

Interactive comment on “Deepwater Horizon oil spill impacts on Alabama beaches” by J. S. Hayworth et al.

J. S. Hayworth et al.

jsh@auburn.edu

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Anonymous Referee #1

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GENERAL COMMENTS Overall, I think this manuscript is well written and well balanced in its discussion of what is known and not known about the Deep-Water Horizon oil spill impacts on Alabama beaches. The main value of the writing, in my opinion, is that it can serve as a basis and motivation for performing more detailed and long-term studies of oil spill problems in the Alabama shore environment – something that will benefit the entire nation since much of this kind of knowledge results from studying

C4625

the effects of accidental spills, a type of natural experiment that we should not ignore. As knowledge builds from the many spill locations, everyone becomes better able to evaluate and plan for future accidents. With this thought in mind, I would like to see the present manuscript revised to include more related information, in summary form, resulting from previous spills such as the Cadiz oil spill, the Exxon Valdez spill and others mentioned in the manuscript. Much of this information is referenced, but I think readers would benefit from more explicit information in the present manuscript. For example, I have read that a few years after the Exxon Valdez spill, the local fish catch increased significantly. Is this true and, if so, has such an effect been observed at other locations? If there are both potentially positive and negative long-term effects from oil spills, then both should be identified clearly. This is done in the manuscript to some extent, but I suggest it be made more explicit (more known knowns at other spill locations). Climate in the spill location would also be expected to be important.

Author response. We appreciate the comments and suggestions provided by the referee. We agree that the manuscript will be improved by including more related information from previous oil spills. We have attempted to provide this additional information in our revised manuscript.

1. Several measurements were made in Auburn University labs. Please give more information concerning how these measurements were performed

Author response. In the revised manuscript on page 8, we have included some additional details on the measurements performed in our laboratory.

2. Page 6734, line 11: after “communities” add “and guidance in handling future oil spills.”

3. Page 6734, line 16: remove “of course, difficult to determine”. Replace with “by definition, impossible to express”.

4. Page 6734, line 23: add “Achieving such revelations is one of the main objectives of

C4626

scientific research.”

Author response. We agree with all of the above suggestions and the requested changes have been made in our revised manuscript.

TECHNICAL CORRECTIONS 1. Figure 4 is not referenced in the text, and after Figure 3, each figure referenced uses one figure number to small, i.e. Fig. 5 is called Fig. 4; Fig. 6 is called Fig.5; etc.

2. Page 6728, line 25: “mat” should be “mats”.

Author response. The issues with referencing figures noted by the reviewer have been corrected in our revised manuscript. The noted grammatical errors were also corrected.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 6721, 2011.