

**NOVA SCOTIA AQUACULTURE REVIEW BOARD**

**IN THE MATTER OF:** Applications made by TOWN POINT CONSULTING INC. for NEW MARINE SHELLFISH LICENCES/LEASES in ANTIGONISH HARBOUR, ANTIGONISH COUNTY for the SUSPENDED CULTIVATION of AMERICAN OYSTERS (AQ#1442, #1443, and #1444)

**AFFIDAVIT OF EXPERT WITNESS – ROBIN STUART**

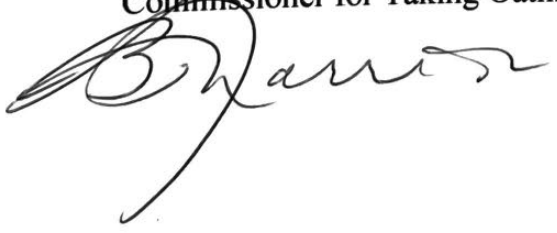
I, ROBIN STUART, of Englishtown, in the Province of Nova Scotia, HEREBY MAKE OATH AND SAY AS FOLLOWS:

1. I am a resident of Englishtown, Nova Scotia.
2. I have been employed as an aquaculture manager and currently work as a private consultant in this field. Attached to my affidavit as Exhibit "A" is a true copy of my curriculum vitae, setting out my expertise, education and training.
3. Attached to this affidavit as Exhibit "B" is a statement of the substance of my proposed evidence.
4. I make this affidavit in connection with the Applications made by Town Point Consulting Inc. for New Marine Shellfish Licences/Leases in Antigonish Harbour for the Suspended Cultivation of American Oysters and for no improper purpose.

SWORN/AFFIRMED before me at )  
Baddeck, in the )  
Province of Nova Scotia, this 24 )  
day of May, 2023 )

**BRUCE MORRISON**  
A COMMISSIONER OF THE  
SUPREME COURT OF NOVA SCOTIA

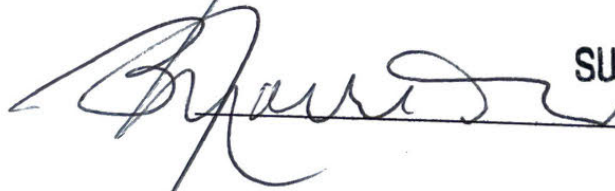
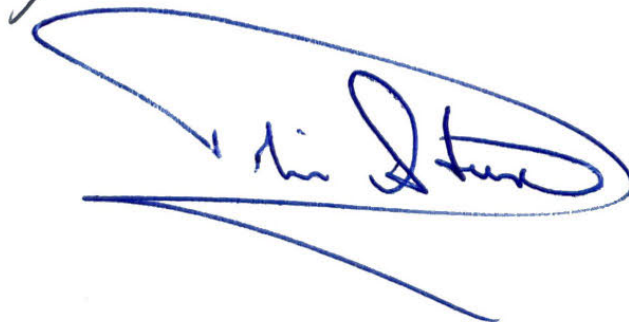
Commissioner for Taking Oaths



ROBIN STUART

This is **Exhibit "A"** referred to in the  
Affidavit of ROBIN STUART sworn before  
me on May 24, 2023

**BRUCE MORRISON**  
A COMMISSIONER OF THE  
SUPREME COURT OF NOVA SCOTIA

A handwritten signature in blue ink, appearing to read "Bruce Morrison", written over a horizontal line.A handwritten signature in blue ink, appearing to read "Robin Stuart", written below the signature of Bruce Morrison.

**ROBIN STUART**

Englishtown, [redacted]  
Nova Scotia, Canada

Fax: [redacted]  
Home Phone: [redacted] Cell: [redacted]  
Email: [redacted]

**P E R S O N A L**

Mr. Stuart is one of the aquaculture industry pioneers in Canada with a wealth of experience in many aspects of the industry including management, research and development, technical assistance, environmental management, and practical hands on experience in all aspects of aquaculture activities. He has managed and operated aquaculture-processing facilities for both finfish and shellfish. As an entrepreneur businessman he is well versed in all aspects of farm management including marketing and business farm management.

