



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Washington State Habitat Office  
510 Desmond Drive SE, Suite 103  
Lacey, WA 98503

NMFS Tracking No:  
2010/04010

October 13, 2011

Michelle Walker  
Corps of Engineers, Seattle District  
Regulatory Branch CENWS-OD-RG  
Post Office Box 3755  
Seattle, Washington 98124-3755

Dear Ms. Walker:

This correspondence is to reiterate NMFS comments regarding conservation measures as proposed by the Corps on pages 12-14 of the March 9, 2011 Addendum to the Nationwide 48 Biological Assessment. These comments follow from a teleconference meeting between NMFS' SW Washington Branch Chief, Jeff Fisher, and senior biologist Scott Anderson, with COE supervisor Matt Bennett and project manager Pam Sanquinetti that occurred on September 22<sup>nd</sup>.

**Proposed Conservation Measures #1-3:**

1. Washed gravel shall be used for shellfish bed preparation. (Source of original requirement: USACE 2008, USACE 2010f, USACE 2010n)
2. Materials used for construction or discharged into waters of the United States must be free from toxic pollutants in toxic amounts. Unsuitable material (e.g., trash, debris, car bodies, asphalt, tires, etc.) shall not be used for any activity, whether permanent or temporary, in waters of the United States. (New requirement)
3. A Pacific herring spawn survey shall be conducted prior to undertaking the activities listed below if any of these activities will occur outside the approved work window for the project area's Tidal Reference Area. The activities requiring a spawn survey are: 1) mechanical dredge harvesting, 2) raking, 3) harrowing, 4) tilling or other bed preparation activities, 5) frosting or applying oyster shell on beds, 5) geoduck harvesting, net removal, or tube removal. Vegetation, substrate, and aquaculture materials (nets, etc.) shall be inspected for Pacific herring spawn. If Pacific herring spawn is present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and Pacific herring spawn is no longer present.



The U.S. Army Corps of Engineers encourages the permittee to complete a training class on identifying Pacific herring spawn with the Washington Department of Fish and Wildlife. A map showing the Tidal Reference Areas and a table with the approved work windows for Pacific herring are enclosed and can also be found at the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch website. The permittee shall maintain a record of Pacific herring spawn surveys, including the date and time of surveys; the area, materials, and equipment surveyed; results from the survey; etc. The record of Pacific herring spawn surveys shall be made available upon request to the U.S. Army Corps of Engineers, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. (Source of original requirement: USACE 2010f, USACE 2010n)

*NMFS Response:*

*These measures were either provided in the original BA produced for the consultation on NWP 48 by Jones and Stokes (2007) on behalf of the Corps (#1), are newly proposed by the Corps unrelated to comments provided by NMFS in the original or reinitiated consultation (#2), or reflect the Corps interpretation of a NMFS conservation recommendation provided in NMFS 2009 biological opinion on the issuance of NWP 48 (#3).*

*Per our discussion, the NMFS supports these measures as identified. In some major growing areas (e.g., Willapa Bay) where gravel is used to amend a bed, the ability of growers to comply with measure #1 may be limited by a local supply of washed gravel, potentially creating a compliance issue at the outset.*

**Proposed Conservation Measure #4:**

4. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground, etc.) within an existing aquaculture project area shall not be placed within 25 horizontal feet of existing vegetated shallows or kelp. Vegetated shallows are defined at 40 CFR 230.43(b). “Newly positioned” is defined as being re-positioned or placed within a portion of the project area where operations are not currently located and where aquaculture has not previously occurred. (Source of original requirement: USACE 2010f, USACE 2010n).

*NMFS Response:*

*A 25-foot buffer is beyond the 3 meter distance recommendation by NMFS in the 2009 NW 48 Biological Opinion and in the NMFS 2011 concurrence letter for the consultation reinitiation. The NMFS asserts that a 25 foot buffer from eelgrass for ground, long line, and rack and bag culture is not supported by applicable literature. The NMFS proposed the 3 meter distance presented in the NWP 48 BA given the lack of evidence that suggests a larger buffer would provide greater benefits for eelgrass. Findings from Rumrill and Poulton (2004), DeAlteris et al. 2004, Newell 2006, Wisheart et al 2009, and Ferraro and Cole (2007) support this assertion.*

*The NMFS would support an adaptive management approach wherein the operator would adhere to a 3 meter buffer, as initially proffered in the NMFS NWP 48 biological opinion. The presence and density of eelgrass would be observed over a set period authorized under the permit. Adjustments to the size and or shape of the buffer would be based on the response of the*

