Supporting Information for

Snow Persistence Explains Stream High Flow and Low Flow Signatures with Differing Relationships by Aridity and Climatic Seasonality

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Contents of this file.
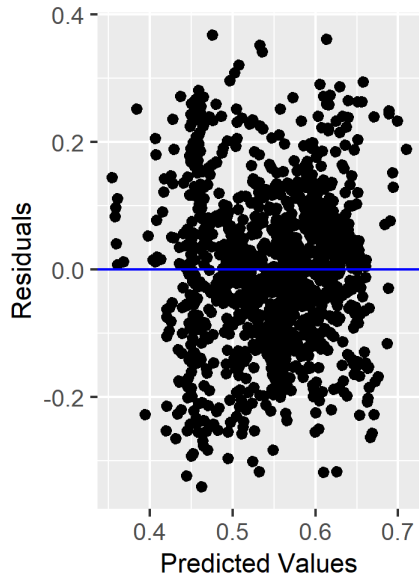
Figures S1, S2, S3, S4, S5

Introduction

This supporting information includes five figures containing model diagnostics for multivariate linear regressions for the five hydrological signatures used in this study, including the baseflow index (BFI; Fig. S1), normalized Q_5 (Fig. S2), the slope of low flow duration curve (Low-FDC; Fig. S3), normalized Q_{95} (Fig. S4), and the slope of high flow duration curve (High-FDC; Fig. S5). Variable transformations and statistical procedures are listed in Table 1 of the main paper.
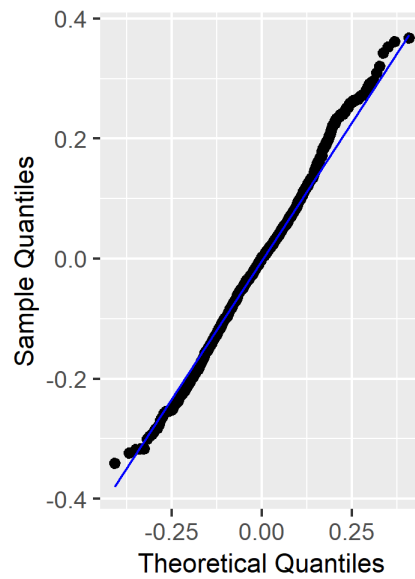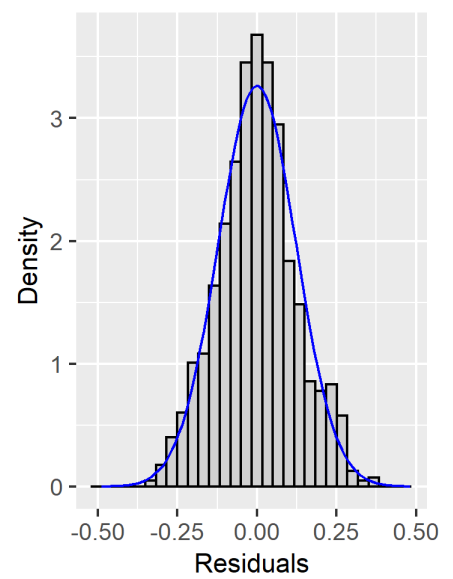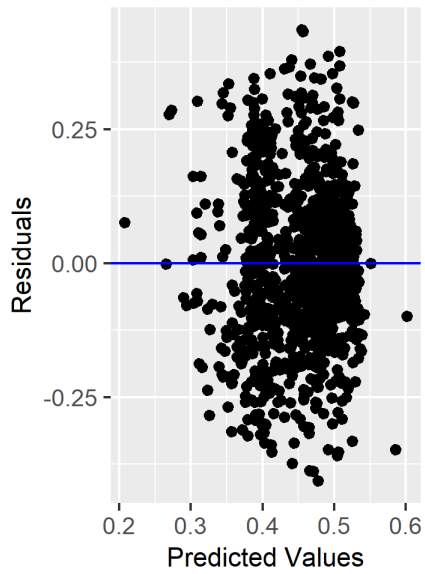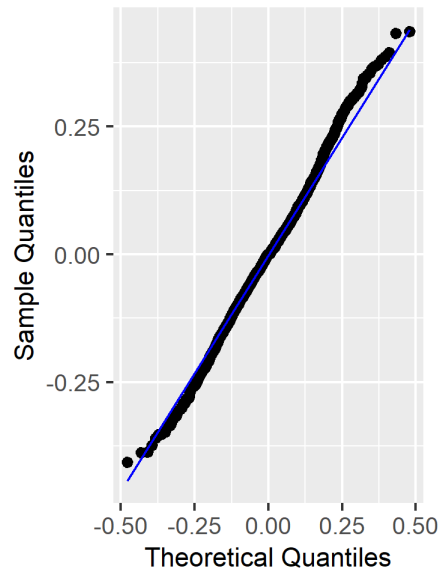
BFI Model Diagnostics

