


Province of Nova Scotia Notice of Application for
Reissuance of Rockweed Lease 6050 (Formerly 6017)
by Scotia Garden Seafood Inc.
Commercialisation and Management Plan

Introduction

Scotia Garden Seafood Inc., incorporated to the Nova Scotia Registry of Joint Stock Companies on April 27, 1995, through its wholly owned subsidiary Tidal Organics Inc. is applying for reissuance of NSDFA Leases 6050 (Formerly 6017) for another 15-year period to harvest the intertidal marine plant species *Ascophyllum nodosum*, commonly known as rockweed. The company seeks the reissued lease to start before the 2024 harvest season as the previous lease expired on December 31, 2023. Rockweed will be harvested for drying and milling at the company's facility in Pubnico, Nova Scotia, which processes the rockweed into a kelp meal product sold for fertilizer and animal feed nationally and internationally.

Tidal Organics has a long history with over 20 years of successfully managing the harvest of its rockweed leases in Nova Scotia. The company's management plan is designed to maintain a responsible, ecologically sustainable, and safe harvest of this renewable resource as it has done in the past. The company uses area-based management at a geographic resolution of individual sectors. Annual assessments using pre- and post-harvest surveys, preseason rapid surveys, real-time response to anecdotal harvesting or public reports of resource issues, and seasonal quotas monitor the available biomass along with any potential habitat impacts. The company communicates with the public concerning activities in the coastal zones where it operates. The resource will be harvested under management plans submitted and approved by the Minister of Fisheries and Aquaculture.

Description of Lease

Lease 6050 (Formerly 6017) is divided into 33 sectors, LC1 to LC41, including approximately  hectares of harvestable biomass.

The area of the lease reissuance sought by Scotia Garden Seafood Inc. has been defined as:

"All that area of foreshore, including islands and ledges, on the coastline of Shelburne County starting at Black Point, 65 04'03" West; 43 39'30" North; thence by various ways and means in an easterly direction along the coastline toward the western border of Thomas Raddall Park in Queens County at a point 64 52'58" West; 43 49'32" North.

Thence, starting at New Building Cove on the eastern boundary of Kejimikujik National Park Seaside Adjunct at a point 64 47'25" West; 43 53'21" North, running easterly by various ways and means along the coastline to Mersey Point in Queens County at a point 64 40'35" West; 44 01'44" North, specifically to include the Spectacle Islands, Port Mouton Island, and surrounding islands."

Biomass Assessment

Transects were placed parallel to the shore within randomly chosen *A. nodosum* beds in the middle of the intertidal zone. Transects from 30 to 100 m long were sampled at regular intervals. All *A. nodosum* biomass was cut 20 cm above the holdfast and weighed in situ within .25 m².

The field team assesses the *Ascophyllum* and *Fucus* biomass using transects to determine density which is then applied to the sector cover to determine an overall biomass for each sector. Other sector information is recorded such as substrate, average plant length, epiphytes, *Ascophyllum* clump density, other algal species, and macrofaunal species that are present in the area.

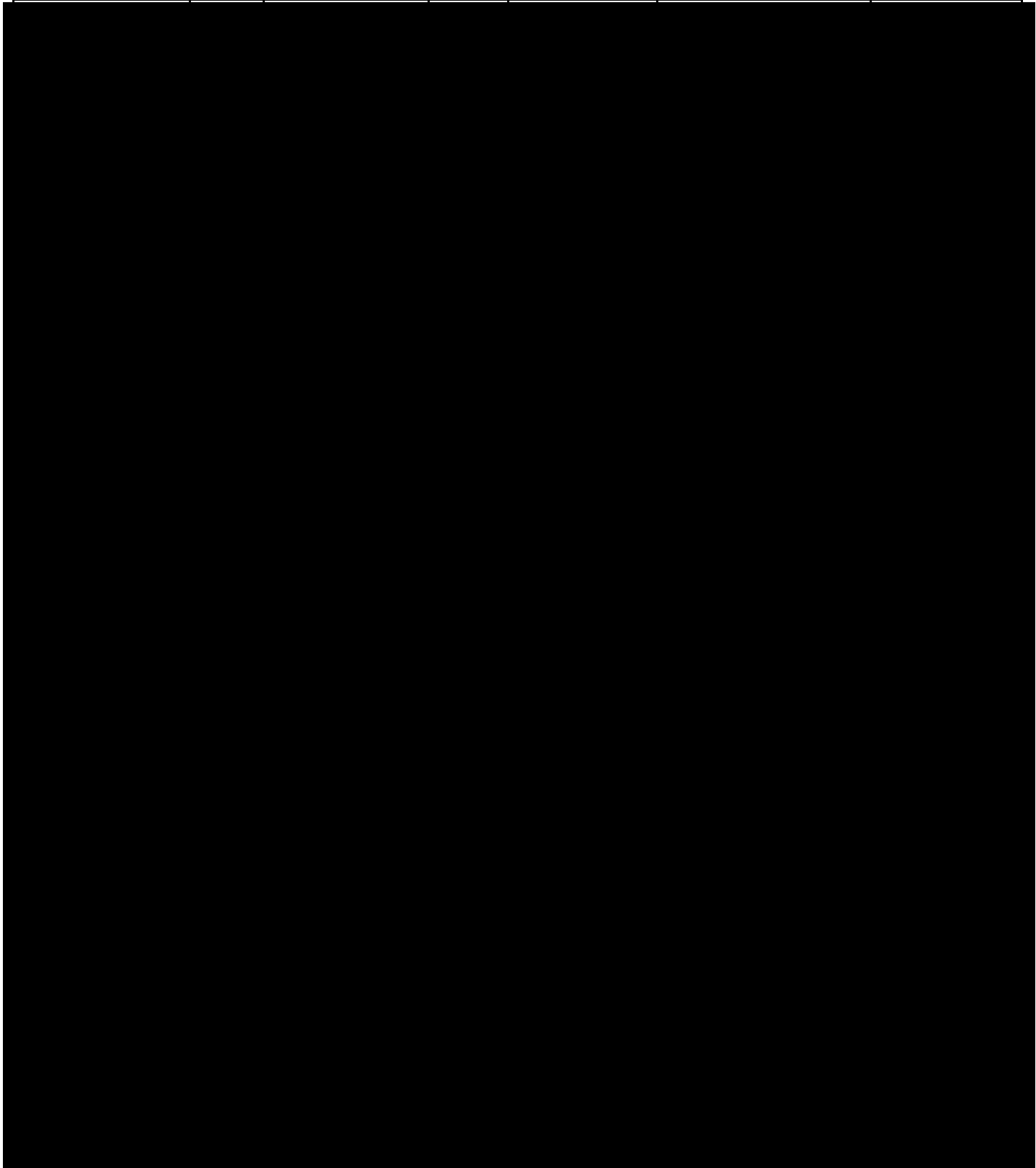
The limits of harvestable *A. nodosum* beds have been defined historically in each management sector by interpretation of 1:10000 aerial photography and Google Earth™ satellite images. Ground truthing of the lower and upper limits of these beds was defined both by measured transects perpendicular to shore + 1 m and GPS positioning \pm 3-4 m. The total harvestable biomass in each sector was the product of the total sector area hectares times the average sample amounts.

