



November 12, 2021

Ms. Cindy L. Dionne
Division of Water Quality Management
Bureau of Water Quality
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

43 COTTAGE STREET
P.O. BOX 45
BAR HARBOR
MAINE 04609
207 288 3340
207 288 8938 fax
friendsofacadia.org

Sent via e-mail to: Cindy.L.Dionne@maine.gov

Dear Ms. Dionne:

Thank you for the opportunity to submit comments on behalf of Friends of Acadia in opposition to the applications from American Aquafarms for wastewater discharge permits from the 60-acre salmon farms they have proposed near Long Porcupine Island and Bald Rock in Frenchman Bay.

Friends of Acadia's mission is to preserve, protect, and promote stewardship of the outstanding natural beauty, ecological vitality, and distinctive cultural resources of Acadia National Park and the surrounding communities for the inspiration and enjoyment of current and future generations. Our organization represents nearly 5,000 members in Maine and across the country – all with a shared commitment to ensure that Acadia remains a treasure with clean air and water, sweeping scenic views, and outstanding recreational opportunities, including hiking, bicycling, kayaking, stargazing, picnicking, and more.

Friends of Acadia is very concerned about the size of American Aquafarms' proposed salmon farms, the volume of effluent coming from the pens, risks from fuel spills, and excess nutrients circulating through the bay, which has poor flushing according to new modeling. We believe that the proposed salmon farms will have unreasonable impact on the water quality and wildlife of Frenchman Bay and the natural resources of Acadia National Park. We urge the Maine Department of Environmental Protection (Maine DEP) to deny the requested permits for American Aquafarms at both the Long Porcupine and Bald Rock locations.

Acadia National Park encompasses hundreds of island properties, and the natural values of these islands are described in the park's boundary legislation approved by the U.S. Congress in 1986. This law opens with the following words in introducing its purpose: "In order to protect and conserve the land and water resources of Acadia National Park..." A tremendous investment of public resources has gone into setting aside and safeguarding these valuable assets for public benefit. Perhaps no group of islands is more prominent and iconic at Acadia than the Porcupine Islands in Frenchman Bay. Friends of Acadia believes that the wastewater discharge aspects of the American Aquafarms proposal would have direct and lasting negative impacts on these very lands and waters that Congress has charged the park with protecting.

At approximately the size of fifteen football fields, the farms would be an industrial use of Frenchman Bay at unprecedented scale, situated as close as 2,000 feet to park lands. At full

build-out, the combined farms would produce 4.1 billion gallons of untreated effluent each day, and the secondary discharge from the dewatered solids is proposed to be 0.36 million gallons per day. By comparison, the Bar Harbor wastewater treatment facility has a permit to discharge up to 2 million gallons of effluent per day and the City of Boston is permitted to release 436 million gallons per day. American Aquafarms' proposed salmon farms far surpass these municipal and urban discharges in volume, and we need to fully understand the impacts to Frenchman Bay's currents, water quality, and wildlife through additional analyses.

Maine DEP should also take into account additional modeling that has shown that water does not easily flush out of Frenchman Bay. Dr. Chris Kincaid from the University of Rhode Island has demonstrated that flow from the discharges at both the Long Porcupine and Bald Rock sites tends to circulate in a gyre over two weeks in Frenchman Bay, mixing together and recirculating to the farm sites. See information about Dr. Kincaid's model and a 2-week animation of flow in Frenchman Bay at Frenchman Bay United's website https://44091146-201a-4fb7-83d1-6c55cd66b050.filesusr.com/ugd/8286d6_50728369fbc34cfc8c860f342361ab8.pdf. The website for the CORMIX model used by the applicant (<http://www.cormix.info/picgal/unstable.php>) indicates that it should not be used for unstable discharge conditions, which includes when "recirculation phenomena appears in the discharge vicinity". Friends of Acadia is concerned that the CORMIX model used by the applicant does not show the entire picture of what is happening in Frenchman Bay and recommends that the Maine DEP take into account Dr. Kincaid's model in the permitting decision.

Additionally, Dr. Kincaid's model of flow over two weeks shows especially concerning patterns of flow bumping up against and recirculating around Acadia's conserved Porcupine Islands, as well as other islands in the vicinity on which the National Park Service holds conservation easements. While the model is not yet sophisticated enough to predict nutrient concentrations, it can be inferred that excess nutrients will build at these locations over the two-week window of the model, not to mention the 20-year span of the proposed aquaculture leases. The organisms living in Acadia's intertidal zone are particularly vulnerable to stressors, such as excess nitrogen and phosphorus, suspended solids, and metals that could originate from the salmon pens. Excess nutrients may result in algal blooms that harm marine organisms and human health.

If Maine DEP does not deny American Aquafarms' permit applications, Friends of Acadia requests that the Department conduct a formal public hearing so that additional testimony regarding potential water quality impacts can be considered. Dr. Kincaid's modeling work has brought to light potential cumulative impacts from American Aquafarms' proposals. A public hearing would provide the opportunity for Maine DEP's scientists, the applicant, and opponents to ask questions of each other and understand assumptions underlying each model.

Friends of Acadia is also concerned about the risk of potential fuel and chemical spills at the American Aquafarms sites. At each farm site, American Aquafarms has proposed having five 500-kw generators and four 9,907-gallon diesel fuel tanks (total 39,628 gallons) aboard the feed/waste barge. The semi-enclosed pens proposed by American Aquafarms are unproven technology at this scale. With climate change, Frenchman Bay is experiencing more frequent intense storms. These storms could disrupt operations at each farm and prohibit addressing spills during these weather events. If Maine DEP does not deny American Aquafarms' permit

applications, Friends of Acadia requests that the state require significant levels of insurance and bonding to cover the risks associated with accidents and spills that could devastate the water quality and health of Frenchman Bay.

At a November 1, 2021 joint meeting of the Bar Harbor Marine Resources Committee, Conservation Commission, and Harbor Committee, residents and local fishermen pointed toward the locations of the proposed salmon pens as places where shrimp, herring, and ground fish were historically seen in high numbers and are beginning to return. Pogies are also being seen in greater schools, along with steady numbers of seals and harbor porpoise, which hunt the schooling fish. Those at the meeting expressed concern about how the volume of the effluent from the salmon farms would affect circulation of plankton on which the baitfish prey, as well as the health of eelgrass in the area, which provides critical cover for young lobsters and fish. Attendees were also concerned about the potential for harmful algal blooms resulting from accumulation of nutrients.

Frenchman Bay is under pressure because of our changing climate and associated threats from invasive species, ocean acidification, and storm surges. Adding industrial-sized aquaculture to the bay will exacerbate these pressures and negatively impact the bay's wildlife and water quality. Friends of Acadia encourages Maine DEP to consider additional modeling that demonstrates poor flushing in Frenchman Bay that could lead toward accumulation of waste from American Aquafarms' proposed salmon farms. Traditional fisheries and existing aquaculture facilities operate on a smaller scale and are in harmony with other uses of the bay, including tourism and recreational boating.

Thank you very much for the opportunity to comment. Friends of Acadia respectfully requests that Maine DEP deny wastewater discharge permits to American Aquafarms for their proposed salmon farms near Bald Rock and Long Porcupine Island. If you have questions, please feel free to contact me at david@friendsofacadia.org or 207-669-5481.

Sincerely,

A handwritten signature in blue ink that reads "David MacDonald". The signature is written in a cursive style with a large, sweeping flourish at the end.

David R. MacDonald
President and CEO