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Cure Prescribed for Lake Agawam

BY BRENDAN O'REILLY

Dredging and stormwater management could be the one-two punch needed to restore Southampton's ailing Lake Agawam to a natural balance.

That's according to Christopher Gobler, an associate professor at Stony Brook Southampton's School of Marine and Atmospheric Sciences who has been studying the lake since 2003. If nothing is done to address the excess nutrients in the lake, blue-green algae blooms will lead to fish kills and recreational risks, Mr. Gobler said during a presentation to the Southampton Village Board last Thursday, April 10.

The algae blooms are a result of nutrient loading, an overenrichment of nitrogen and phosphorus in the lake, Mr. Gobler said. "When you have too many nutrients, the natural balance of the ecosystem starts to shift," he explained.

In his five years studying the lake, Mr. Gobler has identified many contributing sources of nutrients, and his three biggest concerns are stormwater runoff, muddy sediment and groundwater.

"It's nearly impossible to fix the groundwater issue," Mr. Gobler admitted, citing the history of farming in the area and the density of cesspools and septic tanks. A sewage system could help, though he added that seeing the effects of it would be years off since the ground is so saturated with nutrients. "Nitrogen in the ground will be there for decades to come," he said.

An easier goal to achieve would be redirecting stormwater.

"Every time it rains there's an incredible flush of water of a very large volume that enters the lake, and that water's rich in nutrients," he said. "That water doesn't have to go into the lake."

Most of the rain that falls in Southampton Village ends up pouring out of a storm drain and into the north end of Lake Agawam, Mr. Gobler noted. Rainwater itself is enriched with nutrients, and runoff also carries with it any nutrients it washes away from lawns and impervious surfaces.

"If the water was rerouted," he said, "it would reduce the nutrient loading to the lake." It could be directed to a vegetative area, where plant life would absorb the nutrients, he suggested.

Another option is to send the stormwater out into the ocean, though Mr. Gobler questioned how politically popular that would be. He pointed out that on other parts

of Long Island, treated sewage is sent out to the ocean, and stormwater would be even cleaner than that. The water wouldn't just dump out on the beach, he added.

Rather, it would be delivered through a pipe stretching miles out into the ocean. To address the muddy sediment at the bottom of the lake, Mr. Gobler suggested dredging. The mud, an accumulation of dead algae, is very organic and it releases nutrients into the water, feeding future generations of blue-green algae. Further disrupting the balance in Lake Agawam are the toxins the algae release, Mr. Gobler explained.

"If there are high levels, and someone were to go swimming in that water, they could get sick immediately, or it could be a longer term accumulation," he said. The scientist also advised against eating fish caught in the lake.

The professor will be giving a lecture on Lake Agawam and other local water bodies on Friday, May 2, at 7 p.m. on the Stony Brook Southampton campus. The talk is open to the public.

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