

Bear Cove Oyster Expansion - Comment

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Preliminary Decision for Lease Amendment ADL 227591

2018

Dear Ms. Cougan,

The spirit and content of the Preliminary Decision for Lease Amendment ADL 227591 convey grave lack of consideration for the public interest and the wild resources we in the Homer Area depend on in Kachemak Bay. Aquaculture operations must be shown on a case-by-case basis not to threaten wild populations, habitats, and public recreation if they are to be consistent with the public interest. While the both the Kenai Area Management Plan and the *Kachemak Bay and Fox River Flats Critical Habitat Areas Management Plan* (Management Plan) require that fish, wildlife, habitat and public use be protected, DNR has conducted no analysis of the impact of the significant expansion of Early Tide Seafarms, LLC on these fronts. This is an unacceptable act of negligence to DNR's core responsibility to the public. There are a number of areas of major concern that must be addressed in the Final Decision, and we believe, if addressed, would bar the requested expansion in Bear Cove.

(1) While the Management Plan states that "the effects of existing farms [in Kachemak Bay] will be utilized to determine, in part, decisions to permit, deny, or modify new aquatic farm proposals...", the Preliminary Decision does not cite any data on impacts of current oyster farms in Kachemak Bay to fish, wildlife and public use and enjoyment of the critical habitat area. That may be because little research has been conducted. If so, no permit for expansion can be granted under these guidelines.

(2) Furthermore, while there may be little information on impacts of farms in Kachemak Bay, there has been research on oyster farms in other places: one of the greatest potential impacts is the net loss of energy, in the form of phytoplankton, from the ecosystem. Bivalve species have been shown to filter 4 - 14.5 gallons of seawater per day. Filtration removes phytoplankton and detritus from the water, and this process is referred to as "top-down" population control, because competition for phytoplankton and detritus harm wild species who depend on the same resources. For example, a study in the Bay of Bourgneuf showed that as the stock of oysters increased from 37,821 to 46,343 tonnes from 1986-88, the wild population of mussels dropped from 40,068 to 6,700 tonnes in the same period.

Early Tide Seafarms, LLC's proposes to increase the number of oysters from 42,000 to 320,000 by 2020. Oyster farm production in all of Kachemak Bay was under 200,000 in 2010, so this is a major proposal for a small bay and shows how quickly development is being permitted here despite the lack of information on impacts in the bay. If each animal filters between 4 - 14.5 gallons daily, the proposal is that by 2020, Early Tide Seafarms, LLC will be filtering between 1,280,000 and 4,640,000 gallons of water every day, stripping out phytoplankton and detritus. In our cold climate, that phytoplankton is gold, and many depend on it, from shellfish to salmon to mammals, on up to the people who depend on those species, be they fishermen, guides, or players up and down our "wild" industry, from hotel owners to taxicab drivers. If we give the phytoplankton to the oysters, we take it from the other species, and we all loose. A large-scale operation in Bear Cove must be analyzed to assure that over-stocking is not occurring. Over-stocking of oysters "can seriously affect phytoplankton availability for other aquatic animals and plants" and has the potential to "exceed the carrying capacity of a whole bay, whereby total productivity of a bay is reduced to the point where its ecological balance is disrupted." The stakes here are very high, yet no analysis of the carrying capacity of Bear Cove has been attempted. No permit for expansion can be issued in this context. There is surely room for some some scale of aquaculture in Bear Cove and in Kachemak Bay. But if DNR grants lease permits without determining what the ecosystem can support, DNR will be responsible for any ecosystem crash in our common wilderness and financial damages to a very significant number of stakeholders at the end of the road.

