

Friends of Penobscot Bay
POB 1871 Rockland ME 04941
"People who care about Maine's biggest bay"

October 28, 2018

Gregg Wood
Maine Department of Environmental Protection
Bureau of Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333-0017

Re Whole Oceans LLC discharge permit application

Dear Gregg

Friends of Penobscot Bay appreciates the opportunity to review the application by Whole Oceans LLC for permission to discharge wastewater into Penobscot River from a Recirculating Aquaculture System (RAS) salmon tankfarm, and offer the following comments and observations for your consideration.

BPT GOAL ACHIEVEABLE? DEP's goal here is to identify the Best Practicable Treatment of Whole Oceans' various discharges that will allow the company to meet with all applicable water quality standards. Yet Maine DEP has a very limited number of RAS dischargers from which to determine what "Best" practices are, including, we understand, the Craig Brook federal salmon hatchery.

Hence the agency is faced with breaking new ground. In keeping with State rule and law ensuring that water quality is not reduced by multiple dischargers to a single waterbody, DEP needs to take the precautionary route of looking at the multiple proposed dischargers at the same time. Given the practically identical technology discharging wastes and therapeutant and other residues into different ends of the same estuarine reach, the Whole Oceans LLC and Nordic Aqua Farms (NAF) discharge permit applications need to be reviewed in tandem, not sequentially. Unless that is done, it is not clear to us that the standards of Maine's anti-degradation policy will be met.

We understand that this would necessitate extending the review period for WO, though not necessarily for NAF. However, with investment in landbased RAS salmon industry on the increase, it is reasonably anticipatable that in addition to those two applicants, additional applications for siting additional RAS facilities in this lower Penobscot River /upper Penobscot Bay estuary will be forthcoming.

Moreover, both Nordic and Whole Oceans profess no competitive designs against each others' market shares. If so, then they should likewise be willing to ensure they do not collectively reduce water quality in the estuary they share.



Therefore, Instead of scattershot responses to individual applications, we urge the state of Maine to get off on a stronger footing by evaluating that geographic reach as a potential **RAS industrial livestock agriculture growth zone** and setting cumulative limits as a matter of course.

Cumulative impacts of multiple aquaculture discharges

We believe that pursuant to 38 §414-A(1)A, the review of this project needs to take in consideration the combined discharges of significant amounts of nitrogen, phosphorus, pheromones, kairomones, antibiotic and antifungal therapeutants, and sterilizing and cleaning chemicals both from Whole Ocean's proposed operation and from the proposed Nordic Aqua Farms' RAS salmon tankfarm, which is also seeking to discharge wastewater into the shared waters of the Penobscot estuary

It is not clear how WO's slaughterhouse effluent is being managed. Will it be sent to Bucksport's POTW or get discharged as part of WO's wastewater effluent? Bucksport's tidal Penobscot River waters are Class SC, while Belfast's tidal waters are cleaner at Class SB. Effluents from Whole Oceans could reduce water quality in certain parameters in the neighboring SB waters.

What about PRAMP?

From: Penobscot River Phosphorus Waste Load Allocation Ambient Monitoring Plan Report – 2014

The **Penobscot River Ambient Monitoring Plan (PRAMP)** "measures the effectiveness of the Phosphorus-Waste Load Allocation (P-WLA) in eliminating eutrophication driven dissolved oxygen (DO) non-attainment, and to identify potential/particular areas of concern along the river."

Again the combination of WO's and Nordic's discharges could result in a "potential/particular areas of concern along the river." This as the outgoing tide will bring WO's phosphorous, nitrogen and other wastes down to Belfast waters

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MERCURY According to the Penobscot River Mercury Study's findings in Chapter 5: "Total mercury sedimentary inventories and sedimentary fluxes in the lower Penobscot River and estuary, Maine" some of the highest mercury concentrations in the river's near-surface sediments* occur adjacent to the proposed Whole Oceans RAS. * Near-surface = upper 3 cm of sediments



Total Hg concentrations in Penobscot River (PBR 27B is closest to proposed Whole Oceans RAS facility; see results below)

(Mercury continued next page)

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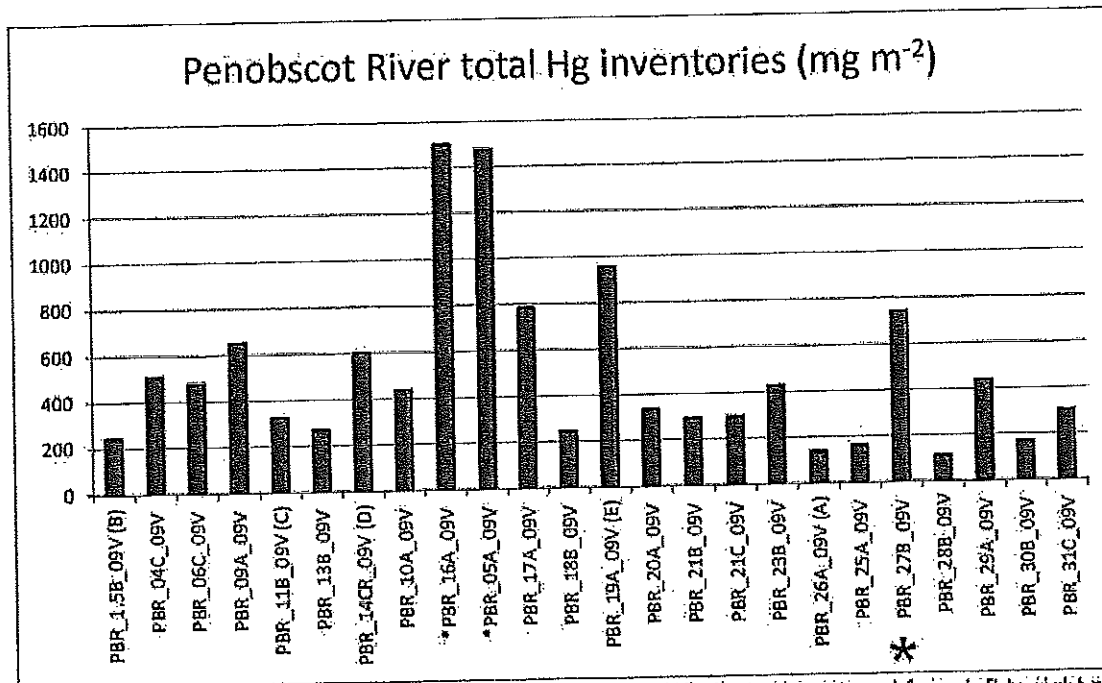


Figure 5-9. Sedimentary inventories of total Hg in Penobscot River cores, arrayed from left to right moving from north to south. * = mercury sample site closest to Whole Oceans

In closing we want to emphasize that an effective review of this project will require it to be considered in tandem with Nordic AquaFarm's proposal. Maine Natural Resources Protection Act notes in its Findings:

"The Legislature further finds and declares that the cumulative effect of frequent minor alterations and occasional major alterations of these resources poses a substantial threat to the environment and economy of the State and its quality of life."

Please be cognizant of this.

Sincerely

Ron Huber

Ron Huber executive director

Friends of Penobscot Bay