Title

Spatial Study 2021: Sample-Based Surface Water Dissolved Inorganic Carbon, Non-Purgeable Organic Carbon, Total Nitrogen, Total Suspended Solids, Ions, and Organic Matter Characterization from across Multiple Watersheds in the Yakima River Basin, Washington, USA

Summary

This dataset supports a broader study examining the drivers of spatial variability in sediment respiration rates in the Yakima River Basin. The dataset provides geochemistry and organic matter characterization data generated from samples collected during the same two-week period at 47 sites within multiple rivers throughout the Yakima River Basin in Washington, USA. Related sensor data will be published separately and can be used to link sediment respiration rates to biogeochemical processing rates.

Data Package Structure

This dataset is comprised of one main data folder containing (1) file-level metadata; (2) data dictionary; (3) field metadata; (4) dissolved inorganic carbon (DIC), non-purgeable organic carbon (NPOC), total nitrogen (TN), total suspended solids (TSS), and ions; (5) surface water sampling protocol; (6) sensor protocol (7) readme; (8) methods codes; (9) international geo-sample number (IGSN) mapping file; and (10) folder of high resolution characterization of organic matter via 12 Tesla Fourier transform ion cyclotron resonance mass spectrometry (FTICR-MS) through the Environmental Molecular Sciences Laboratory (EMSL; https://www.pnnl.gov/environmental-molecular-sciences-laboratory). This folder contains two subfolders, one containing the .xml data files and the other containing instructions for using Formularity (https://omics.pnl.gov/software/formularity) and an R script to process the data based on the user's specific needs. All files are .csv, .pdf, .R, .ref, or .xml.

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Change History

Version 1	July 2022	Original data package publication