2018 Longitudinal Water Temperature Profiles of the Yakima River, Washington

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Summary

Longitudinal profiles of near-streambed water temperature were measured at ambient river velocity using the method of Vacarro and Maloy (2006) within nine reaches of the Yakima River between Sunnyside Diversion Dam near Parker, WA and the confluence of the Yakima River with the Columbia River near Richland, WA. In eight reaches, near-streambed water temperature was measured along three profiles on the right, center, and left sides of the channel; in the other reach, water temperature was measured along two profiles on the right and left sides of the channel. Temperature and location data was collected and processed in accordance with Washington State Department of Ecology Quality Assurance Project Plan (QAPP) No. 18-12-009 (Appel, 2018). Temperature was measured at three-second intervals and related to concurrently surveyed global-positioning system (GPS) location data using the time step of each data set. If GPS survey data was missing for time steps when temperature data was collected, the position of water-temperature data was determined by linear interpolation between adjacent surveyed points. Temperature data were deleted from the near-streambed water-temperature profile if downstream progress of survey collection boats was interrupted. Temperature were corrected for logger bias by determining the mean difference between pre- and post-deployment checks against a NIST thermistor (Ward, 2018). Near-streambed water-temperature data are presented as comma-separated value files that include a row for each water-temperature measurement and columns for latitude, longitude, datum, lateral position, date, time, and temperature in degrees Celsius. Comma-separated value files for the 26 profiles are contained within the archive: "2018\_Yakima\_Temperature\_Profiles.zip". https://doi.org/10.5066/P9YCIA50.

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