The lease was surveyed extensively in 2018 and this was supplemented by repeated annual surveys. 1007, 0.25 m² samples were collected in Lease 6050 (formerly 6017) from 2019-2023 (*Table 1*). Using a lease global average of the data from 2019-2023, Tidal Organics has estimated a standing crop of approximately [REDACTED] wet metric tonnes. This will give an annual yield of approximately [REDACTED] metric tonnes at a 20% exploitation rate under ideal harvesting circumstances (*Table 2*). After years of assessment and harvest activity, a few notable challenges within the lease area include few landing sites, largely exposed areas, and accessibility limitations. In *Table 2*, the sectors marked in green are accessible, yellow sectors are difficult, and red sectors are mostly unharvestable.

Table 1: Total samples collected from 2019-2023 with standard deviations in kg collected to date, formerly Lease #6017.

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Table 2 : Calculated Annual Harvestable Biomass estimates under ideal harvest conditions for Lease 6050 (formerly 6017) from 2019-2023 ground truthing surveys.



Tidal Organics will continue its regular seasonal surveys of the lease sectors going forward. This data will be audited by an independent consulting company. In addition, Tidal Organics will survey and assess all sectors in this lease at a minimum interval of every three years throughout the lease under the provincial biomass protocol. Ideally, all assessments will occur outside of the reproductive season and if not a discount for reproductive receptacle material will be applied to the biomass.

Tidal Organics' leases are assessed before, after, and during the harvest season to ensure a sustainable harvest and maintain the healthy resource that the company is dependent on.

Harvest Activity

All sectors will be assigned a quota and harvest method based on the biomass and exploitation limits before any harvest occurs in a sector. When the quota is fulfilled, the sector will be closed. Harvesters are notified via sector closure notices posted at wharf sites as well as by text message. Frequent progress updates are sent to the lead harvester to show the remaining quota in sectors and prevent overages. All harvest activity will be monitored through a combination of daily text reports of amounts by sector and a weekly compilation of daily deliveries at the processing plant in Pubnico. The company will continue to harvest only through those means and implements approved by the Minister of Fisheries and Aquaculture.

To ensure a sustainable harvest, the company strictly monitors Holdfast content in *Ascophyllum* material that arrives at the plant and enforces a maximum of 10% holdfast content on its harvesters, lower than the 15% regulation.

The company strives to communicate and maintain good relationships with all coastal stakeholders through in-person contact and website information posting.

Commercialization

Demand for Tidal Organics' products remains high and the company continues to ship its products around the world. The company will continue to attempt to maximize its resources as it strives to contribute more man-hours to the local economy at all steps of the production process, from the harvesters (most of which are lobster fishermen who harvest during the offseason) to the production plant to the shipping companies that pick up the final Kelp meal product. Between harvesters, production staff, and other positions, Tidal Organics employs around 70 people.

Tidal Organics is part of a robust local economy in southwest Nova Scotia and strives to use as many local suppliers as possible.

The company has proven itself to be a good steward of the rockweed resource in its history of operations in Nova Scotia. It will strive to exceed all standards for an ecologically sustainable harvest.