

Interactive comment on “Technical Note: False low turbidity readings during high suspended sediment concentrations” by Nicholas Voichick et al.

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Received and published: 27 November 2017

For some technical reasons (problem in the system?), the reviewer received an earlier version of the manuscript for review, which should be content-wise almost the same as the the one in the public discussion but which did not have the same line numbers. Here the sentences to which the mentioned line numbers correspond to:

16 - 20: In rivers with limited variation in the physical properties of the suspended sediment, an increase in suspended-sediment concentration will initially cause a linear increase in turbidity. When the suspended-sediment concentration in these rivers causes turbidity levels that exceed the upper measurement limit of a probe, turbidity

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probes do not necessarily “peg” at a constant value.

32-33: Although turbidity is commonly used to monitor change in water clarity, it is not an absolute measure of water clarity in part because it is an instrument-specific measurement.

104: Physical suspended-sediment samples are collected episodically to verify the 104 acoustical and turbidity measurements.

174-175: The sediment concentration at which false low turbidity occurs will depend on the characteristics of the sediment, particularly the grain-size distribution, as well as the properties of the instrument, such as path length and detector angle.

200-201: One indicator an instrument is recording false low turbidity could be a pattern of lower values bracketed by values at the maximum recording level. Data showing this pattern should be verified using surrogate measures of turbidity, such as acoustic attenuation or suspended-sediment concentration, especially if suspended-sediment concentration is known or suspected to be particularly high (e.g. several thousand 203 mg/L)

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2017-528>, 2017.

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