

# **The public is responsible**

**A**re we doing enough to protect the Cape environment?

Not for the Cape estuaries and embayments. They are hurting.

Key question. Who is most responsible for not protecting our marine environment”?

It's not the Cape Cod Commission, Division of Marine Fisheries, Department of Environmental Protection, town officials, the press, or our scientists, etc. Who's left?

An uniformed and complacent public!

I don't say this lightly. Residents need to become "aware" on how our environment is changing and the processes involved.

One of the most damaging processes that literally are "killing" our Cape estuaries is eutrophication. The majority of the public doesn't know, or sadly, could not care less what this process means. Other residents nicknamed "Water People" are informed citizens making a living from the water and are "well aware." They have "seen the light" or rather the "greening" eutrophication of our beaches and coastal waters.

Basically, eutrophication means "over fertilization" of an aquatic system, i.e. ponds, estuaries and embayments. This is the most important environmental issue on Cape Cod. Over fertilization is the result of high nutrient concentrations seeping into our marine waters, usually generated from expensive and well-intended state-approved domestic sewage systems (Title 5). Other nutrients are generated from street drainage, and lawn fertilizer and other minimal insults. Excess nutrients feed marine algae cells, create blooms of invasive and unwanted marine algae. As the water warms, by early/mid summer these algal plants grow exponentially, choking the waterways with excessive plant material, producing low oxygen events when these plants die and rot.

In time, all of this produces a "killing field" suffocating fish and shellfish. Time is on the side of these ever-increasing eutrophic events, negatively impacting water quality in New England, most of the coastal U.S., and embayments all over the world.

"Caretakers" of Cape Cod have no choice now but to pay better attention and become informed. The degrading process eventually will win out and seriously impact human health and coastal recreation. Coastal property owners will be forced into submission. Within poorly circulated

nitrogen-rich embayments, hydrogen sulfide gas is generated from dying and rotting finfish, shellfish and decaying algae. Such commonly recurring hypoxic events can lead to declining values of coastal real estate investments. Once clean and healthy estuaries common to the "Old Cape Cod" now have forced shellfish closures because of excess fecal coliform counts. Shellfish closures and disappearing eelgrass are the sentinel signs. Next come beach closures, followed by loss in interest in kayaking, canoeing, cruising and sailing. Dense "rafts" of mat algae prevents all of these water activities.

One could argue a myth here, or just overreacting? Well, the future is here and it's happening on Cape Cod now within several estuaries. Serving as a volunteer water quality monitor for several years for Barnstable and Falmouth, the trend is unequivocal.

Where do we go from here? Read your local newspapers, attend meetings, and ask questions! Pay particular attention to the new "Barnstable County Water Protection Collaborative" where each Cape town is being asked to serve and participate in helping each other to solve costly sewerage initiatives. Also, the Mass. Estuaries Project is "coming your way" with some excellent ideas on how each town may meet its Total Maximum Daily Load of nitrogen budget by using natural creative attenuation methods in addition to limiting expensive needs for sewerage.

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