A wide range of experience in both finfish and shellfish culture brings a multiplicity of experiences useful for aquaculture development elsewhere.

Mr. Stuart has worked for both the industry and the Provincial and Federal Fisheries departments. He is well versed in the regulatory environment and has chaired committees involving all the government regulators on aspects of environmental management for aquaculture.

He is one of the founders of the Aquaculture Association of Nova Scotia and a past President on three occasions. This has kept him in touch of the industry across the country and has been asked to represent industry at several National and International conferences.


As a professional diver with over 9000 logged dive hours Mr. Stuart engages working with a passion that only comes from a sincere love and respect for the ocean and its inhabitants.

A down to earth approach with a real sense of the practical combined with good communication skills enables Mr. Stuart to get things done by utilizing the skills of those around him combined with an indomitable spirit and persistence.

**E D U C A T I O N**

Dalhousie University, B.Sc.(Marine Biology), 1971

**BRUCE MORRISON**  
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 , May 24, 2023

## **E M P L O Y M E N T**

**Verschuran Institute, worked on MSX project under Rod Beresford to determine way to grow oysters successfully in an MSX zone, 2018 to 2022**

***CBU/Verschuran Institute, assist in the development and provide technical assistance to oyster lease holders participating in the MSX project, 2018 to present.***

***Bounty Bay Shellfish & Cape Breton Bivalve, 2004-present, conduct environmental monitoring for largest mussel farm in Canada.***

***Paqtneq First Nation, provide assistance to community in commercial oyster operation in Pomquet Harbour 2014- present.***

***Waycobah First Nation, Aug.2015 til November 2019***  
*Operations manager for trout farm in Whycomagh Bay.*

***Paqtneq First Nations, 2013,2014,2015***

*Do stock assessment of Pomquet Harbour for oysters. Provide training for oyster seed collection both classroom and field.*

***Coldwater Fisheries Inc. May/11 to August/14***

*Operations Manager for Cold Water Fisheries Incorporated -Cape Breton Operations for trout cultivation at several sites including St Peters Hatchery, Atoqwa'su Farms a joint venture with Waycobah First Nations, and several other sites.*

***5M Aqua Farms Ltd. October/10 to May/11***

*Conduct hydrographic data collection and mussel performance compared to other locations and assist to restructure company to be more competitive*

***5M Aqua Farms Ltd. October/09 to October/10***

*Hired as a consultant to organize and oversee a project with a team of scientist from 3 universities to study environmental impact of a mussel farm on St Ann's Harbour, the largest farm in Eastern Canada..Topics such as develop an working carrying capacity model, assess the impact on benthic invertebrates, and migratory wild pelagic. Identify the mortality problem encountered with farm mussel stocks with solution. Identify performance of mussels both meat and shell growth year round at different locations in the harbour to improve farm management.*

***Cape Breton University, June/09 to October/09***

*Conducted detailed study of Sydney Harbour under the direction of Dr. Bruce Hatcher to map the marine benthic communities in Sydney Harbour to provide an aid for DFO to determine the compensation package( HADD) for the dredging of the harbour and construction of the new container pier in Point Edward. The study involved underwater video transects and taxonomic identification of all species by both number and distribution.*

***PEI Mussel Farms Ltd., May/06 to March/09***

*Hired under contract develop and implement an environmental monitoring program for the companies operations in both PEI and Nova Scotia. The development of a web site as a tool to provide both up-to-date environmental data but also production performance data for all leases. Due to challenging economic environment due to lower profit margins and an increasingly competitive global market employment ended on an employee basis.*

***Cape Breton University, February /06 to present***

*Research Associate. Preparing historical science studies on Bras d' Or Lakes in a usable electronic format to enable application in future research on the development of the oyster industry of Cape Breton.*

