



November 21, 2019

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Re: Proposed Rule Changes to 62-302.530(70), F.A.C.
Florida's Water Quality Standards

Dear Ms. Sutton:

This letter is provided as public comment to the proposed changes to 62-302.530(70), F.A.C. regarding turbidity. The added rule subsection (70)(b) "Turbidity shall not be increased above background conditions within the Southeast Florida Coral Reef Ecosystem Conservation Area, Biscayne Bay National Park, Biscayne Bay Aquatic Preserve, Florida Keys National Marine Sanctuary excluding canals, and Dry Tortugas National Park, as shown on the map titled "Florida Reef Tract", July 2019 ..." will increase project costs and duration of construction, may not take accurate account of wave-induced natural (background) turbidity, and imposes overly restrictive criteria on projects that are not in proximity of hardbottom and coral resources.

The following are specific concerns I have regarding the proposed rule change.

- 1) The proposed rule change is too broad and will adversely impact construction costs of projects that are not in proximity of hardbottom and coral resources. These project costs are cost-shared by the Florida Department of Environmental Protection (Department) and the local government. The rule change should be specifically written for projects that can directly impact the resources generally within 1,000 feet of hardbottom and coral resources (rather than a broad geographic area), while providing the additional protection to the critical coral and hardbottom resources.
- 2) As currently written, the proposed rule change for subsection (70)(b) does not reference a single version of a document. Any changes to the Department's draft implementation document (Draft Implementation of the Turbidity Criterion for the Protection of Coral Reef and Hardbottom Communities, September 2019), would require a rule change. The rule can reference an implementation document, but the Department should have the flexibility to revise the document without entering the protocol for rule making.



- 3) The Department's "Draft Revised Turbidity Criterion to Protect Florida Coral and Hardbottom Communities" document provides a comprehensive review of literature and studies. The document suggests that corals and hardbottom flora and fauna are able to withstand some level of increased turbidity for short-term durations, on the order of 4 weeks. The Department cited research conducted in Florida that suggested a level of turbidity of 7 nephelometric turbidity units (NTUs) or less. The Department's document states "The best available science supports a revised turbidity criterion for areas with coral reef habitat at approximately <7 NTU, based primarily on the work by Fourney and Figueiredo (2017) and Telesnicki and Goldberg (1995)." Further, the research conducted by Fourney and Figueiredo (2017) indicated they used anthropogenic sediment with a greater proportion of fine particles than natural sediment. Before applying this study to beach nourishment and inlet maintenance projects, the Department should seek clarification on the concentration of fines in the researchers' anthropogenic sediment. This is important because borrow areas delineated for beach nourishments must have sand compatible with the natural beach sands. This includes a criterion for fines (silts) within the borrow area, which are similar to natural sand.
- 4) The Department has turbidity monitoring data for each project previously constructed in the Florida Reef Tract and Monroe County. Some data have been collected at fixed stations along the reef resources. Have these data been analyzed? The data that the Department already have from previous beach nourishment projects should be used to assess suitable monitoring criteria. The Department has biological monitoring data collected to assess possible impacts of beach nourishment projects on hardbottom and coral resources in proximity to a project. The Department's "Draft Revised Turbidity Criterion to Protect Florida Coral and Hardbottom Communities" document does not appear to assess the Department's data or the findings of multiple previous beach nourishment projects.
- 5) Based on permits the Department issued for beach nourishment projects, the Department does not require biological monitoring of hardbottom and reef communities when the resources are generally more than 1,000 feet from the borrow site or placement area. There are a number of beach nourishment projects within Florida Reef Tract that have beach placement and borrow areas generally greater than 1,000 feet from reef and hardbottom resources. Turbidity criterion more stringent than an increase of 29 NTU above background at the edge of a mixing zone should only be applied to projects that have hardbottom and reef resources generally within 1,000 feet. Increased compliance should be applied only at the resource and not at the edge of a mixing zone that is not in proximity to a resource. The Department's draft implementation document does not address the proximity of hardbottom and reef resources to the project area. The rule should be written such that it is not necessary for the applicant to seek a variance for projects that are not in proximity to hardbottom or coral resources that are generally more 1,000 feet of a resource.
- 6) While natural background turbidity varies during tidal cycles in inlets and immediately adjacent to inlets, wave conditions influence turbidity more than tide cycles, especially for beach nourishment projects. The "Draft Implementation of the Turbidity Criterion for the



Protection of Coral Reef and Hardbottom Communities” (September 2019) document does not account for the variability of turbidity due to wave conditions, which are highly variable, more so than variations due to tides.

- 7) The Department’s “Draft Revised Turbidity Criterion to Protect Florida Coral and Hardbottom Communities” document provides a cost analyses of the economic benefit of the hardbottom and reef communities, but it does not provide a cost analysis for the addition monitoring requirements and additional construction time. These added construction costs are paid for by the local sponsor and are often cost-shared by the state. What is the basis and analyses for how implementing this rule change will affect local sponsors and state? This should include the analyses for Small Cities as defined by Florida Statue, which includes the Town of Jupiter Island, the Town of Palm Beach, and each local sponsor in the Florida Keys.

Should you have any questions or concerns, please contact me at 561.899.0541
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Sincerely,

APPLIED TECHNOLOGY & MANAGEMENT, INC.



Peter N. Seidle, PE
Senior Coastal Engineer

cc: Lisa Armbruster (Sustainable Beaches, LLC)
Jackie Larson (Florida Shore and Beach Preservation Association)

