



# EarthWatch Rhode Island



**Topic: DEM Tackles Explosive Growth in Sea Lettuce along the Shoreline**

**Date: Friday, August 15, 2008**

**Location: Conimicut Beach, Warwick**

As temperatures warm in Narragansett Bay, decaying sea lettuce is becoming an annual nuisance for many who live and play along parts of the Rhode Island shoreline.

Sea lettuce, or *Ulva lactuca*, is green algae that grows near and below the low tide mark. Under normal conditions, sea lettuce provides food, habitat and shelter to many marine animal species. However, under certain conditions that may include excessive nutrients and warmer water temperatures, the growth of sea lettuce explodes. When the seaweed dies, wind and ocean currents can push and keep the decaying seaweed to the shoreline where it becomes stranded in the shallow water and forms large green mats.

As these mats decay they can produce hydrogen sulfide, a gas with a foul or rotten egg odor. Once the sea lettuce begins to decompose, it becomes gelatinous and is nearly impossible to remove. There is then little that can be done to eliminate the foul odors. People exposed to low concentrations of hydrogen sulfide produced by the rotting seaweed may experience irritation to the eyes, nose, or throat. Asthmatics or sensitive individuals may experience more severe symptoms such as difficulty breathing and nausea.

The Department of Environmental Management, with assistance from affected cities and towns, removes sea lettuce in order to prevent hydrogen sulfide odors in seaweed-prone shoreline areas. Using a Barber Surf Rake and tractor, staff from DEM's Office of Emergency Response drive the beach cleaner along the shoreline and remove the sea lettuce that has collected above the low



**Before and after photos of seaweed removal at Bullocks Point in East Providence.**

tide line. The sea lettuce is then composted or disposed of in appropriate composting or disposal facilities.

To date (8/15/08), through cleanup efforts that began in early June, more than 137 cubic yards of seaweed have been removed from RI shorelines including 49 cubic yards from the Conimicut area of Warwick and 82 cubic yards from the Riverside Terrace area of East Providence, and 6 cubic yards from Stillhouse Cove in Cranston.

In addition to the efforts of DEM and the waterfront municipalities, the Department is encouraging waterfront property owners, members of neighborhood associations and civic groups, and other interested residents to help keep the waterfront fresh and odor-free by removing sea lettuce. When the tides deposit sea lettuce along the waterfront, residents can gather it up using a rake and gloves, and deposit it in yard waste bags. Homeowners should put the filled bags out with the trash for pick up. For larger pickups, residents should call the local public works departments in advance to arrange for pickup of the yard waste bags.

**Interviews:**

Jim Ball, Oil and Hazardous Material Specialist, DEM/Office of Emergency Response, discussed the sea lettuce problem and how DEM deals with it

Don Squires, Oil and Hazardous Material Specialist, DEM/Office of Emergency Response, demonstrated how the sea lettuce is removed using a Barber Surf Rake and tractor.