

Date: January 6, 2017

To: Pam Sanguinetti
U.S. Army Corps of Engineers
Seattle District Regulatory Branch

From: James S. Brennan MS, MSc
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Subject: Comments on NW 48 Commercial Shellfish Activities Regional Conditions

Dear Ms. Sanguinetti:

Thank you for giving me an opportunity to comment on the NW 48 regional conditions regarding shellfish activities in Puget Sound and Washington State. I previously submitted comments on the NW 48, dated July 28, 2016, and am offering these comments on the proposed regional conditions. In general, I believe that the proposed regional conditions are wholly insufficient for mitigating the broad range of impacts associated with industrial aquaculture, and violate the protective requirements under the National Environmental Policy Act, the Clean Water Act, the Magnusen-Stevens Fishery Conservation and Management Act, and the Endangered Species Act. Furthermore, removing conditions that would provide some level of protection for eelgrass and forage fishes (conditions 10 and 14) is irresponsible and would result in significant impacts to well-known critical habitats and species.

As a former regulator (Marine Habitat Biologist) for the Washington Department of Fish and Wildlife, and as a professional marine biologist for 33 years (25 years working in Washington State), I am very familiar with the regulatory process and how alterations of marine systems affect the health and integrity of natural systems. As a former author of environmental permits, it was my job to evaluate potential impacts of proposed activities, and to require conditions, which would mitigate adverse impacts. In my review of the proposed conditions for aquaculture activities, I find that they are woefully inadequate for mitigating the broad range of activities and associated impacts, both individually and cumulatively. The mitigation sequencing process is hierarchical, beginning with avoidance, followed by various means of lessening or compensating for impacts. The use of a particular mitigation measure, or set of measures, requires some form of evaluation to assign appropriate and adequate mitigation. It also often requires monitoring to determine effectiveness of mitigation measures. The conditions proposed for commercial shellfish aquaculture do not appear to have used any form of assessment or evaluation, and are so minimal that they are meaningless, in my opinion. I believe that if monitoring were required, which it should, you would find that individual and cumulative impacts could be quantified, and a much higher level of mitigation would be required to protect aquatic habitats and species.

The conditions are not only inadequate to meet the minimum or moderate impact threshold, some are illogical and illustrate the lack of justification for their application. For example, while all other forms of development in marine waters (or other wetlands) are required to meet more stringent environmental review and regulatory oversight (and controls), industrial aquaculture is being allowed to convert and otherwise disturb aquatic systems with virtually no controls. One condition restricts the "storage" of materials (e.g., rebar, tubes, nets, etc) on the beach for no more than 7 days, yet the same materials are

allowed to be installed in tens of thousands of acres of intertidal and subtidal areas for the life of the project (years or decades). How does this address the changes in species composition and structure (and related impacts to the natural habitats and species adapted to the natural setting)? Similarly, the large amount of plastics used in current shellfish aquaculture practices results in significant degradation and loss into the marine environment. Periodic beach "patrols" do not prevent the loss, nor do they minimize the degradation of intertidal and subtidal areas, impacts in the food web, entanglement, and known impairment (e.g., feeding, growth, reproduction) or death of organisms that have consumed plastics, among other impacts.

As a restoration practitioner, I have worked with the Army Corps on both large and small-scale shoreline restoration projects. I am mystified by their lack of concern and proposed allowances for commercial shellfish, when I have experienced project delays over a single rock being placed within their jurisdiction on an extensive bulkhead removal and shoreline restoration project. At a minimum, shellfish aquaculture activities should receive the same level of environmental review and permitting requirements as any other in-water project. This level of oversight should occur with each individual project, where individual and cumulative impacts are determined and adequately mitigated.

It is apparent that the Army Corps has not conducted any form of analysis to determine individual or cumulative impacts of shellfish aquaculture, and provides conditions that are virtually meaningless when considering the scope and scale of aquaculture activities. Shellfish aquaculture is expanding at an alarming rate (hundreds of permits/acres per year), with little regulatory oversight or evaluation of its impacts on marine systems. While we spend millions of dollars per year on restoration and recovery efforts for impaired ecosystems and ESA-listed species, the shellfish industry is being allowed to counteract such efforts, based upon political influence and the myth that they are somehow "beneficial" (proven to be untrue) to the health and integrity of public resources.

I urge the Army Corp of Engineers to meet the requirements and intent of the Clean Water Act and Magnusen-Stevens Fishery Conservation and Management Act by requiring individual permits, conducting adequate environmental review, conditioning permits with valid and meaningful requirements to fully mitigate individual and cumulative impacts, monitor, and enforce where violations occur. The future health and integrity of our natural resources depends upon you taking the responsible actions, as well as what is required by law.

Thank you for giving me an opportunity to provide these comments.

Sincerely,
James S. Brennan MS MSc