

## Close the Loop, Save the Bay

Seeing an endless quantity of plastic trash strewn across the beaches at Sears Island is heartbreaking. Knowing that this was only a fraction of what fell into Penobscot Bay from [bales sent from Ireland](#) to be incinerated in Maine, is even more devastating.



The currents eventually brought some of this garbage to Islesboro. In the future, our shores risk seeing a lot more pollution thanks to Nordic Aquafarms' fish factory.

Maine's leading Professor of Oceanography, [Dr. Neal R. Pettigrew](#), who ran physical oceanography experiments in Penobscot Bay from 1997-2000, testified that "[Nordic's] modeling done at this point does not appear to be sufficient to accurately examine the outcomes of the proposed wastewater discharge on the local and far-field regions of Penobscot Bay."

Despite Dr. Pettigrew's reputation and experience, the Department of Marine Resources, the Department of Environmental Protection, and the town of Belfast ignored his findings. They have also ignored the testimony of Dr. Kyle Aveni-Deforge, a marine environment expert. Dr. Aveni-Deforge testified that not only will the effluent increase the amount of nutrients near the shore, but that the data needed to fully assess the plume paths is absent from the application. **When Nordic's application failed to meet the DEP's nitrogen standards, the DEP let Nordic**

**change their numbers, but without re-opening the record, so no experts were allowed to ask questions.**

Nitrogen would be only one of the many substances found in the 7.7 million gallons of warm effluent flooding the bay every day. Viruses, bacteria, and other pathogens will be in the mix. [Dr. Brian Dixon](#), a world renowned Fish and Environmental Immunologist, [testified](#) concerning these issues, and the shortcomings of the proposed filtration system.

The [known toxins in fishmeal](#) will also find their way to the bay. While Nordic claims it will be finding al-



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CARING FOR THE WATERS OF MIDCOAST MAINE

ternative foods they have produced no answers on what will be used. The toxins in fishmeal, and farm raised fish, include persistent and bioaccumulative toxic substances (PBTs), monomethyl mercury, and polychlorinated biphenyls (PCB's). In addition, [Ethoxyquin](#), used to keep the fishmeal from exploding and rotting, is banned in Europe, but permitted in the US. This chemical damages DNA and creates liver complications.

The filtration systems will not eliminate all of these chemicals or the chlorinated disinfectants and germicides, antiparasitic and antiviral drugs that will be used. **Testing the waters for pharmaceuticals or contaminants usually associated with fishmeal, and the treatment of diseases and pathogens, are not being required by the State.** This may be because Maine struggles to enforce compliance even at the federally run [Craig Brook hatchery](#) which was in violation of its own phosphorous standards for years. "Maine DEP was only now requesting a consent agreement with the hatchery because it had taken several years to accumulate a sampling of water quality data."

If it takes years to "accumulate a sampling of water quality data" when a violation takes place at a government facility, how long would it take to address Nordic's violations? [Cooke Aquaculture](#), also licensed and overseen by DEP, is in constant violation of its permits.

There are many more serious issues for the bay concerning this factory, not the least of which is the dredging of [mercury-laden sediment](#). Again, Upstream Watch brought in an [expert to review](#) the studies, he concluded that Nordic's entire study is faulty.



If plastic that spilled at Mack Point washed up on shore at Islesboro, other substances dumped into the bay will as well.

Is all this worth a 30 year factory that is using obsolete technology demanding [28 megawatts of power](#) every day, run by a corporation that has [violated their permits](#) in Norway?

Upstream Watch has insisted DEP meet its own requirement that the Best Available Technology be used. Closed looped RAS, like that being used by [Sustainable Blue](#), is by far the best technology out there. **Combined with [restoration efforts](#) that are seeing incredible success, and locally-based [regenerative aquaculture systems](#) that support local, independent people, [sequester carbon](#) and help revive marine ecosystems, these closed looped systems could meet Maine's economic needs and ecological imperatives.**

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