*eelgrass. Consideration of the total eelgrass acreage coverage and density in the project area would be the most appropriate metric from which to gauge whether adaptive management measures would be needed. In other words, if a localized area of impact is identified within the 3 meter buffer for a specific culture activity, but the total project area covered under the NW 48 permit shows an increase in eelgrass areal coverage or density, then a more restrictive buffer would not be warranted because it could be concluded that the farm activity, or more specifically, the area authorized for culture under the NW 48 permit, has not adversely altered the habitat area of particular concern (seagrass). If, however, a decline in eelgrass is identified within the buffer, and throughout the area authorized, then more prescriptive measures may be warranted. To ensure that any reductions in coverage or density are truly associated with culture operations, a comparable reference area in the same waterbody should be evaluated.*

#### **Proposed Conservation Measures #5-#6:**

5. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground, etc.) within an existing aquaculture project area shall not be placed above the tidal elevation of +5 feet Mean Lower Low Water if the area is documented as surf smelt spawning habitat by the Washington State Department of Fish and Wildlife. A map showing the location of documented surf smelt spawning habitat is available at the SalmonScape interactive program on the Washington State Department of Fish and Wildlife website. “Newly positioned” is defined as being re-positioned or placed within a portion of the project area where operations are not currently located and where aquaculture has not previously occurred. (New requirement)

6. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground, etc.) within an existing aquaculture project area shall not be placed above the tidal elevation of +7 feet Mean Lower Low Water if the area is documented as Pacific sand lance spawning habitat by the Washington State Department of Fish and Wildlife. A map showing the location of documented Pacific sand lance spawning habitat is available at the SalmonScape interactive program on the Washington State Department of Fish and Wildlife website. “Newly positioned” is defined as being re-positioned or placed within a portion of the project area where operations are not currently located and where aquaculture has not previously occurred. (New requirement)

#### *NMFS Response*

*These measures represent new requirements placed by the Corps. However, it is NMFS interpretation that these measures respond in an appropriate manner to the conservation recommendation offered by the NMFS in our original biological opinion to protect forage fish spawning habitats of sand lance and surf smelt. We would like to point out that the tidal elevations referenced in these measures should be reversed, in that surf smelt are recognized to spawn at elevations of +7 MLLW and above, while sand lance may spawn at tidal elevations of +5 MLLW and above.*

#### **Proposed Conservation Measures #7-11**

7. Permittees shall not use tidelands waterward from the line of mean higher high water (MHHW) for the long-term storage of bags, racks, marker stakes, rebar, nets, tubes not currently secured to the substrate, etc. Materials to be stored for longer than 7 days shall be stored above the MHHW line. At a minimum of once a year, aquaculture debris shall be removed from the permit area and disposed of or stored appropriately. This condition does not to apply to the wet storage of harvested shellfish. (Source of original requirement: USACE 2010f, USACE 2010n)

8. All pump intakes (for geoduck harvest, washing down gear, etc.) that use seawater shall be screened in accordance with National Marine Fisheries Service and Washington Department Fish and Wildlife criteria. Note: This does not apply to work boat motor intakes (jet pumps). (Source of original requirement: USACE 2010f, USACE 2010n)
9. All-terrain vehicles, other vehicles, and equipment shall not be washed within 150 feet of any stream, waterbody, or wetland. All wash water shall be treated before being discharged to any stream, waterbody, or wetland. (Source of original requirement: USACE 2010f, USACE 2010n)
10. Vehicles shall be stored, fueled, and maintained in a vehicle staging area placed 150 feet or more from any stream, waterbody, or wetland. Where this is not possible, documentation must be provided to the U.S. Army Corps of Engineers as to why compliance is not possible, written approval from the Corps must be obtained, and the operators shall have a spill prevention plan and maintain a readily-available spill prevention and clean-up kit. (Source of original requirement: USACE 2010f, USACE 2010n)
11. Inspect all vehicles operated within 150 feet of any stream, waterbody, or wetland daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes operation. The permittee shall maintain a record of inspections and the results of these inspections shall be made available to the U.S. Army Corps of Engineers, National Marine Fisheries Service, and U.S. Fish and Wildlife Service upon request. (source of original requirement: USACE 2010f, USACE 2010n)

*NMFS Response*

*These measures are reflective of recommendations provided by NMFS in our original biological opinion or otherwise provided in the biological assessment produced for the Corps and are thus supported.*

**Proposed Conservation Measure #12**

12. All tubes, area nets (e.g. anti-predator nets), and other equipment used on the tidelands below the line of mean higher high water shall be clearly, indelibly, and permanently marked to identify the permittee name and contact information (e.g., telephone number, email address, and/or mailing address). On the nets, identification markers will be placed with a minimum of one identification marker for each 50 feet of net. (New requirement).

