

Sutton, Kaitlyn

From: Karen Bohnsack - NOAA Affiliate <karen.bohnsack@noaa.gov>
Sent: Friday, November 22, 2019 11:45 AM
To: Sutton, Kaitlyn
Cc: Lauri Maclaughlin - NOAA Federal; Joanne Delaney - NOAA Affiliate
Subject: WQS Triennial Review: Comments on Turbidity Criterion Proposal
Attachments: Key West Harbor_Turbidity Standard_2003.06.27.doc

Hi Kaitlyn,

Thank you for the opportunity to comment on the Turbidity Criterion for the Protection of Coral Reef and Hardbottom Communities. Please see the comments below from the Florida Keys National Marine Sanctuary:

1. FKNMS supports the establishment of turbidity criterion for coral reef and hardbottom communities (proposed revised Rule 62-302.530(70)(b), F.A.C.). The proposed criterion is similar to the anti-degradation standards for turbidity that already apply within Outstanding Florida Waters (Rule 62-30.700, F.A.C.), including FKNMS, and would extend the more protective standard across the Florida Reef Tract and other areas where coral reef or hardbottom communities are currently found. Given the stressed nature of south Florida's coral reefs, to the extent possible we encourage the expedient adoption of this new criterion.
2. According to the document entitled: "Implementation of the Turbidity Criterion for the Protection of Coral Reef and Hardbottom Communities," compared to the OFW Rule, the coral reef and hardbottom turbidity criterion establishes more extensive data requirements for determining background turbidity conditions and adopts a different statistical approach for determining the criterion. As such, please clarify whether these revised turbidity criterion requirements would supersede those established in the OFW Rule, and note that the more protective approach is favored.
3. Monitoring-Specific Comments:
 - Despite the greater data requirements in the revised turbidity criterion, a more robust monitoring program should be considered for each project. Specifically, a minimum of one background and one compliance station for each mixing zone is insufficient. Given the complexity and variability of tidal conditions and current patterns that will affect a project's turbidity plume, hydrodynamic modeling should be used to determine the number and location of compliance and background sampling stations. Additionally, current measurements should be included in the methodology, to be logged concurrently with turbidity measurements.
 - Please clarify the shifting versus fixed compliance and background sampling locations. If these are moving with the plume and changing tidal conditions, is it correct to assume that larger areas are being impacted by turbidity than are being captured during any distinct sampling event? Additionally, as the plume shifts and stations move, how can you ensure that an area that was previously in the mixing zone is not later selected as a background station (and thus potentially inflating the background turbidity measurement with residual project-generated turbidity)? Would a greater number of sampling stations at fixed sites be a better method?
 - Finally, we would encourage a consideration of including additional sampling events at the baseline stations during construction (not just prior, as currently designed). Some consideration should also be given to account for a full range of meteorological and physical oceanographic conditions (winds/ waves/currents/runoff) and other variables that may influence the pre-construction baseline measurement. These pre-project baseline stations would ideally be established by the agencies or an independent third party, to reduce bias from the applicant. Additionally, pre-application and pre-constructions meetings should be required (not just encouraged) to identify the pre-project baseline stations and turbidity limits.
4. **Document-specific suggestions:**
 - Turbidity Technical Support Document:
 - Suggest including mention of the 2003-2004 precedent set by FKNMS and NOAA PRD/HCD during the Key West Harbor dredging project, in which a 15 NTU standard was applied (see the attached document: *Key West Harbor_Turbidity Standard_2003.06.27*)

- (p. 4) Include mention of the other 5 species of Caribbean corals listed as threatened under the Endangered Species Act: *Dendrogyra cylindrus*, *Orbicella annularis*, *Orbicella faveolata*, *Orbicella franksi*, and *Mycetophyllia ferox*.
- Review for typos (ex. p. 13 - redundant use of "collected" in paragraph 2).
- Consider providing information on the potential for dredging and other human-induced turbidity and sedimentation impacts to have cumulative direct and indirect impacts which result in the decline of protected and endangered resources on the Florida Reef Tract. These cumulative impacts should be considered in individual project permits. For example, human-induced turbidity occurring in areas that are currently affected by Stony Coral Tissue Loss Disease may result in greater impacts and losses of corals.
- Turbidity Implementation Document:
 - (p. 2) Include mention of the other 5 species of Caribbean corals listed as threatened under the Endangered Species Act: *Dendrogyra cylindrus*, *Orbicella annularis*, *Orbicella faveolata*, *Orbicella franksi*, and *Mycetophyllia ferox*.
 - Review for typos (ex. p. 8 - double commas after "SEFCRI" in paragraph 2).
 - Light attenuation, sedimentation impacts and cumulative stress are not addressed in this document; at a minimum this should be noted, with a reference that those issues could potentially be addressed via alternate permitting avenues. This document could then point the reader to the Turbidity Technical Support document for further clarification and background information.
 - We appreciate the inclusion of seagrass communities in this turbidity criterion when coral or hardbottom organisms are found in the area. Suggest clarifying this aspect of the criterion beyond the existing footnote.

Best Regards,

Karen

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