SECTION 1: Development Description

Overview

Kingfish Maine, Inc., a subsidiary of The Kingfish Company proposes to construct and operate a Recirculating Aquaculture System (RAS) to grow a saltwater finfish species, Yellowtail Kingfish (Seriola Lalandi) for US and international food markets. The facility is designed to handle a capacity of 6,000 to 8,000 metric tons of fish annually, and encompass the whole production cycle of the fish from broodstock, hatchery, to growth to market and processing and shipping. The proposed facility location is a 93 acre property on Mason Bay Road in Jonesport, Washington County, Maine. This property's address is 9 Dun Garvin Road and per the Jonesport assessing data identifies the property as tax Map 8 Lot 23. The property is largely unoccupied at present. The planned facility is dependent on access to excellent seawater for growing this species of finfish. The property was selected for its frontage and access to Chandler Bay, which will supply required seawater to the facility and accommodate a treated water discharge via new intake and outfall construction.

The facility would hatch, grow, and process fish in newly constructed buildings. Operations will be conducted indoors, in staged growth tanks that develop the fish from egg to market size. It will support growth of the fish through its life cycle, from egg to production size. Broodstock and juvenile fish operations, as well as specific feed growing operations will be focused in one building, building 1. The rest of the growth period and processing and shipping will be in the primary building. The onsite operation would also perform associated work, including maintenance of broodstock, growing of specialized feed sources for the fry developmental stage, and water quality and biological health monitoring. Ancillary buildings and structures and tankage is planned for food, chemicals, water supply and wastewater treatment from the operation. Intake water supply and treated water outfalls into Chandler Bay will provide a means of accessing the requisite high quality seawater to sustain the operation and to ensure excellent water quality in the resource.

Site development will include facilities to support the operation needs of the product, including landside access and roads for circulation of deliveries and staff, as well as onsite utility and mechanical support, administrative space, residential units for staff, and a store and information center are also proposed to further the project objective.

Project Purpose

The Kingfish Company presently operates in the Recirculating Aquaculture System (RAS) food industry, and has identified the US market for growth. Its subsidiary, Kingfish Maine, Inc. plans to design, build and operate an 8,000 Metric Ton per year RAS system in the US to grow finfish to market size and provide this food product to a domestic market and to the Americas. Based on its due diligence to select a proper candidate site, Kingfish Maine, Inc. proposes to construct and operate its land based Recirculating Aquaculture System facility on a 93 acre parcel of land on Mason Bay Road in Jonesport, Washington County, Maine.

Staffing and Operations

The facility will employ approximately 100 employees, split through three shifts to support the operation, with most staff working first shift. Workers will include qualified staff as well as skilled technicians to operate the aquaculture equipment within operational parameters.



Management

Kingfish Maine's parent company, The Kingfish Company, is focused on sustainable food production by utilizing RAS in land-based aquaculture. Management includes recognized experts in aquaculture operations, development, and construction. Kingfish's advisory board includes business and academic experts who support ongoing operations and new initiatives. The company's high-quality operation has earned accreditation from numerous organizations for its sustainable practices. Its mission statement summarizes the outlook and objectives of the company: 'Sustainability and respect to our fish and the environment are at the core of The Kingfish Company's values, and inform our design, operations, and technology decisions.' Particular qualifications are included with the applicable section of this submission.

Prior Experience and Project Expertise

The Kingfish Company, parent company of Kingfish Maine, presently operates an equivalent facility in the Netherlands operating to high regulatory standards and is now providing product in the marketplace.

The Kingfish Company's Dutch subsidiary, Kingfish Zeeland, has constructed and expanded a facility in Kats, Netherlands. This facility has been in operation since 2017, and is successfully delivering product into the world food market at a 600 Metric Ton per year capacity and expanding to increase production. Its organization oversees the complete operation, including maintenance of brood stock, growing fish from egg to market size, growing specialty feed for fry, handling and maintaining process related chemicals, ensuring intake and discharge quality and performing treatment, conducting fish grading and selection, processing, packing, shipping, and market support.

As such, Kingfish has extensive expertise in the systems and operations associated with the work and has demonstrated it can operate within parameters in a highly regulated environment. Kingfish's commitment to quality, sustainability, and environmental responsibility is a principal element of their culture.

In addition, Kingfish Maine has retained experts in multiple disciplines to develop facility plans and equipment to operate the facility within the parameters outlined in its licensure, inclusive of SLODA, air emissions, MPDES and waste discharge license.

Property Selection

Kingfish identified the US market as an appropriate opportunity for expansion. Supported by advisors and consultant teams, Kingish developed a search and site selection process to identify likely properties that had adequate development potential and secure access to high quality clean seawater. A matrix of identified sites assessed access to water, available land area, and natural resources for a group of 25 sites, primarily in Maine. Based on the objectives of optimizing site needs, inclusive of adequate land area, access to excellent quality seawater, reasonable access to deep water in the adjoining waterbody, suitable power and related critical infrastructure, the Jonesport property was selected to site the facility.



Site Characteristics

The property's address is 9 Dun Garvin Road and is identified on the Jonesport Tax Map as Map 8, Lot 23. It is presently unused. Existing infrastructure includes driveways, power lines, wells, and structures from disused buildings that had supported activity on the property.

The property fronts on the east side of Mason Bay Road, approximately 9 miles by road south of Route 1. The property extends roughly 2,000 feet to Chandler Bay, which has a rocky and ledge bound shoreline with frontage of ~3,206 feet along the highest annual tide (HAT) line. The property is a mix of the prior development sites, a large open maintained field, wetlands including forested wetlands and a peatland area, and woods in rolling terrain.

