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X-Mailer: Novell GroupWise Internet Agent 6.5.4
Date: Fri, 11 Aug 2006 15:46:48 -0700
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Subject: Re: DNR Intertidal Geoduck Leases in Thurston and other
Counties - corrected link
X-pstn-levels: (S:99.90000/99.90000 R:95.9108 P:95.9108 M:96.8350 C:98.6951)
X-pstn-settings: 5 (2.0000:2.0000) s gt3 gt2 gt1 r p m c
X-pstn-addresses: from <fran.mcnair@wadnr.gov> [1206/49]

Dear Ms. Townsend:

Thank you very much for your comments regarding Department of Natural Resources' (DNR) geoduck aquaculture leasing program. DNR is also concerned with the impacts of geoduck aquaculture on the environment. Our scientists have looked at the forage fish issue and determined that there would be minimal interaction between the geoduck aquaculture methods and forage fish (sand lance and surf smelt).

Geoduck aquaculture and forage fish spawning areas are located in different zones of the beach. Intertidal geoduck aquaculture is most successful in the lower portions of the intertidal area, with the upper limit being around a +2 foot tidal level. Surf smelt primarily spawn in coarse sand and pea gravel substrate near the mean higher high water level (approximately +14 ft in south Puget Sound). Sand lance spawn on fine sand substrates slightly lower in the intertidal zone than surf smelt, but well above the geoduck aquaculture lease sites. Therefore, geoduck aquaculture and forage fish activity would have minimal interaction due to the physical separation between the habitats. In addition, in southern Puget Sound, surf smelt spawn during the fall and winter and sand lance spawn in the fall.

Through the Best Management Practices (BMPs), DNR will require our lessees to minimize activities that impact forage fish spawning and larval development. The offer scoring process will give greater consideration to aquaculture activities that minimize environmental impacts, including impacts to forage fish. Offers that have dry harvests during daylight tides are scored the highest for that category. Daylight low tides, where there is adequate exposure to the lower intertidal, occur only from April through August and the spawning activities take place in fall/winter. Therefore, geoduck harvesting activities during daylight low tides should not overlap with surf smelt and sand lance spawning activities.

On a smaller temporal scale, surf smelt and sand lance spawning activity occur during high tide, while intertidal geoduck seeding and maintenance activities occur during low tide. Surf smelt eggs hatch between 27 and 56 days and sand lance hatch within four weeks. The newly hatched forage fish larvae are at the mercy of the tides and currents. There may be some interaction between the newly hatched larvae and the geoduck tube, but the impacts are not known at this time. The tubes may have a negative impact by modifying the currents, or have positive impacts by providing cover with macroalgae growing on the tubes. Scientific monitoring studies in prospective leases may address this question, or include investigation of alternatives to tubes.

For the most part, the lease sites will be accessed from the water. Water access requires aquaculture materials to be unloaded close to the geoduck seeding area to minimize transport up and down or across the beach and use of the upper intertidal zone where forage fish spawn will be negligible. Placement of the tubes and planting geoduck seed commonly occurs during spring and summer daylight tides and the difference in timing will likely have no impact on spawning forage fish.

Shellfish aquaculture has occurred on state-tidelands since statehood. The production of food in the aquatic environment for commercial and recreational purposes is to be fostered, but all of the other regulatory management of other state agencies is preserved. Our lessees are responsible to obtain all pertinent permits from the regulatory agencies prior to entering into a lease with DNR. DNR enters into these geoduck aquaculture leases with the intent

of collecting additional environmental data to minimize environmental impacts. The information collected will be used to adaptively manage the program, including any modification of the BMPs.

As you know, DNR is in the initial stages of offering its first leases of state-owned aquatic lands for geoduck aquaculture. Nine lease sites were offered for bid, with none being in Totten Inlet, an area you mentioned of concern. The Dickenson Point tract is located approximately three miles to the east of Zangle Cove and the Wilson

Point tract is located almost four miles to the northeast of Zangle Cove. Both of these sites should only minimally impact residents of Zangle Cove.

Through the Request for Offers process, shellfish growers who wish to lease state owned aquatic lands for geoduck aquaculture must provide information on how they would manage the site and minimize environmental impacts. The offers will be scored next week, and DNR will award more points for efforts that minimize any possible site impacts. In addition, DNR's leases will have BMPs that are designed to minimize the impacts on the environment.

Current best available science has provided no evidence that geoduck aquaculture practices harm the environment. However, recognizing that more scientific studies that directly examine potential impacts are needed, DNR decided to implement the geoduck aquaculture program with an integrated, thoroughly representative, dedicated environmental monitoring program. The monitoring sites will consist of at least one site each for north Puget Sound, south Puget Sound and Hood Canal. Key areas of specific research that DNR will pursue in the 2006 leases include:

- Changes to the diversity and abundance of epifauna (creatures living on the sediment surface) and benthic infauna (creatures living within the sediment);
- Changes in the physical and chemical properties of the sediment; and
- Changes to eelgrass and macroalgal distribution and abundance

Information from these monitoring leases will be used to adaptively manage the geoduck aquaculture program and ensure the impacts are minimized.

Please feel free to call my staff at (360) 902-1100 if you have any questions. We would be delighted to talk with you further. Please ask to speak with Celia Barton, Sarah Dzinbal or Derrick Toba.

Sincerely,
Fran McNair

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