

## Natural Resources Department Memorandum

**Date:** May 9, 2006

**To:** City Manager Judie Zimomra  
Acting City Manager Jim Isom

**From:** Natural Resources Director Robert K. Lofflin, Ph.D.

**RE:** Red drift algae on beaches event

Sanibel beaches are once again shrouded from one end of the island to the other in a near and on-shore morass of detached and decaying red filamentous algae (see attached photos). This is an algae growing offshore in the Gulf of Mexico on firm substrates and exposed reef areas (as opposed to the muddy, silt covered areas) that has broken off and washed inshore. Its overgrowth at this time is an indicator of high levels of nutrients (nitrogen and phosphorus) in the water column and a eutrophication of the nearshore system as a whole. SCUBA divers visiting nearshore artificial reefs report total coverage of the reefs by this red algae bloom and only a fraction of the normally occurring fish species. Clearly the most likely cause of this outbreak is the high volume of nutrients in the polluted discharges from Lake Okeechobee over the last several years.

Unlike 2 years ago when a similar red drift algae event degraded island beaches and *Gracilaria* was a major component, this event appears so far to be restricted to a single and as yet unidentified species of *Ceramium*. This species is particularly noxious as it decays due to its tendency to severely foul the waters surrounding it, turning it brown and turbid and emanating a strong odor similar to that of sewage. This odor remains prevalent as it piles up on shore where its thin filaments decompose rapidly and quickly lose any value for foraging shorebirds. This event appears to be increasing in severity and extent and large rafts of the decaying algae are clearly visible offshore. Wind direction will be critical in determining whether this bloom continues to get worse for Sanibel. So far, it does not appear to be as extensive or heavy as 2 years ago, but if conditions continue to worsen, hand or even mechanical removal of the larger beached wrack lines of this algae may be necessary.