State: Sewering can save Three Bays

By DOUG FRASER
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HYANNIS - The science may be complex, but the equation is fairly simple.

Add nearly 60,000 residents to the 11,000 who lived in Barnstable, Mashpee and Sandwich in 1950. Then factor the number of septic systems it takes to service them and you get water quality so poor in parts of Cotuit, West and North bays that whole meadows of eelgrass have disappeared, mats of algae float on the water, and decreased levels of oxygen lead to fish kills.

Sounds pretty unappealing to tourists - our lifeblood - and to those who would buy a home here.

It could get worse, but it doesn't have to.

State officials aired a report last night at a public hearing at Barnstable Town Hall that explained how to restore eelgrass and water quality to what is known as the Three Bays Estuary.

The culprit is nitrogen, which acts as a fertilizer fueling the rapid growth of algae. These blooms suck the oxygen out of the water and keep light from reaching eelgrass, killing it.

Three-quarters of the nitrogen reaching the estuary comes from septic systems. In some areas that amount of nitrogen needs to be cut by 85 percent.

The goal is simple: to make Cape waters swimmable, fishable and populated with habitat like eelgrass, which can act as a nursery for marine species.

Steve Halterman of the state Department of Environmental Protection said that establishing sewer systems in large areas of the towns was probably the only viable way to deal with nitrogen. The report is part of a state-wide effort, known as the Massachusetts Estuaries Project, to determine the amount, and the sources, of nitrogen coming into the state's bays and estuaries.

The estuaries project was started in 2001 by the DEP and the University of Massachusetts Dartmouth in response to a federal Clean Water Act requirement that all communities need to set daily limits on the amount of nitrogen and other contaminants flowing into rivers, bays and lakes.

These calculations require about three years of data. When all the information is collected, a total maximum daily limit of nitrogen is set by the state for each water body. It is then up to towns to determine how they want to reduce excess amounts of nitrogen.

"There's a lot of focus on wastewater," said Ed Eichner, a water resources scientist for the Cape Cod Commission. Eichner said that, across the Cape, 70 to 80 percent of the nitrogen flowing into estuaries comes from wastewater, mostly from septic systems, but also wastewater treatment plants.

Chatham estimated that sewering the remainder of the town will cost more than $300 million and Falmouth figured more than $500 million. Six estuaries on Cape have their final figures from the state, and 17 others are in various stages of completing their data gathering or analysis.

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