*NMFS Response:*

*While NMFS supports a requirement to label large coverage (predator exclusion) nets, owing to the potential for such nets to dislodge and incidentally trap ESA-listed or EFH species, a requirement to mark individual tubes and other miscellaneous gear used in culture (e.g., rebar, etc.) does not offer a clear rationale related to the protection of species under which NMFS has management authority and appears unnecessary. While dislodgement of geoduck tubes has occurred, and efforts should be asserted by growers to minimize this outcome, the labeling of such gear will have no positive effect on species or their habitat as dislodged tubes do not represent a habitat interference. The requirement to fasten netting, as discussed in conservation measure #14, should be sufficient to address lost or dislodged equipment.*

### **Proposed Conservation Measures #13**

13. At least once every three months beaches in the project vicinity shall be patrolled by crews who will retrieve debris (e.g., anti-predator nets, tubes, tube caps, netting stakes, etc.) that escapes from the project area. Within the project vicinity, locations shall be identified where debris tends to accumulate due to wave, current, or wind action, and after weather events these locations shall be patrolled by crews who will retrieve shellfish aquaculture debris. The permittee shall maintain a record with the following information and the record shall be made available upon request to the U.S. Army Corps of Engineers, National Marine Fisheries Service, and U.S. Fish and Wildlife Service: date of patrol, location of areas patrolled, description of the type and amount of retrieved debris, other pertinent information. (New requirement)

*NMFS Response:*

*While NMFS supports this new requirement of quarterly beach survey to retrieve debris, the reporting and accounting exercise associated with this measure would appear unnecessary and burdensome. The NMFS recognizes that it is in the best interest of the operator to retrieve dislodged equipment and debris and the extra reporting requirement appears extraneous to the intent of this measure.*

### **Proposed Conservation Measure #14**

14. The permittee shall ensure area nets (e.g., anti-predator nets) are tightly secured to prevent them from escaping from the project area. (New requirement)

*NMFS Response:*

*Per NMFS response to #12, the NMFS supports this new requirement.*

### **Proposed Conservation Measure #15**

15. The permittee must submit a pre-construction notification to the U.S. Army Corps of Engineers for each proposal to apply more than 10 cubic yards of gravel to “frost” (i.e., to harden) the substrate at a mudflat or vegetated shallow, which are special aquatic sites. Mudflat is defined at 40 CFR 230.42(a) and vegetated shallow is defined at 40 CFR 203.43(a). (New requirement)

*NMFS Response*

*It is NMFS understanding, based on the communications that occurred in the teleconference, that the 10 cubic yard limit is in keeping with other Corps permitting requirements for PCN submittals when fill is proposed, regardless of the project action. We would suggest that the reasoning behind the 10 cubic yard limit be further explained such that applicants better understand the precedential basis for this measure.*

### **Proposed Conservation Measure #16**

16. Vessels used for shellfish culturing at the project area shall not ground in eelgrass beds. (new requirement)

*NMFS Response:*

*Based on our understanding of conditions in several growing areas, this requirement would be impossible for some operators to comply with where eelgrass is ubiquitous and coincident with shellfish farming activities, such as Willapa Bay. The NMFS believes this measure could be re-written to allow temporary grounding with the provision that the same location would not be used consecutively, and that eelgrass should be avoided to the extent possible.*

We thank you for the opportunity to provide these comments, and look forward to working with you on these and other aquaculture issues as we move forward. Please call me at (360) 753-6054 if you would like to discuss this issue further.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven W. Landino". The signature is fluid and cursive, with a large initial "S" and "L".

Steven W. Landino  
Washington State Director  
For Habitat Conservation

Cc: Laura Hoberecht

## Citations

DeAlteris, J.T., B.D. Kilpatrick, and R.B. Rheault. 2004. A comparative evaluation of the habitat value of shellfish aquaculture gear, submerged aquatic vegetation and a non-vegetated seabed. *Journal of Shellfish Research* 23: 867-874.

Ferraro, S.P. and F.A. Cole. 2007. Benthic macrofauna-habitat associations in Willapa Bay, Washington, USA. *Estuarine, Coastal and Shelf Science* 71: 491-507.

Rumrill, S.S., and V.K. Poulton. 2004. *Ecological Role and Potential Impacts of Molluscan Shellfish Culture in the Estuarine Environment of Humboldt Bay, California*. Oregon Department of State Lands, Final Annual Report to the Western Regional Aquaculture Center.

Newell, R.I.E. 2006. Oyster Reef Restoration and Oyster Aquaculture. Pages 52-60 in: "Best Management for Sediment Control and Water Clarity." CBP/TRS-282-06. Download [pdf](#)

Lorena M. Wisehart, Heather M. Tallis, Jennifer L. Ruesink, Brett Dumbauld, and Sally Hacker, 2009. Oysters and Aquaculture Practices Affect Eelgrass Density and Productivity in a Pacific Northwest Estuary. *Journal of Shellfish Research* 28(2):251-261. 2009.