Figure S1: Diagnostic plots for multivariate linear regression model of baseflow index (BFI). (a) residual plot, (b) Quantile-Quantile (QQ) plot, and (c) residual histogram.
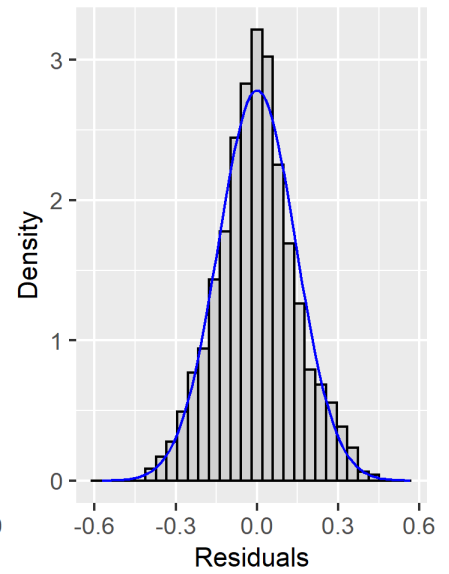
Normalized Q_5 Model Diagnostics
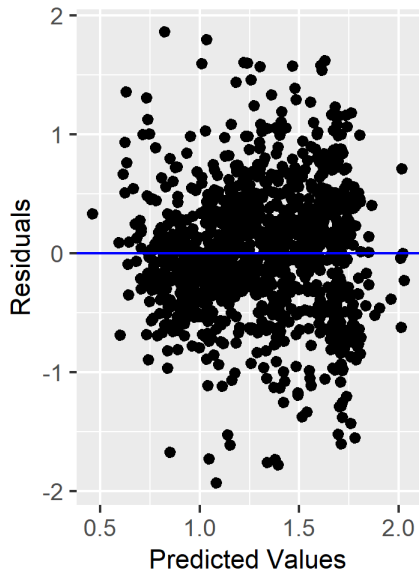
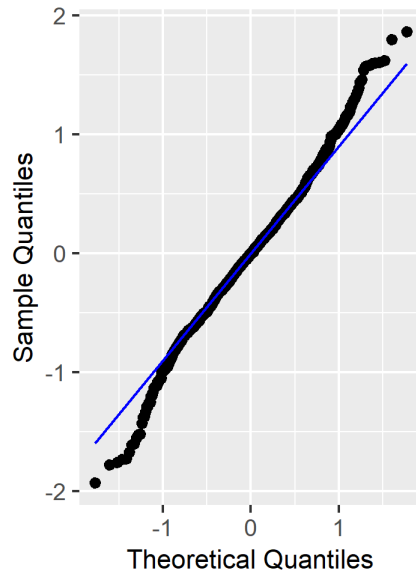### (a) Residual Plot

(b) QQ Plot

(c) Histogram

Figure S2: Diagnostic plots for multivariate linear regression model of normalized Q_5. (a) residual plot, (b) Quantile-Quantile (QQ) plot, and (c) residual histogram.
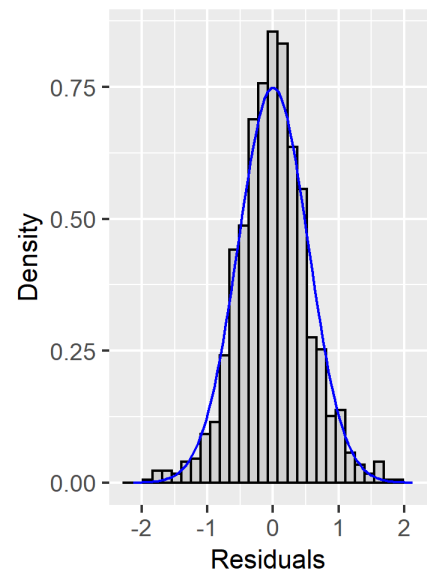
Low-FDC Model Diagnostics
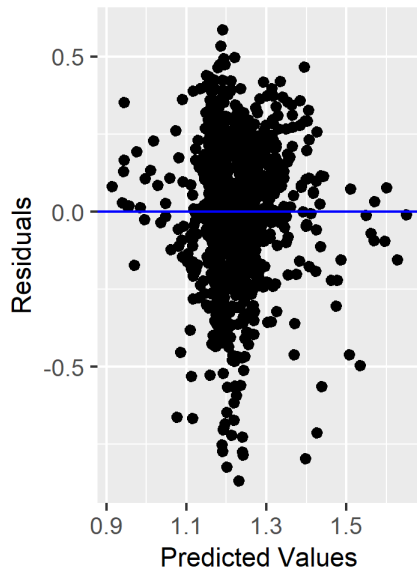
(a) Residual Plot

