A Micro-Pulse Dye Tracer Approach for Quantifying Fluid and Solute Flux Across the Groundwater —Surface Water Interface

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Table4
Voltage to Concentration

All of the file contents are organized into separate directories listed under the **Contents of this file**, and are intended to be easily identifiable. General descriptions below are provided for each of these directories.

The breakthrough data measured by the fluorometer in the manuscript was collected at 12 (0.30 m), 18 (0.45 m), 24 (0.60 m) and 48 (1.2 m) inch depths below the streambed. The 12 inch experiment was run twice, hence the test1 and test2 designation. The raw data is provided in "Breakthrough Data – Raw and Filtered" in csv format. The filtered data is clearly labeled and the code "time_filter.f95" is provided. The raw data was collected at 1 s intervals for 12 and 18 inch depths, and 5 s intervals for the 24 and 48 inch depths. The data was filtered to 8, 10, 15, and 25 second intervals for the 12, 18, 24, and 48 inch breakthrough data. These data are stored as text files.

The analyzed data found under "Breakthrough Curves – Analyzed" is in the form of separate spreadsheets, one for each tracer test. The spreadsheets preserve the solver

setup, best-fit ADE values, and plots used in Figure 3 in both black and white and color. The spreadsheets also contain mass recovery calculations.

Data for figure 4 is contained in “Figure4_data_figure” as a spreadsheet. This data plus the best fit ADE parameters are summarized in Table 2.

The slug test data are contained in “Slug Test Raw Data” in csv format. A summary of the slug test results from AQTESOLV v.4.5 pro are listed as a separate file “slug test analysis.xls”. Slug1 data are not used in the analysis.

The experimentally computed SFF voltage to dye concentration conversion factor is provided in “Voltage to Concentration” in the form of a spreadsheet. Only the 1x gain was used for all tracer experiments.