***Ocean Stuarts Consulting Services October/01 to January/06***

Sole proprietor. Design Environmental Management Plan for one of the largest mussel farm in Canada. First to identify MSX presence in Bras d'Or. Conduct MSX R&D program winter 2003. Design Environmental Monitoring Program for NS finfish & shellfish aquaculture industry. Stock assessment survey for public oyster beds in Bras d' Or Lakes and to enable a relay fishery. Teach shellfish spat prediction technology to group of shellfish farms to enable them self-sufficiency. Perform various liaison functions with fed and provincial government levels for aquaculture companies.

***Apaqtukewaq Fisheries, Chapel Island May-June 2001***

Identify oyster leases and submit applications including business plans for each. May 2001

***Teaching Shellfish Culture January-May 2001***

Teach shellfish culture to 42 Native students from Eskasoni First Nation. Designed the curriculum, which covered a 16-week time frame. Job ended April 13.

***Contract Diving Services***

Provide diving services for three fish farms for a four-month period. Diving involved underwater log hours of over 500 hours in this period. Performed diving environmental assessment work for large mussel farm. Has logged over 7500 over dive hours.

***Nova Scotia Dept. Fisheries & Aquaculture, Biologist May 2000***

Undertook a contract to work in close liaison with all regulatory agencies and industry to design environmental assessment guidelines to meet the CEA process for both finfish and shellfish industries. The job involved chairing a committee of all federal and provincial departments with an input on environmental assessments. The job ended in September 2000.

***Biologist-Manager, Saddle Island Fisheries Ltd. 1995 to Nov, 1999***

Identified and set up year round salmonid net pen farm. Responsible for all aspects from site selection to installation, hiring, operations including growing to harvesting, processing over one million pounds H&G salmon. The farm was purchased by another company & still operates today

***Senior Manager-Biologist Eskasoni Fisheries Ltd. 1993-95***

Involved in all aspects of management from site selection, operating plan development, hiring, and operations of three net pen sites in Bras d' Or Lakes, C.B Triploid trout and Atlantic salmon were grown . This was the largest salmon farm in Nova Scotia at the time.

***Manager & Co-Founder Golden eagle Fisheries Ltd. 1990-93***

Managed cage operations of several sites growing trout and Atlantic Salmon.

***Teacher Aquaculture Training Course 1990***

Designed the modules and taught 24 Native students in all aspects of salmonid\_aquaculture in conjunction with the NS Fisheries Training School over nine months.

***Consultant Aboriginal Fisheries Development 1989***

Assisted in the creation of an Aboriginal Fisheries development plan for Atlantic Canada under the direction of the Eskasoni Band.

***Consultant 1988-89***

Identified salmonid overwintering sites Cape Breton.

Environmental Impact study with CEF Consultants involving diving, electro-seining, etc..  
Consultant for Nova Aqua to discover reason for high salmonid mortalities on land based marine tank farm. Report enabled insurance coverage.  
Reports on sea lice life history and control methods in conjunction with Atlantic Vet College and National Research Council  
Organized International Workshop on Sea Lice at Gaelic College, St. Anne's, CB.

***President -Stuart Salmon Farms Ltd. 1986-90***

Formed company complete with shareholders and operated until sea lice infestation rendered continuing uneconomic.

***Research Director, Cape Breton Marine Farming Ltd. 1985-86***

Directed a crew of technicians and biologists on studies on Atlantic salmon, speckled trout reared in seawater, rainbow trout, and striped bass at several locations on Cape Breton Island. First to rear large rainbows in seawater in Canada  
Vaccination techniques, feed trials, density studies, etc.. First to inject Vibrio vaccine on commercial scale in Canada.