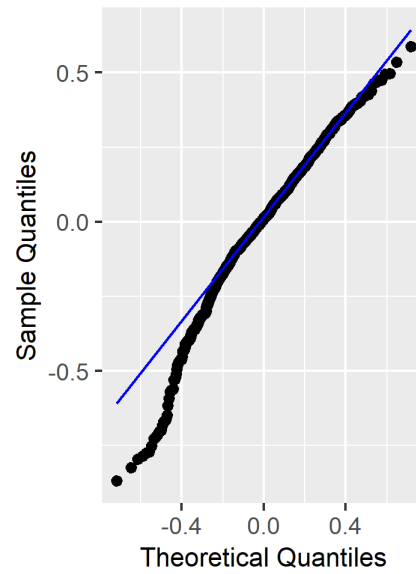## (b) QQ Plot

(c) Histogram

Figure S3: Diagnostic plots for multivariate linear regression model of the slope of the flow duration curve at low flow (Low-FDC). (a) residual plot, (b) Quantile-Quantile (QQ) plot, and (c) residual histogram.
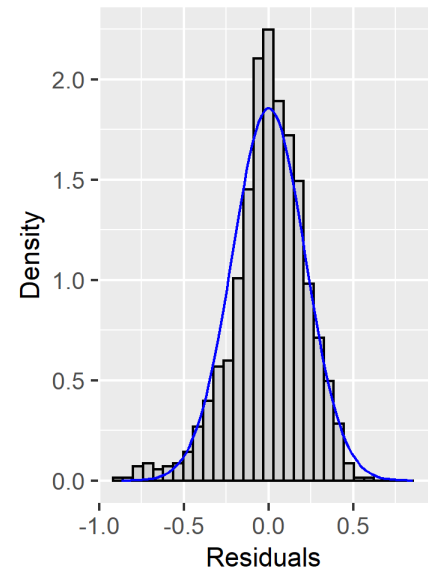
Normalized Q$_{95}$ Model Diagnostics
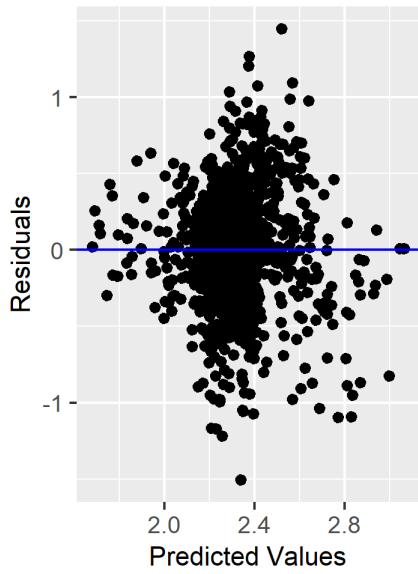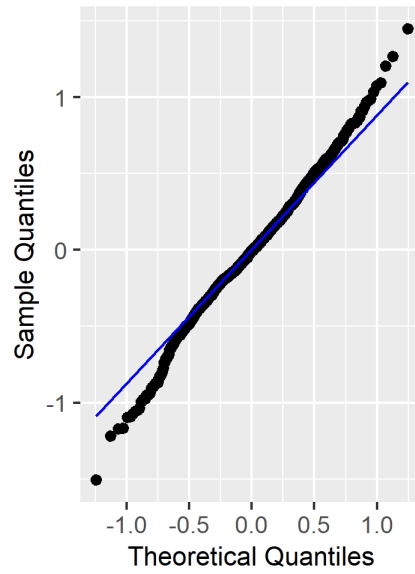
(a) Residual Plot

(b) QQ Plot

(c) Histogram

Figure S4: Diagnostic plots for multivariate linear regression model of normalized Q$_{95}$. (a) residual plot, (b) Quantile-Quantile (QQ) plot, and (c) residual histogram.
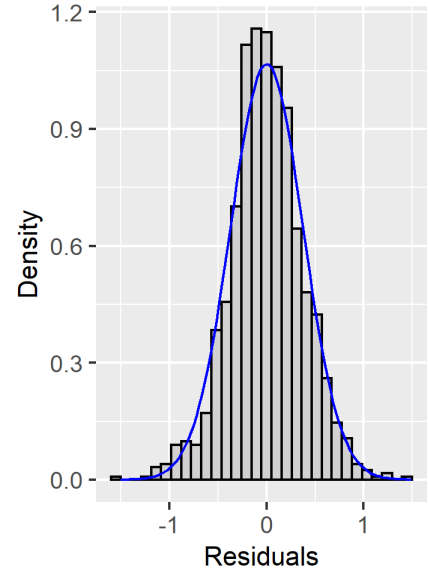
High-FDC Model Diagnostics

(a) Residual Plot

(b) QQ Plot

(c) Histogram

Figure S5: Diagnostic plots for multivariate linear regression model of the slope of flow duration curve at high flow (High-FDC). (a) residual plot, (b) Quantile-Quantile (QQ) plot, and (c) residual histogram.

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