The property's shoreline lies adjacent to a VE 15 floodzone, reflecting its moderate exposure to open water and wave action to the east. The Shorefront is mapped as Ledge and gravel beach, and the subtidal areas are mapped as coarse-grained flats per the Maine Department of Conservation 'Coastal Marine Geologic Environments' map.

Natural resources assessments, environmental studies, geotechnical investigations, test pitting, hydrogeological investigations, remote operated vehicle seafloor inspections, and and related studies have been performed on the property.

Prior Property Development and Uses

Presently unused, the site contains the remnants of several separate prior uses. A cottage is present along the coast of the property, sited on a shorefront promontory, Natt Point. The cottage, lying along the shore, is served by a long gravel access drive, which is identified as Dun Garvin Road on the tax map at its intersection with Mason Bay Road. In addition to the cottage, a blueberry field was maintained and worked for an indeterminate time period. The property was the site of a development start for a federal communication installation, which was not completed. Prior development also included a net manufacturing operation, which occupied several buildings for its activities. The net manufacturing company was the most recent commercial use, dating to the 1980s. All buildings are presently disused.

Proposed RAS Facility and Operation Elements

The RAS facility will incorporate two primary buildings for growing fish. Building 1 incorporates a broodstock facility to maintain the breeder population and a hatchery. Building 2 includes a series of separate tanks to maintain and grow fish as they progress to market size. These two buildings contain the complement of tanks, filters, recirculating equipment and associated components to provide the necessary growing environment, water quality and feed supply for growth of the fish.

Adjunct Site Improvements

In addition to the broodstock and growout facilities, additional structures integral to the RAS process include intake water pumping and treatment, combined waste and heat exchange water treatment before discharge to MPDES standards, backup power generation facilities, administration/executive buildings, residential staff accommodations, and a farm store and information center for community outreach and involvement. Additional elements include general storage yard areas and tankage, security and equipment buildings and structures.



Process Infrastructure

The RAS facility is a functionally water dependent use. Water for the recycling aquaculture system is proposed to be sourced from planned intake pipes in Chandler Bay, supplying approximately 6.3 MGD of supply water for operations. Additionally, 22.2 MGD of seawater is to be pumped through the facility for heat exchange. After use and before discharge, this water enters a treatment building, where it is treated to the requisite quality standards. The facility also requires the conventional utility infrastructure of freshwater, wastewater disposal, electricity, and telecommunications.

Process Seawater Supply

Seawater is planned to be piped from two intakes in Mason Bay approximately 1,400 feet from shore. This seawater supply is conveyed in two 1,200mm (~4') diameter pipes. Intake water is pumped into Building 4, where it is filtered and disinfected before supplying seawater to Building 1 and Building 2.

Treated Seawater Discharge

After treatment to standards regulated in the Maine Pollution Discharge Elimination System permit, treated water flows to outfalls. Treatment occurs in Building 10, and discharge is routed via two 1,200mm (~4') diameter pipes to two parallel sets of diffusers in Mason Bay approximately 2,750 to 2,880 feet from shore. Application for a Maine Waste Discharge License and Maine Pollutant Discharge Elimination System permit has been made to Maine DEP. Additionally, a submerged lands lease has been received from the Maine Department of Agriculture, Conservation, and Forestry for seawater supply and discharge lines.

Power Supply

Owing to limited available power, Versant Power will perform an upgrade to an existing distribution line, improving its current distribution network in existing rights of way. Onsite power supply will extend in from Mason Bay Road and distribute from centrally located equipment to reach the development components. The project proposes implementation of roof mounted solar panels.

Backup Power

Onsite backup power is a requirement to sustain the fish during power outages. Design includes appropriate equipment and sound attenuated diesel generators. The generators operate as standby power only. Air licensing will be sought for the emissions associated with operating the generator engines.

Potable water Supply

Wells have been developed for the purposes of assessing water supply and will be utilized for the facility's potable water requirements for staff, use in the operation and a portion of the water supply for the processing of fish for market. Water quality and aquifer characteristics have been assessed to ensure no adverse effect on surrounding water levels or wells.

Fire Protection

Fire protection for the facility requires fire suppression sprinklers in Building 1 and Building 2. A fire protection water supply is not available nearby, so a ground storage tank and fire pump are planned to supply hydrants and sprinkler connections within the facility.



Wastewater disposal

Domestic wastewater for the operation and ancillary uses will be treated and disposed by onsite wastewater disposal systems. One system, System 1, is an engineered system. This system will require review by MEDEP and MDHHS as well as the Jonesport Licensed Plumbing Inspector.

Stormwater Management

The Stormwater Management Law's basic standards (Ch. 500.4.B) of the are applicable, and requires that construction phase and permanent erosion and sedimentation control be implemented. The Stormwater Law's general standards (Ch. 500.4.C) are also applicable, for which stormwater will be collected in drainage structures and routed to treatment. Impervious improvements for the facility are a combination of large roof areas and paved yards and parking areas. Development also includes landscaped areas which are similarly collected and treated. Plans have been prepared to comply with the Stormwater Law, with collection and treatment of stormwater by means of Wet Ponds and Grassed Underdrained Soil Filters. Other standards are not applicable. As the facility discharges directly to Chandler Bay, the project is eligible for a waiver from the flooding standards (Ch500.F.3.a).

Site Amenities

Additional facility elements include a store and public outreach information center, a security booth, staff office and meeting space, and staff residential housing.

Appended to this section are location and general site information.



APPENDIX 1A Location Map





APPENDIX 1B

Jonesport Tax Map 8



