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| Response | |
| Line 44: I this this phrasing is statement is not correct - “all restorations are expected to persistently increase… “. It is my perception that investments in restoration are made with the goal of locally enhancing oyster populations. But, there is not necessary the expectation that all project expect persistent increases in population size. | Wording revised to eliminate “all” (line 43) | |
| Line 311-312: can you scale these estimates of spat per quadrat to be the number per meter square so they are more meaningful/interpretable? | In revision have discussed this as the number per ¼ m2 and also converted to number of oysters per m2. Because we do not know the depth of material recovered beyond “wrist deep” by the divers, we are assuming the material recovered is from the surface of the reef thus we are reporting this as per m2 and not per m3. | |
| Line 350-358: What is the justification for using these river discharge values and the single period lags? Is there a connection between these discharge values and the salinity observed in Apalachicola? Is there a connection between this lag period and the ecology of oysters? I think these details would be helpful in the methods. | This is explained in detail in the Methods section lines 234-243. | |
| Line 362: Isn’t this statement written incorrectly - it seems that the driver is predicted to be cultch biomass and response live spat, so I recommend reorganizing the statement. | This error has been corrected, line 341 | |
| more attention to alternative explanations for the observed data beyond issues with the cultching  — e.g., the question of larval supply is skimmed over in lines 640-644. Will putting cultch down work if we change how we do it, or have there been changes that may mean that putting cultch down may not work as a single solution? | Lines 406-409 includes brief discussion and citations to key papers assessing other issues that have been debated since 2012  ##this will need a little more addressing. Maybe. It has been addressed in revision but I need to point to a couple more sections where this is discussed. | |
| more references to work done in other areas  — e.g., (1) in Mobile Bay by researchers based at the Dauphin Island Sea Lab specifically about reef height, location, etc.; (2) more detail about? work in Chesapeake Bay specifically about “the substantial work done in oyster restoration” | We respectfully request more detailed citations from the Reviewer. We have included examples and references from multiple regions of the Gulf of Mexico, South Atlantic, and Chesapeake Bay regions. | |
| Research Questions: Q3: In the framing of the paper in the earlier parts of the introduction, there is not really any motivation for understanding project to project differences… so this question comes out of nowhere. Is there some reason to expect the projects to differ based on their design, placement, timing of deployment? | This is addressed in a new sentence in line 70. | |
| The discussion of reasons for failure barely acknowledges the most likely causes: predation on spat and early juvenile oysters, and possibly disease, especially Dermo. For both of these factors, salinity regimes are crucial, yet no salinity data are offered, only the proxy variable river discharge, which is far less informative. How could there be no salinity data available for these sites? | *I will address this with the Associate Editor.* | |
| The one topic that the authors do not give much/any attention to is whether the broader food webs in these bays are now no longer conducive to supporting spat survivorship (i.e there are too many predators of spat that suppress their success) - this is just very briefly alluded to in the Future Directions section. | This is extensively debated in Florida including a recent US Supreme Court lawsuit. Addressed in paragraph lines 402-409. | |
| Acknowledgements need updated project numbers for the current placeholders 'YYYY-YYY' | *Yes I will work on this* | |
| reduce “coding” — e.g., time periods that were useful for the modeling were less useful in text and figures b/c required too much decoding/math from reader | I’m going to address this by adding a second x axis in the plots that have “period” and this second y axis will say “Jan 2022” or whatever. This will be tricky however. | |
| Line 41: What is meant by a ‘low but apparently resilient state’ - resilient to evolving back into a more robust, living reef? | Removed in revision | |
| There seems to be some underlying blame being suggested in this statement to those conducting restoration that they are not learning from prior projects. I think that this phrasing may act to repel such entities from wanting to read/engage with this work so suggest some rephrasing here. | Removed in revision | |
| Line 84-85: is there at lease a personal communication to cite about this statement? | Addressed by referencing figure 2. | |
| Line 111. Should 'at' be 'and'? |  | |
| Line 125. What number of quadrants per site? Minimum number? Range? | I will work on this | |
| Line 287: were none of the months or years significantly higher than average? | Explained in revision. Lines 115-119. | |
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| Line 335: I do not know what the SP term is | This is defined in line 254. A unique identifier combing the site and project names. Treated as a random effect. | |
| Line 404: Suggest 'intended' (or 'hoped') instead of 'designed' | Addressed I think | |
| Research Questions: It is unclear in Q1 whether these are oyster counts in the bays in general or on the restoration project specifically. | Revised in lines 108, 126, 139 to clarify | |
| Research Questions: Q2 and 3: why only Apalachicola was investigated for these questions is unclear. I encourage you to provide some justification to support understanding by the reader. | Addressed lines 57-63 and elsewhere | |
| it would be ideal for there to be more data available … However, investments in these data are rare at the scale/level of resolution needed to be valuable. So, I think the authors are doing their best with a limited data set. | Yes, I’m open to suggestions. | |
| The term "cultch biomass" is used throughout to express the amount of cultch material deployed. The term should be just "mass." | I think this edit is ok, it is a big edit. | |
| Biomass on cultch, including oysters and all else, would be interesting, but is not mentioned. | I defined cultch in this paper as living and dead material. The reviewer is not recognizing how I defined cultch. | |
| Reef restoration, even without oysters, can be ecologically beneficial. | Just posturing | |
| I am also curious why some effort was not made to quantify cultch in terms of surface area rather than mass. It would be a more relevant variable, and computable from mass with some simple algorithms. | We are unaware of reliable conversions between mass and area for the materials used. These relationships are highly correlated and whether we were discussing mass or area only the limestone material persisted based on available data. | |
| increase clarity (including of statistics presentation) |  | |
| reduce jargon |  | |
| make less “preachy”/ more forward-looking |  | |
| reduce length |  | |
| Line 19: shortcomings not short comings |  | |
| Line 36: some of these citations seem improperly formatted |  | |
| Lines 37-39 Awkward phrasing |  | |
| Line 58 and throughout: 'Bays' should be capitalized, I believe, as those are all proper names of bays (Pensacola Bay, St. Andrew Bay, etc.) |  | |
| Line 72: the redundant use of leadership and leaders is a bit clunky |  | |
| Line 146: 'Staring' should be 'starting' |  | |
| Line 281: over-dispersed was used as a term earlier but explained here. Might move that section in parentheses to the first mention of over-dispersed |  | |
| Line 403: Multiple use of ‘designed’ in this sentence is a clunky |  | |