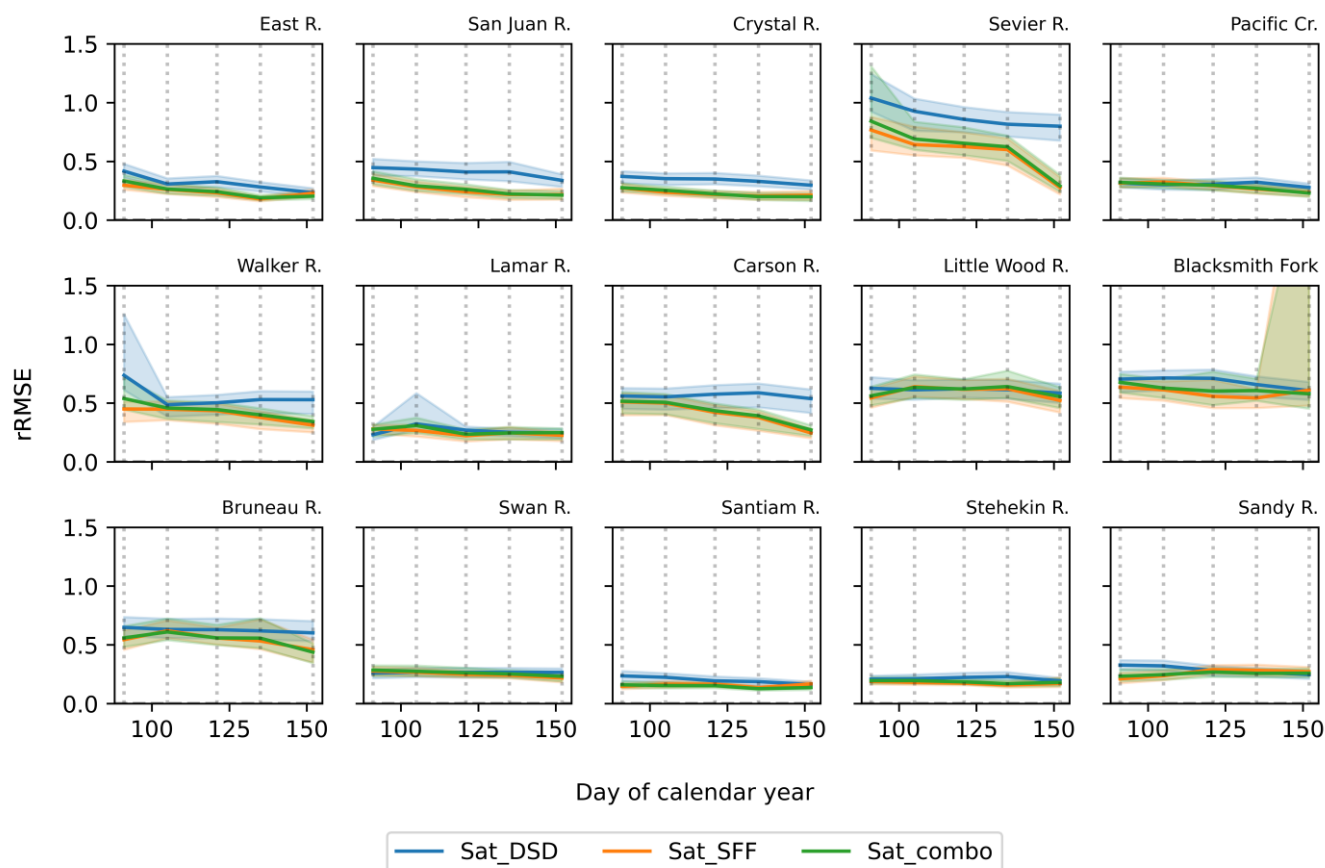


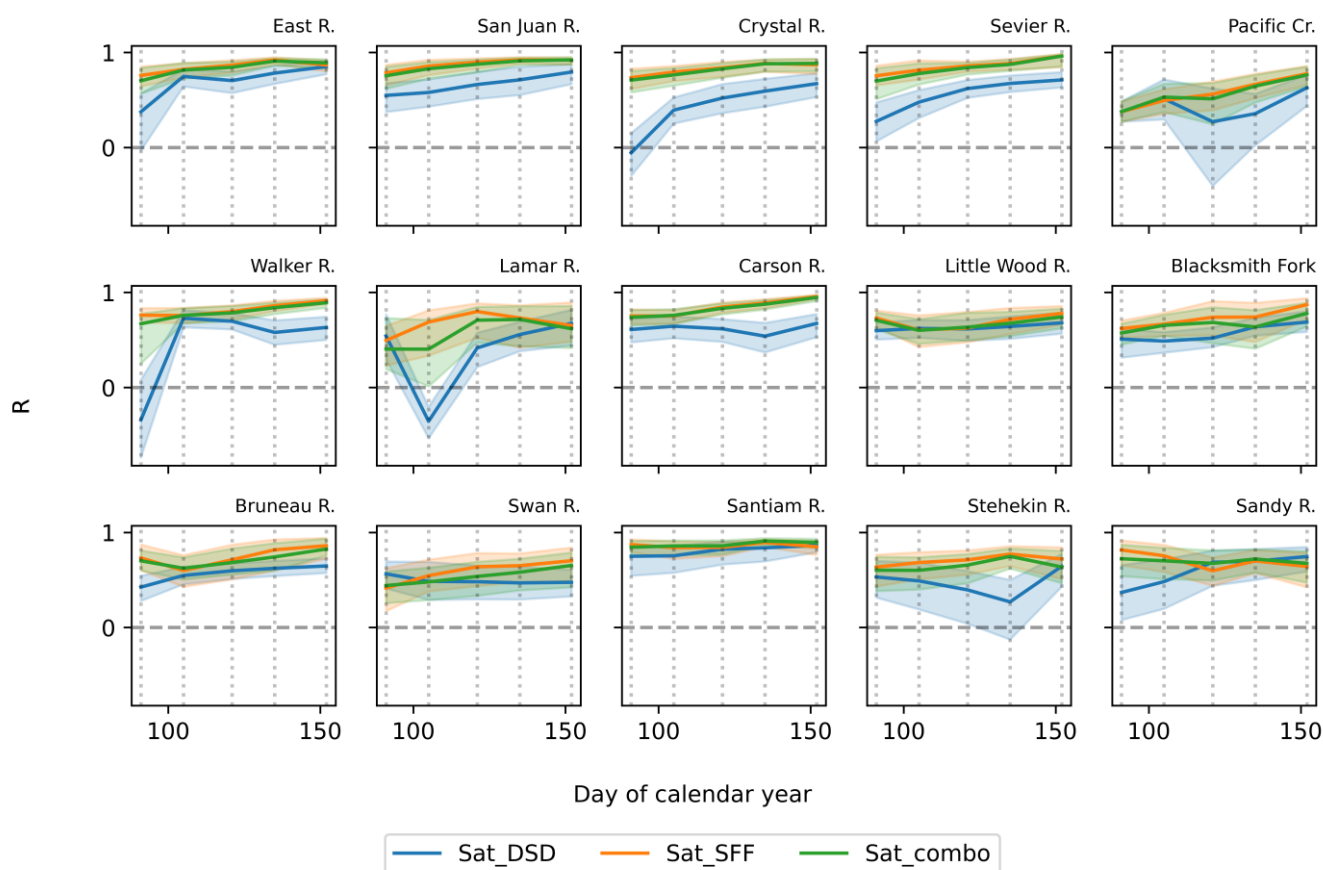
Supplementary material

