



Oysters are bivalve of choice to remove nitrogen from Chilmark Pond. *Mark Alan Lovewell*

Shellfish Plan Spans Chilmark and Tisbury

Ivy Ashe *Thursday, April 24, 2014 - 9:14pm*

With nitrogen pollution a perpetual concern for Vineyard waterways, two towns are hoping that a shellfish experiment will be the latest puzzle piece to fall into place.

Voters in Chilmark and Tisbury will be asked at their respective town meetings next week to fund pilot programs aimed at reducing nitrogen levels in two locations: Chilmark Pond and Lagoon Pond. Through the funding and a partnership with the Martha's Vineyard Shellfish Group, test reefs of noncommercial oysters will be cultivated, in addition to beds of native ribbed mussels.

Chilmark's proposal involves \$10,000 of funding. Tisbury is asking for \$15,000.

In Tisbury, the initial proposal for the pilot program came from town wastewater commissioners. At last year's town meeting, the commissioners focused their nitrogen reduction efforts on updating town sewage facilities.

“If you were going to tackle the whole thing just through sewerage, you’d have quite an expensive project on your hand,” Tisbury wastewater commissioner Melinda Loberg said on Wednesday. Mrs. Loberg said that sewerage solutions, while good for mitigating future nitrogen production, do not address the high levels of nitrogen that are already in the water and groundwater.

Oysters remove nitrogen from water via filtration; an adult oyster is capable of filtering up to 50 gallons of water a day. Most oysters on the Vineyard are grown commercially in oyster cages, but a bed or a reef of the shellfish is more productive when it comes to filtration.

Martha’s Vineyard Shellfish Group director Rick Karney said the main question was whether an oyster bed could take hold in Lagoon Pond, a high salinity environment where the beds could be susceptible to predation from snails. The test bed will be at the mouth of Mud Creek.

In Chilmark, the pilot program would pave the way for a massive future effort.

“To reverse our nitrogen loading in our ponds we have to do large scale shellfish growing,” Chilmark selectman Warren Doty said on Tuesday. “It has to be done at a large volume — growing one million oysters doesn’t matter much. Ten or 15 million might.”

“Hundreds of millions of oysters lived in these waters before we fished them out, and they had a tremendous positive effect on water quality,” he said.

But Chilmark Pond is closed to shellfish harvesting by the state, so even though the beds would be noncommercial the oysters could not be grown to market size. Mr. Karney said the shellfish group could grow them up to a certain point and move them — a more complex process, to be sure.

He said he was most excited about the potential for using ribbed mussels. The ribbed, or marsh mussel is native to the Vineyard but it is not eaten (“They have kind of a miserable taste,” Mr. Karney said). Like oysters, they are power filters. And they eat bacteria in the water, doubling the pollution-cleansing effect.

“They’re an exciting species in a lot of ways,” Mr. Karney said. “Among my shellfish colleagues a lot of people are recognizing the importance of these things.”

Ribbed mussel beds could also be used to help stave off coastal erosion. The mussels grow in dense concentrations and are “almost like rocks,” Mr. Karney said, so they act as natural fortifications in the coastal zone. The shellfish group has applied for a state grant — which would be matched by the town funding — to see if the mussels could be grown in a hatchery. Some work on hatchery raising has already been done at Rutgers in New Jersey, but the full potential of the mussel has yet to be tapped.

“We just don’t have a good source of marsh mussel seed,” Mr. Karney said.

Back in Tisbury, the group hopes to move the wild population already in Lagoon Pond into areas of high nitrogen and see how they help water quality.

“We think there’s really going to be a need for shellfish biomediation,” Mr. Karney said.

Remy Tumin contributed reporting.