

Interactive comment on “Evaluation oxygen deficiency in the Chesapeake Bay” by Wencheng L. Slater et al.

Anonymous Referee #1

Received and published: 3 March 2018

The authors present the results of hydrographic surveys carried out in Chesapeake Bay in 2010 and 2011. They assess the hypoxic state of the water column relative to a hydrological standard of 2 mg l⁻¹. They also calculate a biological standard based on *A tonsa* and assess the water column against this standard. Whilst it is an interesting study, I do not think that it can be published in its current state due to insufficient detail in the methods section.

Numbered comments below refer to the guidance for reviewers given on the ESSD website.

1. Read the manuscript

Whilst some of the data have been presented in Elliot et al (2013a) and Pierson et

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al (2017) this paper does provide doi links to the datasets and therefore makes them publicly accessible. The data would be of use in the future for researchers to compare changes in state in the Bay. There are insufficient details given in the methods to allow other researchers to re-use the data. Within the manuscript there is no information about the instrumentation and sensors which are used on the CTD, Scanfish and SMS systems although the CTD Dataset description file does give details of instruments and serial numbers. There are no details about which parameters are measured on the SMS and Scanfish packages, no information about calibration regimes, logging regimes or uncertainty for each parameter. Figure 3 presents chlorophyll a data but there is no mention in the methods about samples being collected and analysed for chlorophyll a. It is not possible to assess the data quality as there is insufficient information given. The aims of the manuscript focus on the science rather than a comprehensive presentation of the datasets. There is insufficient detail in the methods section for other researchers to assess the quality of the data and therefore re-use the data.

2. Check the data quality

I was able to access the CTD data and download them using the doi. When I click on the doi links for the Scanfish and SMS system data, I get to a description of the underway datasets and a list of file names but could not download the actual data. As discussed above there is no discussion of uncertainties or calibrations.

3. Check the presentation quality

The CTD data and metadata are usable in current format although it is not possible to make an assessment of data quality. I couldn't assess the other data as I could not access it.

4. Check the publication

The analytical section of the paper is much more comprehensive than the methods section. Why have the authors chosen ESSD given the focus of the manuscript is on

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the assessment of hypoxia in Chesapeake Bay rather than on a full description of the datasets?

Significance – the data are unique and potentially useful if sufficient meta data are included.

Data quality – unable to assess due to insufficient details in the manuscript.

Presentation quality – I have some specific comments in the separate annotated pdf.

Please also note the supplement to this comment:

<https://www.earth-syst-sci-data-discuss.net/essd-2017-129/essd-2017-129-RC1-supplement.pdf>

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2017-129>, 2018.

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