# Can Remotely Sensed Snow Disappearance Explain Seasonal Water Supply?

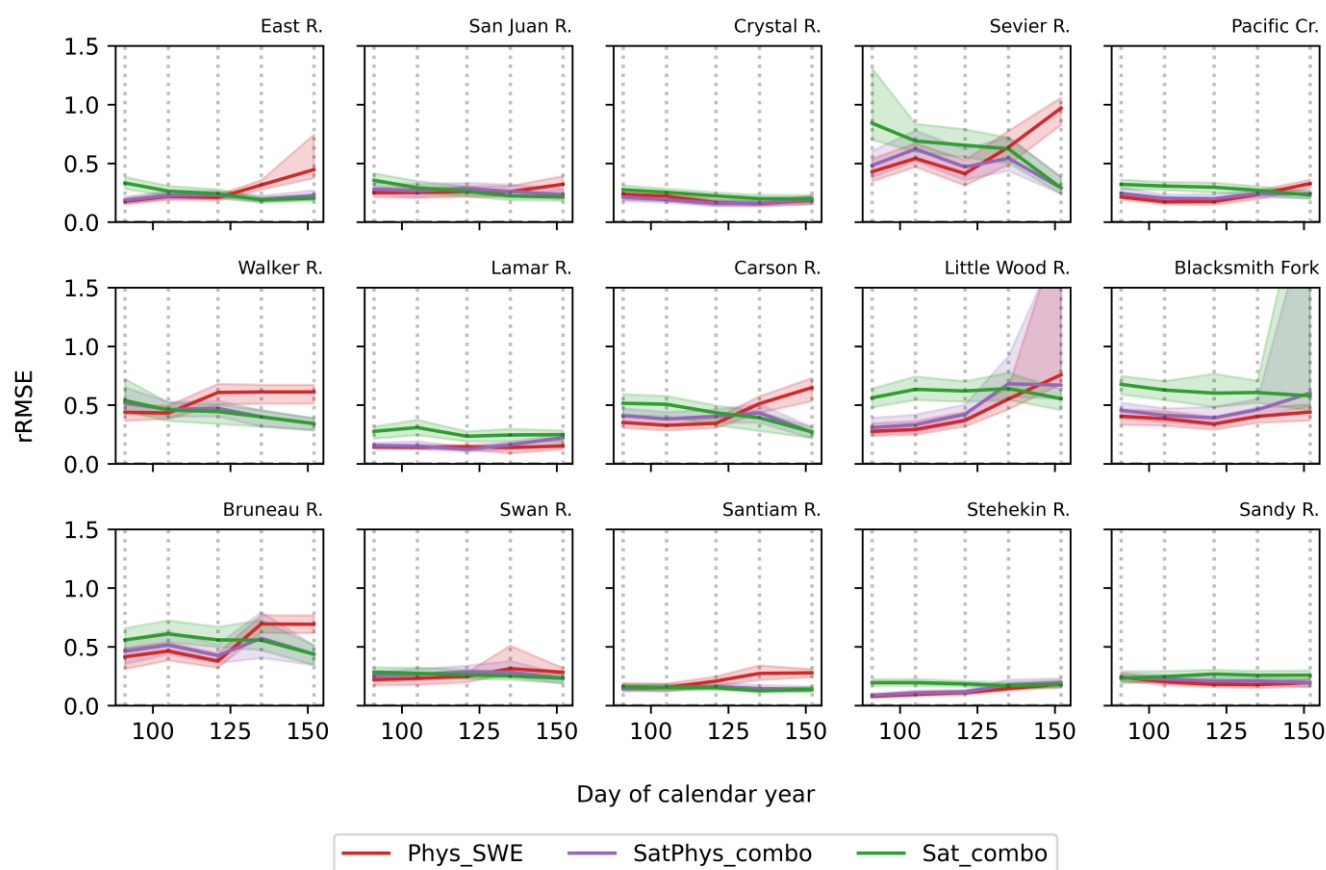
Kaitlyn Bishay <sup>1,\*</sup>, Nels R. Bjarke <sup>1</sup>, Parthkumar Modi <sup>1</sup>, Justin M. Pflug <sup>2,3,4</sup> and Ben Livneh <sup>1,4</sup>



