

SECTION 5: Noise

Overview

Kingfish Maine proposes to construct an enclosed RAS facility at 9 Dun Garvin Road in Jonesport, Maine. The project activity encompasses land based aquaculture operations in key buildings, with adjunct outbuildings, support facilities and equipment on the property. The site, encompassing 93 acres, allows for significant separation distance from sources of noise to boundary lines. Operations are to be conducted indoors, and so limit sources of noise emission. As no municipal ordinances restrict noise levels, the DEP Chapter 35 standards will apply. As no protected locations are identified within the site, the standards shall be applicable to the property lines of the proposed development. Chapter 35 exempts aquaculture operations, and construction noise will be controlled.

Construction:

Construction activities will comply with the No Adverse Environmental Effect Standards of the Site Location of Development Act Control of Noise [Chapter 375, 10,(5),(i)]. Equipment will be muffled, and with the exemption of safety alert devices, are not significant sources of noise. Equipment for transport, construction and finishing of building components will be operated so that the combined sound level at any property line is below 65 dBA from 7:00 AM to 7:00 PM and below 55 dBA from 7:00 PM to 7:00 AM.

Operations:

With regard to operations, the aquaculture activity is exempt in accordance with the No Adverse Environmental Effect Standards of the Site Location of Development Act Control of Noise [Chapter 375, 10,(5),(i)]. In order to be good neighbors, the project seeks to adhere to noise reduction standards. Target sound pressure levels at property lines are 70 dBA during the daytime and 60 dBA at night.

Registered and inspected vehicles in the facility to make deliveries or pickups will be operated under the provisions of Chapter 375, 10,(5),(c), (ii).

Building Enclosures

Planned building assemblies will minimize sound transmission by virtue of maintaining efficient thermal envelopes.

Building 1, the broodstock and hatchery building, is to be constructed with a steel frame and panelized wall system, and a built-up roof system.

Building 2, the growout and processing building, is to be constructed with a steel frame and panelized wall system and a built-up roof system.

Sound mitigation measures in building construction include wall and roof systems with Sound Transmission Class (STC) ratings of range of ~40. The loudest machinery within the facility buildings is compliant for 8 hour working OSHA exposure, or is separately sound treated. Within the primary building, sound transmission control design measures and operations include control of openings to the exterior. These measures include use of the design of an interior corridor within the primary building for truck and vehicle loading, controlling noise from the activity to an enclosed space. Additional operational controls include reduced velocity louvers for air intake and exhaust.

Noise will also be generated from enclosed machinery in outbuildings, exposed machinery, and building heating and cooling equipment. As the facility was planned for continual operation, nighttime noise level limits were considered as the standard for operational limits.

Rooftop Units

The loudest rooftop mounted units are on Building 1 and 2, and are associated with air handling. Assessing sound transmission from rooftop units, sound levels are expected to be significantly lower than 90 dBA at the source, and so will be reduced owing to separation distance from property lines (470LF) by ~42 dB, to <50 dB.

Machinery

No motor driven exposed machinery without sound attenuation is planned. Project standards and specifications will stipulate a requirement for barriers or similar sound attenuation to mitigate sound from exposed machinery such as condensers. Components to be baffled shall be done so in accordance with manufacturers clearance standards and with manufacturers standard components as applicable.

Backup power generators with internal combustion engines are to be sited in enclosed buildings, and so will have dampening from the building enclosure construction.

In the application of site controls, vegetation exists in perimeter areas that are not planned to be developed as part of the site amenities. This vegetation surrounds the development core, and will provide sound barrier benefits to the adjacent properties and waterside.