**PROFESSIONAL AFFILIATIONS**

1. Founding member Aquaculture Association of Nova Scotia,
2. President Cape Breton Oystermen's Association,
3. Writer Atlantic Fish farming
4. Maritime Oyster Development Committee
5. President Aquaculture Association of Nova Scotia, 1986,1994.1995
6. Member Aquaculture Association of Canada
7. Member World Aquaculture Association
8. Executive & Board member Aquaculture Association of Nova Scotia  
1996,1997,2002,2003,2004,2005,2006,2007,  
2008,2009,2010,2011,2012,2013,2014,2015,2016,2017,2018,2019, 2020
- 10.Member Regional Aquaculture Development Committee East St. Margaret's Bay  
1999
- 11.Board Member, Eastern Nova Scotia Oyster Management Board, 2004-2009

**SPECIALIZED TRAINING**

Professional Scuba Diver (RCN Clearance Diver, NASDS)

Small Business Management, University College of Cape Breton

Christopher Leadership Course

Lotus 123,Computer Tutor,

Marine Emergency Duties A1

St.John's Ambulance First Aid

Small boat safety course

Revised Quality Management Program, HACCP, 1998

### **CASUAL INTERESTS**

Long distance running, President Baddeck Runners Club 2005-2016

Scuba Diver

Rugby, Soccer Coach

Hiking

Community Volunteer Services

### **PUBLICATIONS**

Shellfish carrying capacity modelling, Jon Grant, Ramone Filgueira,  
Environmental Monitoring NS Aquaculture Farms, with Jon Grant, Jamie Smith

### **REFERENCES**

1. Scott Dockendorff, President, Bounty Bay Shellfish Inc., 902-961-3700
2. Dr. Roland Cusack, N.S.Dept. Fisheries & Agriculture, Fish Vet  
902-893-6539
3. Dr. Jon Grant, Oceanography Dalhousie University, 902- 494-2021
4. Dr. Neil Ross, NRC-IRAP, 426-8402
5. Dr. Bruce Hatcher, Cape Breton University, 563-1988

Submission to Aquaculture Review Board regarding leases requested by Town Point Oyster Farm in  
Antigonish Harbour

Submitter:

BIO

Robin Stuart Bsc Marine Biology(honours), Dalhousie University

Mr Stuart has been working in varying capacities on oyster farming and fishery since 1970.

His initial exposure to oysters was working as a field technician and diver for DFO, Terry Rowell in Dunk River, PEI doing oyster spat prediction and enhancement for wild fishery. Provided service to the industry to assure viable spat falls for the beds.

For two years, 1970 and 1971 worked at the Marine Ecology Lab of BIO on invertebrate ecology of Petpeswick Inlet a typical estuarine environment. Work involved performing diving services, and both field and lab work under Dr Doug Sameoto on the epi benthos.

In 1972 lived and worked for almost a year on Degania Aleph, the first Kibbutz formed in Israel doing many agrarian functions including carp farming.

Hired in September 1973 by Roy Drinnan to provide technical assistance to new oyster farmers and coops all over Cape Breton Island with Devco Marine Farming. Worked closely with the Extension Dept of St FX( John Chisholm) with over 500 Oyster Coop Members.

Conducted R&D developing spat prediction methods, bottom planting densities, and off bottom cultivation of oysters. Worked with Crane Cove Oyster Farm, Chapel Island Oyster Farm, Whycomomagh Oyster Farm, Nyanza Oyster Farm sharing technical assistance.

At its peak I had over 100 employees who made collectors, collected seed and sold to growers in excess of 20 million oysters per year on over 780 rafts.

Continued in varying capacities of oyster activity including the development of hot water dipping with Bluenose Oyster farm to control mussel sets. Sat on the Maritime Oyster Development Committee developing oyster policies for the Maritimes.

Owned and operated my own salmonid farm 1986-2000 until lost all to sea lice.

Worked as an employee for NS Fisheries and Aquaculture in 2000 with role of building a committee of all regulatory agencies and industry to determine the environmental impact of aquaculture. The group I started still exists today, The NS Aquaculture Environmental Review Board.