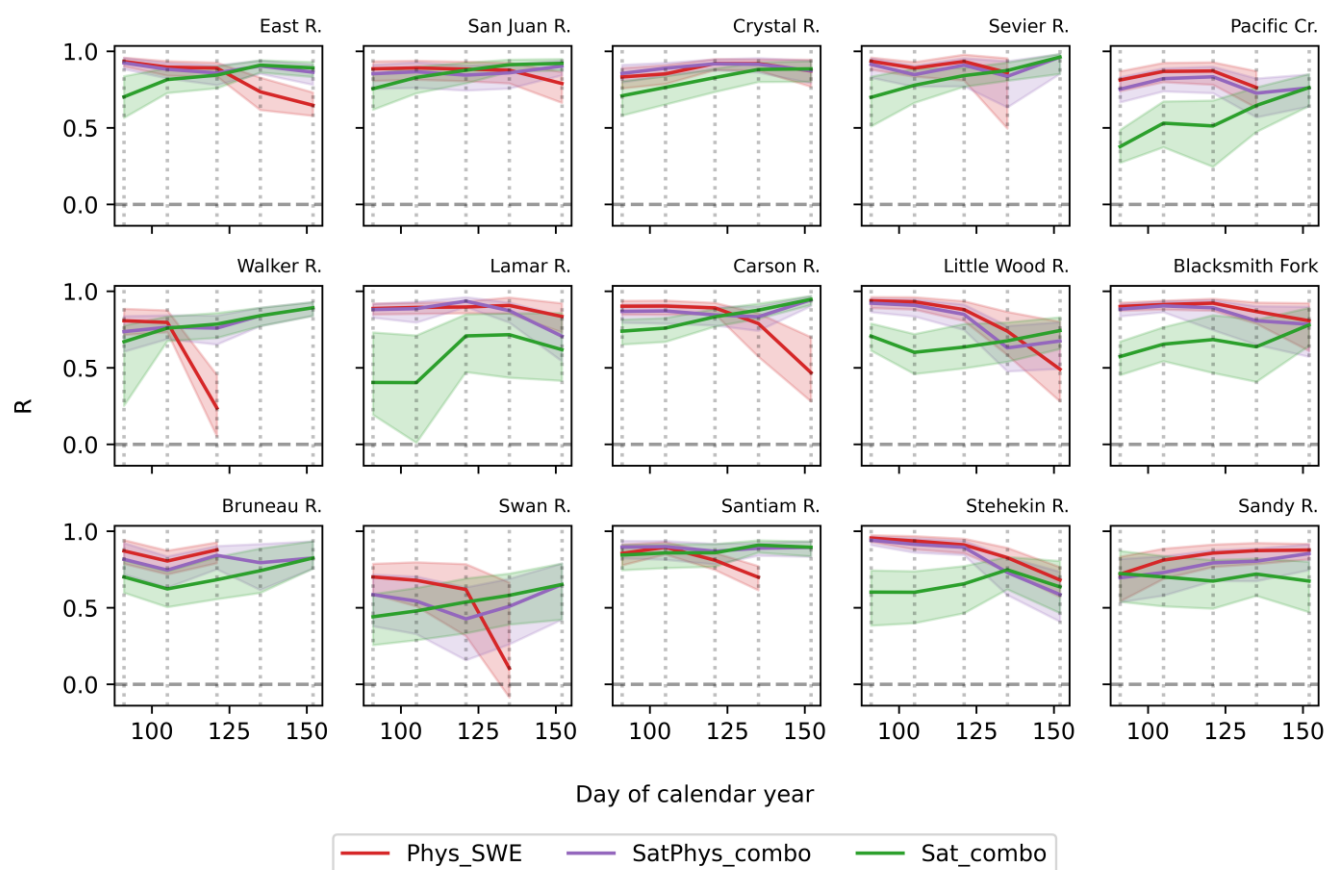
**Figure S1.** The median rRMSE statistics for three different satellite-based water supply forecasts with interquartile range (25/75 percentiles) shaded, for all 15 study basins. Vertical dotted lines denote the days chosen for forecasting—1 April, 15 April, 1 May, 15 May, and 1 June.



**Figure S2.** The median correlation,  $R$ , statistics for three different satellite-based water supply forecasts with interquartile range (25/75 percentiles) shaded, for all 15 study basins. Vertical dotted lines denote the days chosen for forecasting—1 April, 15 April, 1 May, 15 May, and 1 June.



**Figure S3.** The median rRMSE statistics for three different satellite and in-situ-based water supply forecasts with interquartile range shaded, for all 15 study basins. Vertical dotted lines denote the days chosen for forecasting—1 April, 15 April, 1 May, 15 May, and 1 June.



**Figure S4.** The median correlation,  $R$ , statistics for three different satellite and in-situ-based water supply forecasts with interquartile range shaded, for all 15 study basins. Vertical dotted lines denote the days chosen for forecasting—1 April, 15 April, 1 May, 15 May, and 1 June. Due to a lack of recorded SWE on the forecast dates for any year in the study period, some basins (e.g., Sevier R. and Pacific Cr.) have an undefined correlation coefficient,  $R$ , for the Phys\_SWE model. This is because Pearson's correlation coefficient,  $R$ , cannot be defined for a constant input array and, after complete snow ablation, SWE is equal to zero for all years studied. This has been reflected in the figure above.

**Table S1.** Correlation between USGS gage elevation and median PBIAS values for all basins calculated for each model and each forecast date. Values with a significant relationship ( $p$ -value < 0.05) are marked with an asterisk.

	1 April	15 April	1 May	15 May	1 June	Mean	Median
<b>Sat_DSD</b>	−0.30	−0.13	−0.30	−0.24	−0.14	−0.22	−0.24
<b>Sat_SFF</b>	−0.17	−0.31	−0.41	−0.28	0.01	−0.23	−0.28
<b>Sat_combo</b>	0.09	−0.19	−0.14	−0.12	0.04	−0.06	−0.12
<b>Phys_SWE</b>	−0.10	−0.29	−0.36	−0.35	0.19	−0.18	−0.29
<b>SatPhys_Combo</b>	−0.04	−0.26	−0.46	−0.21	−0.02	−0.20	−0.21
Mean	−0.10	−0.24	−0.34	−0.24	0.02		
Median	−0.10	−0.26	−0.36	−0.24	0.01		

**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.