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Interactive comment on "Carbon storage in seagrass soils: long-term nutrient history exceeds the effects of near-term nutrient enrichment" *by* A. R. Armitage and J. W. Fourqurean

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Thank you for your comments. Our study design was not intended to detect ecological thresholds, and we did not have an a priori expectation that a threshold would emerge during the analysis. Rather, our objective was to determine if there was a relationship between soil carbon and seagrass nutrient limitation. Therefore, a curve fit regression analysis to determine the best fit was an appropriate technique to characterize that relationship. In a revision, we will expand our description of this analysis to clarify that we fitted regression models of increasing complexity, and accepted the model with predictive power (i.e., R2 value) that was higher than in simpler models, but where that

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predictive power did not increase at the next step in complexity. A comparison of the goodness-of-fit of multiple alternative models (sensu Qian 2014) may have enabled us to specifically quantify the value of the ecological threshold, but that was beyond the scope of our study objectives. We concede, however, that in the text, we may have overstated the certainty of the "threshold" identity, and will temper the language about thresholds in a revised manuscript.

We agree with the technical comments and will incorporate them in the revision.

Qian, S. S. 2014. Ecological threshold and environmental management: a note on statistical methods for detecting thresholds. Ecol. Indic. 38: 192-197.

Interactive comment on Biogeosciences Discuss., 12, 16285, 2015.