

Finding gold in Cape wastewater

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FALMOUTH — The Cape will spend billions in the next few decades to keep nitrogen and other contaminants from fouling its coastal waters to comply with the federal Clean Water Act.

But Cape municipal officials heard yesterday that they might not be considering some of the most innovative solutions to deal with wastewater.

Cape towns are throwing away money, and creating unsustainable solutions by ignoring the value in wastewater and solid waste, and not reusing much of the water pumped into homes and business, a panel of wastewater experts from the United States and Canada said at a forum hosted by the Waquoit Bay National Estuarine Research Reserve.

"There is no such thing as waste in nature," said Ed Clerico, president of Alliance Environmental, of Hillsborough. The United States is still using a wastewater model, developed in Roman times, in which clean water enters a municipality, is used, and then is discarded as waste, he said.

Of the 1,200 gallons that each United States resident uses on an average day, only one gallon is for drinking, he said, while up to 10 gallons are used for each flush of a toilet. It takes money to buy the energy to pump and treat drinking water, and more energy to clean it and dispose of it, he said.

"What we are doing is not sustainable," said Clerico, who discounts large-scale wastewater treatment plants as the only solution.

His company reduced the amount of water used at Gillette Stadium in Foxboro by 75 percent, he said. And at one New York city high-rise, his company developed a system to collect its wastewater and stormwater, screen it for solids and sediments, treat and filter it, and use it to flush toilets, wash clothes and cool the building, he said.

Shower water, dish and laundry water are also heated for use, and that heat can be extracted to warm a home, or produce energy, experts pointed out. Bruce Douglas, vice-president of Stone Environmental of Montpelier, Vt., said Cape towns should consider using the solid waste they now pay to ship to SEMASS, a Rochester waste-to-energy plant, as a fuel to power small and large wastewater treatment plants.

"We need to make (water management) more profitable. This is just about the money," said Patrick Lucey, president of Aqua-Tex, in Victoria, British Columbia. Lucey urged taking a broader view of water, assessing its value as more than just a commodity.

His company installed a wastewater treatment plant underground in the center of a lot in Victoria, constructing a wetland above it, and located homes all around the edges facing the wetland. The increased price of the waterview homes paid for the extra cost of the construction.

Clerico said the technology to reuse wastewater exists and is sound.

Other speakers said there is support and funding for at the state and federal levels for alternative solutions.