



NORTH CAROLINA  
Environmental Quality

August 31, 2021

CRC-21-24

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

BRAXTON DAVIS

Director

## MEMORANDUM

**TO:** Coastal Resources Commission  
**FROM:** Robb Mairs  
**SUBJECT:** Artificial Turfgrass within the Coastal Shoreline Buffer

The increasing use of artificial turf grass installation within the Coastal Shorelines Area of Environmental Concern, particularly within the 30' buffer, has recently presented implementation issues for DCM as there are no standards that specifically apply to this material. Your rules restrict development within the 30-foot buffer to water-dependent uses, which are typically docks, piers, boat ramps, bulkheads and accessways. There are also exceptions for limited non-water dependent uses, which include pile-supported signs; elevated, slatted wooden boardwalks; crab shedders; decks/observation decks; grading, excavation, and landscaping with no wetland fill except when required by a permitted shoreline stabilization project. Questions have been raised about the use of artificial turf in the buffer under the landscaping exception.

DCM staff have consulted with the DEQ Division of Energy, Mineral, and Land Resources (DEMLR) State Stormwater Section and with the DEQ Division of Water Resources (DWR) 401 & Buffer Programs for assistance in determining whether this material, as installed, would be considered pervious (if it were being reviewed through a state stormwater permit), and if it would be consistent with vegetative setback and buffer requirements. Staff from DEMLR replied that the material could be considered pervious on a case-by-case basis, but that they have regulations on what can be placed in a required vegetated setback from surface waters in coastal stormwater permits. Their rules require this area to remain vegetated unless one of the exceptions listed in the rules has been met, and artificial turf is not one of these exceptions. Staff from DWR responded that the Tar-Pamlico and Neuse River buffer rules do not include artificial turf grass in their respective Table of Uses and that the material would appear to contradict the intent of the rule to preserve buffer function for nutrient removal. Furthermore, in some cases small plastic fibers are mixed into the soil under the turf during installation to enhance soil compaction, and turf "infill" (small silica, rubber or plastic beads) is also sometimes applied to the surface of the artificial turf to stand up the blades following installation. DWR staff expressed concerns with the potential for these small plastic fibers, and rubber or silica beads, to enter nearby receiving waters and potentially lead to water quality standards violations.

Since adoption of the 30-foot buffer rule in 2000, the Commission has had a clear intent and has been consistent in not allowing non-water-dependent amenities within the buffer that could undermine the purposes and effectiveness of the buffer. The buffer area has been identified as crucial in protecting water quality by filtering contaminants from runoff, allowing infiltration, stabilizing soil, slowing floodwaters and preserving the natural character of the shoreline. When the Commission has granted variances, it has usually involved a habitable structure, and these variances have typically been conditioned on the use of an engineered stormwater system.

In order to retain the effectiveness of the 30' buffer in filtering runoff, Staff request that the Commission confirm DCM's interpretation that the application of artificial turf within an Area of Environmental



Concern requires a CAMA permit, and that it is not allowable under the “landscaping” exception to the 30’ buffer at 15A NCAC 07H.0209(d)(10)(G). While DCM can permit this material within the 75’ AEC, it may be deemed as impervious surface based on a case-by-case review and therefore count toward the maximum allowable impervious surface coverage (depending on installation methods and materials, and any existing impervious surfaces).

I look forward to answering any questions about this determination at our upcoming meeting.

