

PACIFIC AQUACULTURE REGULATIONS

Approach on the Use of Noise

Foreword

In response to the February 9, 2009 British Columbia Supreme Court decision in *Morton vs. British Columbia (Ministry of Agriculture and Lands)*, the Government of Canada through the Department of Fisheries and Oceans (DFO), has enacted the Pacific Aquaculture Regulations (PAR) under the authority of the *Fisheries Act* (R.S.C., 1985, c. F-14). The regulations took effect on December 18, 2010, and provide the regulatory framework for the management of aquaculture activities in BC and in particular waters off its coasts.

The purpose of this document is to support the implementation of the new regulatory regime for British Columbia under the PAR. Marine finfish, shellfish and freshwater aquaculture operations now require a federal aquaculture license in order to operate legally in the province of British Columbia. Pursuant to the PAR, DFO may determine conditions of license for the range of issues. This approach document supports the development of licence conditions pertaining to noise.

Purpose

This document provides direction on the use and management of underwater noise deterrents for aquaculture operations in British Columbia.

Scope

The approach focuses on the use of noise deterrents as they affect fish and aquatic ecosystems, and is not intended to address the creation of noise in day-to-day aquaculture operations. The effects of noise associated with normal aquaculture operations are generally short-term, localized and insufficient to cause injury.

Noise Management Context

Although current regulations do not prohibit use of underwater noise deterrents, the practice has been discouraged and the aquaculture industry generally does not employ them.

Recent Pathways of Effects (PoE) analysis indicates that noise associated with aquaculture is generated from day-to-day activities associated with site operations and acoustic predator deterrents. The latter, which include acoustic harassment devices (AHDs), seal bombs and cracker shells, propagate efficiently through water and may be perceptible to marine mammals many kilometres from their source.

Such acoustic deterrents may cause hearing injury to marine mammals at very close range.

Based on current knowledge of sounds generated by the types of vessels, equipment and machinery used in aquaculture during routine operations, these sounds may have short- term, localized effects on aquatic animals (e.g., avoidance, masking communication and echolocation sounds) but do not appear sufficient to cause injury to, or permanent displacement of, aquatic animals.

Noise Management Measures

Acoustical deterrents in aquaculture operations are prohibited as a condition of licence.

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