Findings and Decision – Renewal Application of We'koqma'q First Nation for Experimental Licence and Lease AQ#5013

1. Overview:

On May 25, 2022, the Nova Scotia Department of Fisheries and Aquaculture (NSDFA) received an application from We'koqma'q First Nation for a new Marine Experimental Aquaculture Licence and Lease #5013 (AQ#5013), as described below:

Table 1. Description of Experimental Aquaculture Licence and Lease #5013

Type: Marine Finfish	**Size:** 34.42 Ha
Number: AQ#5013	**Cultivation Method**: Marine Cage Cultivation
Applicant: We'koqma'q First Nation	**Species:** Rainbow trout
Location: Whycocomagh Bay (South Aberdeen), Inverness County	**Proposed Term:** One year with annual renewals up to a maximum of five years

2. History

AQ#5013 was issued on September 27, 2021 for a one year term (September 14, 2021 to September 13, 2022).

3. Procedure

3.1 Departmental Review

A review of the information submitted by the applicant in support of their application for an experimental licence and lease was completed. This review recommended that the site be issued based on technical and biological assessment. This review was completed on July 18, 2022.

4. Factors to be considered

As an experimental aquaculture application, We'koqma'q First Nation intend to test and validate the application of a diagenesis model for the prediction of sulfide levels in Whycocomagh Bay. This activity is intended to test new technology and methods which will help inform the optimum cage configuration, fallowing plans and stocking strategies.

The proposed experimental site was based on the existing coordinates of adjudicative application #1431. The proposed experiments are deemed appropriate for this location, and the results can be directly applied to site AQ#1431, should the adjudicative application be approved as proposed by the Aquaculture Review Board.

The experimental proposal represents the potential for the development of new industry practices through validation of the diagenesis model, which could inform the development of suitable locations and aquaculture practices for the applicant's application for a new site (AQ#1431) in

this location. Activities are expected to increase the potential for local and provincial services and suppliers, as fulfillment of this request will require local service providers and suppliers.

Local fisheries have been researched and described, including recreational, commercial and traditional Mi'kmaq fisheries. Mitigation strategies have been researched and described for all applicable fisheries activities and are reasonable for the proposed experiment. Recreational and traditional Mi'kmaq fisheries have successfully co-existed with trout aquaculture operations in Whycocomagh Bay. The applicant describes how they will mitigate potential fisheries impacts through operational procedures.

The experiment is expected to aid the applicant in proactively minimizing any negative impact on the benthic environment when planning future farming activities. There is oceanographic data collected for Whycocomagh Bay. The oceanographic conditions provided by the applicant are suitable for Rainbow trout culture. Rainbow trout can tolerate the varying salinities and temperatures identified at this location. Ice cover over the bay during winter will require fish to be moved to an over-wintering site and all nets to be removed from the cage after fish are harvested or moved to the over-wintering location. As areas within the Bay may be prone to anoxic conditions due to the low currents and exchange rates, oxygen monitoring will be required to occur on a regular basis and increase around tidal events.

Migratory birds, marine mammals and other wildlife have been researched and described in the applicant's development plan, including rare and endangered species, species at risk, location sensitive species, culturally significant flora and fauna and general marine life. Advice from both Federal and Provincial regulators have been communicated to the applicant to mitigate the impact of the proposed experiment on local wildlife and would be required to be included in the applicant's Farm Management Plan (FMP). Strategies have been provided to address visual impacts, smell and noise, and navigation for marina users. The applicant will be required to have an approved FMP, which will cover applicable procedures and mitigation strategies.

The applicant must ensure that all gear remains within the geographic boundaries of the site. Section 55 of the *Licence and Lease Regulations* requires an aquaculture licence holder to mark each of their sites in a manner determined by the Minister and keep each site marked during the term of their licence. The licence and lease holder must also comply with the *Canadian Navigable Waters Act* and the agreed upon site markings. The Farm Operations section of the *Farm Management Plan* for AQ#5013 will require the operator to indicate how they will operate the site in accordance with industry best practices with respect to maintaining the site in good order, the removal of decommissioned farm supplies and equipment, and the retrieval of gear or debris that has broken loose.

The nearest Salmon run rivers are Skye River, Middle River and Baddeck River. Advice from both Federal and Provincial regulators concluded that the proposed experimental operation would not have an impact on local fishery enhancement programs nor would it require additional risk treatment. The site will be required to operate within the containment requirements of the *Aquaculture Management Regulations* (AMR's), which include engineering approval of the infrastructure to be installed on site and an approved finfish marking plan.

The proposed experiment is not expected to encumber restoration or recovery efforts. The Farm Management Plan must include necessary procedures to address fish health and containment management. AQ#5013 will also be subject to the Province's Environmental Monitoring Program, whereby the benthic environment of the site will be monitored.

Proposed site AQ#5013 is located in South Aberdeen, Whycocomah Bay, Inverness County, approximately 250 Metres from the shoreline. The nearest marine aquaculture site, AQ#5010, is approximately 1.5 km North, and is operated by We'koqma'q First Nation. Within Whycocomah Bay, West of these two sites, are another three (3) aquaculture sites also operated by We'koqma'q First Nation (AQ#0814, AQ#0845 and AQ#0600). There is an application to expand the boundaries of site AQ#0814, which at the time of this issued document was in the application review phase. Existing and proposed finfish sites will be managed collectively and therefore are not expected to negatively impact each other or shellfish sites. The existing sites have proven to be successful in their productivity and utilization.

5. Decision

Based on the considerations above, Experimental Aquaculture Licence and Lease #5013 shall be renewed for a second term of 1 year (September 14, 2022 to September 13, 2023).

The Licence and Lease documents shall be prepared in accordance with the standard operating documents of NSDFA, and shall be made publicly available subject to the provisions of the *Freedom of Information and Protection of Privacy Act.*

6. Conditions

The operator shall adhere to the site marking requirements according to their Notice of Works issued by Transport Canada under the Canadian Navigable Waters Act, reference number NPP#2021-204291

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July 22, 2022

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Date