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Interactive comment on "Floodwater Impact on Galveston Bay Phytoplankton Taxonomy, Pigment Composition and Photo-Physiological State following Hurricane Harvey from Field and Ocean Color (Sentinel-3A OLCI) Observations" by Bingqing Liu et al.

Anonymous Referee #1

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This paper presents two things: (1) the evolution of the Galveston Bay system following Hurricane Harvey in 2017 drawing on satellite data to do this and (2) the description of the algorithms and their subsequent validation against in situ data.

Papers like this are always difficult to judge as there is a highly technical aspect of algorithm description, justification and validation on the one hand and then the (more interesting to the general readership) description of the evolution of the GB system on

the other.

On balance, the authors have done a good job of algorithm description, justification and validation.

However, in terms of the evolution of the GB system following the hurricane it would be good to draw on actual datasets of river discharge during the event, as well as any other supporting data that could be obtained. There are some statements within the manuscript, such as nutrient loading, which are not substantiated by any data for example. It would also be useful to put a few paragraphs in describing the phytoplankton succession and reasons for it - it would also be worthwhile looking to contrast this event with the background "mean state" i.e. what are the anomalies from other years in the satellite record (this may only be possible for 10 - 20 years for a small subset of variables, such as chlorophyll).

Overall though, a well written manuscript and worthy of publication.

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2018-504, 2019.