## CAMELS-Chem: Augmenting CAMELS (Catchment Attributes and Meteorology for Large-sample Studies) with Atmospheric and Stream Water Chemistry Data

Gary Sterle<sup>1</sup>, Julia Perdrial<sup>2</sup>, Li Li<sup>3</sup>, Thomas Adler<sup>2</sup>, Kristen Underwood<sup>4</sup>, Donna Rizzo<sup>4</sup>, Hang Wen<sup>5</sup> and Adrian Harpold<sup>1</sup>

<sup>1</sup> Department of Natural Resources and Environmental Science, University of Nevada, Reno, USA

<sup>2</sup> Department of Geology, University of Vermont, USA

<sup>3</sup> Department of Civil and Environmental Engineering, Pennsylvania State University, University Park, USA

<sup>4</sup> Department of Civil and Environmental Engineering, University of Vermont, USA <sup>5</sup> School of Earth System Science, Tianjin University, Tianjin, China

Correspondence to: Adrian A. Harpold (aharpold.unr.edu)

## **Supplementary Information**

5

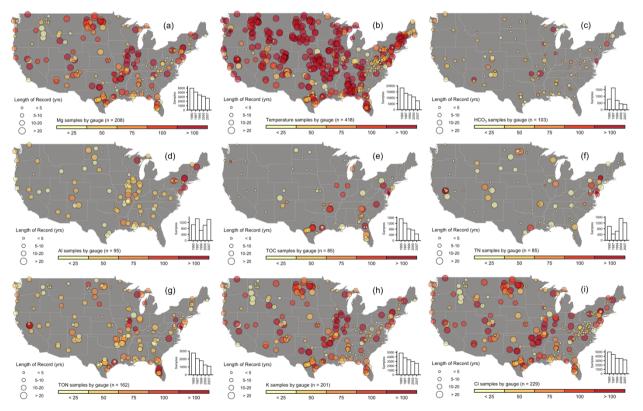


Figure S1: The number of samples (symbol color) and length or record (symbol size) (a) Mg, (b) Temperature, (c) HCO<sub>3</sub>, (d) Al, (e) TOC, (f) Total N, (g) Organic N, (h) K, and (i) Cl. The inset histogram shows the number of samples by roughly 7-year periods.

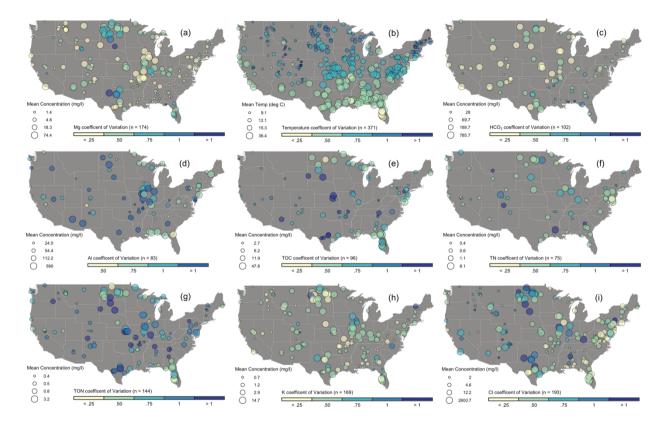


Figure S2: The mean concentration (symbol size) and coefficient of variation (symbol color) for (a) Mg, (b) Temperature (c) HCO<sub>3</sub>, (d) Al, (e) TOC, (f) Total N, (g) TON, (h) K, and (i) Cl

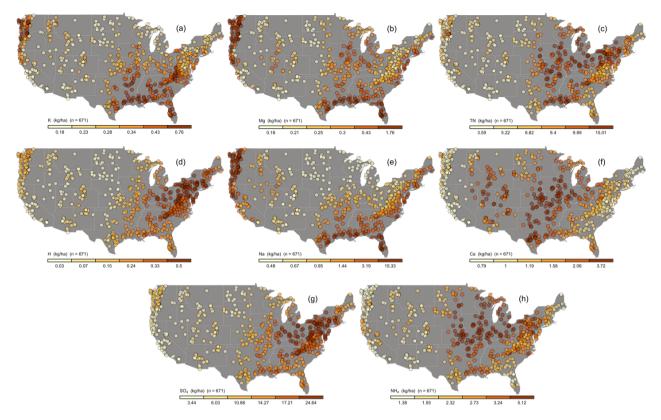


Figure S3: Wet deposition mean concentration for (a) K, (b) Mg, (c) TN, (d) H, (e) Na, (f) Ca, (g) SO<sub>4</sub>, and (h) NH<sub>4</sub>

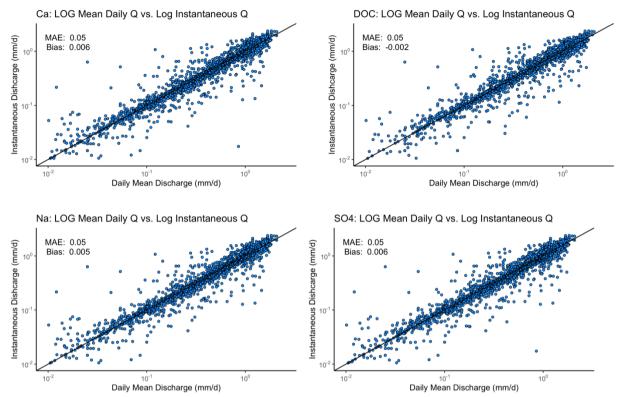


Figure S4: Instantaneous discharge versus daily mean discharge as mm/day when sample of Ca (a), Na (b), SO<sub>4</sub> (c), and DOC (d) are collected. Mean absolute error and bias are shown in the inset of each panel.