

Interactive comment on “Storm Tide Amplification and Habitat Changes due to Urbanization of a Lagoonal Estuary” by Philip M. Orton et al.

Anonymous Referee #1

Received and published: 3 March 2020

This paper compiles historic datasets on land cover, topography and coastal water levels and combines these with statistical and coastal models of extreme water levels and storm tides to understand how human modifications have changed the signal of extreme water levels in Jamaica Bay between 1870 and now. The paper is well-written and addresses a highly relevant topic. My main comments on the paper are:

1. the authors should include at least 1 paragraph outlining the underlying processes incorporated by the seCOM model. While this information exists in the cited publications (e.g. Orton et al., 2016), it will be helpful to have some of this information in this paper as well.
2. In Section 2.3, the authors should include a few sentences describing how the synthetic storm set from Orton et al., 2016b was abbreviated for the purposes of this

[Printer-friendly version](#)

[Discussion paper](#)



study. How were the random tide permutations for the ETCs or the storm tide events for the TCs abbreviated?

3. I recommend moving the results from the leverage experiments described in Section 4.3. to Section 3, Results.

4. Sentence on Page 3, L13 is incomplete.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-343>, 2020.