(3) The decline of native bivalve species (scallops, mussels, razor clams etc.) and other shellfish including crab and shrimp in Kachemak Bay was abrupt and is not well understood. According to the *Kachemak Bay Research Reserve Oyster Population Resiliency Situation Assessment Report* by NOAA and ADF&G, "the rates of decline are alarming and are considerable cause of concern." Given that oyster farms remove phytoplankton and detritus, which these same threatened wild species depend on, oyster farming runs directly counter to their rehabilitation. The value of these wild resources to the state is significantly higher than the expected value of oyster farms; furthermore, according to the Management Plan, DNR's first legal obligation is to protect and promote these species in the critical habitat area. The implications are clear: until these wild populations have been rehabilitated, no expansion of farms or further permits can be permitted.

(4) Furthermore, according to the Kenai Area Plan, "the tidelands around Bear Cove support Pacific herring spawning and a harbor seal haulout." It is well known that harbor seals are highly sensitive to disturbances, and human activity during pup rearing can lead to abandonment of pups and mortality. NOAA describes the problem as follows,

“females will flee to the water if disturbed or approached and may leave their pups behind... A female seal is more likely to return to reclaim her pup once the disturbance near the pup goes away. If activity continues near the pup, the female may eventually give up trying and the pup will be abandoned. A nursing pup that is separated from its mother will not survive.”

It is reasonable to assume that a fourfold increase in activity in Bear Cove will harm the harbor seal population. While information on increases to personnel, boat motors, generators, etc. is absent in the Proposed Determination (they must be included), it is possible that current operations are tantamount harassment this vulnerable population of mammals; it is highly likely that expansion of this scale would constitute harassment.

(5) Also, the Kenai Area Plan classifies Bear Cove as a pacific herring spawning site. It is necessary in herring spawning sites to maintain the health of seagrasses, as that is where they lay their eggs. However, shading from oyster farming has been shown to significantly harm seagrass growth. We cannot trade herring for oysters. It is not in the public interest and it is not consistent with the mandates of the Management Plan to “maintain and enhance fish and wildlife populations and their habitat.”

(6) The Management Plan allows for aquatic farming only when “consistent with...public use and enjoyment of the critical habitat areas...” This one farm would represent more than a 50% increase in total operations in Kachemak Bay, and will include 24 lines and increase buoys in Bear Cove from 120 to 528. When considering public use and enjoyment of Kachemak Bay, we must assess development projects on an individual basis as well as the cumulative effect of development: the Management Plan requires managers to “recognize cumulative impacts when considering effects of small incremental developments and action affecting critical habitat area resources.” We now have over 14 aquaculture permit holders in Kachemak Bay, with many of our small bays and coves supporting farms, and the place feels less wild as a result. This has a strong impact on public use and enjoyment. Research commissioned by the Alaska Travel Industry Association concludes that the feeling that Alaska is “wild” and “unspoiled” is a primary draw for visitors to our state. When many of our residents depend on income from those visitors who are looking for an “unspoiled” Kachemak Bay, unchecked aquaculture expansion is almost certainly a considerable net loss to one of our bedrock industries. In any case, DNR owes the public an analysis along these lines.

To summarize the long list of reasons not to expand aquaculture operations in in Bear Cove: (1) The Management Plan requires that effects of existing farms in Kachemak Bay be used to determine future permitting. This has not been done and may not be possible to do, so no expansion can be permitted. (2) It is reckless to permit the filtering of 1,280,000 to 4,640,000 gallons of water every day in Bear Cove; the impacts of this scale of phytoplankton and detritus removal may well threaten to disrupt the ecological

balance of the entire cove and all the seabirds, fish, and marine mammals who feed, rear and live there. Continued permitting in this manner presents a serious threat all of Kachemak Bay. (3) Aquaculture development of this scale runs counter to the rehabilitation of native scallops, mussels, razor clams, crab and shrimp. (4) This development will harass harbor seals, promoting pup mortality. (5) This development unreasonably threatens herring spawning. (6) The cumulative impact of increased aquaculture throughout Kachemak Bay undermines the tourism industry that depends on the maintenance of a "wild" and "unspoiled" bay. Any one of these reasons is cause enough to deny the lease amendment.

Sincerely,

Roberta Highland

President, Kachemak Bay Conservation Society