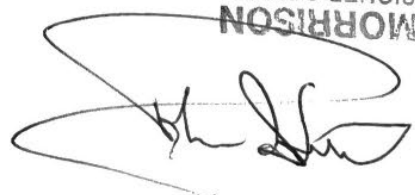
Provided consulting services to DFO on oyster stock assessments to determine the level of fishery permitted for several years until MSX closed the fishery.

Taught oyster biology and farming techniques to Eskasoni and Chapel Island to several community members.

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24.2.2023



**Was the first to identify the MSX parasite in Denas Pond, Cape Breton with Phil Drinnan. Sent the oysters away for pathology and came back verified by VIMS positive for MSX in 2002.**

**Provided field work identifying the extent of the MSX for NS Fisheries couple years post MSX.**

**Proposed several research proposals involving the best and smartest at the time to better understand MSX and how to grow in its presence.**

**Worked closely with CBU on a project that became the PhD thesis for Dr Rod Beresford for MSX. Assisted in field component of setting up and monitoring naïve oysters in positive MSX zones over three years. This was completed in 2022.**

**Did oyster Stock assessment of Pomquet Harbour and conducted a study identifying the market and opportunity for oyster seed in the Maritimes with Brian C Muise.**

**Co-authored a published paper on the carrying capacity of mussels in St Ann's Harbour with Dr Jon Grant and Dr Ramone Filguera .**

**Assisted Paqtnkek with training and oyster farming skills to farm initially seed oysters then later market oysters for 6 years.**

**Conducted a study of the history of oyster farming in Cape Breton for the Science Museum of Canada in Ottawa in 2022.**

**I have been asked as an expert advisor on the impact of oyster farming as proposed by Town Point Oyster Farm of Antigonish Harbour.**

**Although I do not know the details of Antigonish Harbour I can lend my experience of any impacts that might occur as a result of an off bottom farm in this estuary.**

**Before the shore front was purchased and developed by non-Natives there existed a large natural bed of wild oysters that were used as food, ceremonial, utensils, and many other purposes by the first Nations in a totally clean unimpacted environment. Since then, shore front development has taken place and as a result the harbour has been contaminated by this development. The only time this was a true pristine environment was pre-development.**

**It is a fact that oysters are used routinely in many parts of the world to assist in the decontamination of harbours by introduction of large scale oyster populations. These filter feeders screen the water of contaminants both natural and others as part of the feeding process. It is a known fact that turbid waters generally caused by human development of the land are detrimental to the survival of many plant and animal species. Eel grass is usually one of the first victims of this siltation as it gets deposited on the blades negatively affecting photosynthesis. Oysters and eel grass are considered foundation species of many estuaries. They have a symbiotic relationship with both benefitting from each other's presence. Oysters screen the waters which helps healthy eel grass plants to flourish. In addition the waste product of the oysters acts as a fertilizer to improve eel grass health. The oysters stabilize the bottom to improve habitat for eel grass and vice versa.**

The population of oysters proposed to be farmed will not detract from any wild stock. It is highly likely that the wild population of oysters that existed prior to any harbour development far exceeded what is proposed by the farm. In addition the food supply utilized is in the top meter of water that would have little impact on bottom feeders.

In fact more oysters as proposed by the farm will contribute to increased oyster larval densities that will increase wild oyster populations as they settle on eel grass and substrates on the bottom.

As long as shore front development does not increase an increased oyster population both wild and farmed would contribute greatly to its cleanup. There is no better environmental barometer in an estuary than an oyster. In fact by testing the oysters regularly the farm will be an excellent indicator of environmental degradation.

The surface area occupied by the farm will have little impact on other users and with far more environmentally beneficial outcomes. Motor boat vessels increase in activity would definitely have more negative impact than the oysters themselves.

### Methodology

The BOBR design proposed by the farm has been tried by Paqtnkek with positive results so far. It has less visual impact, it appears to have both improved growth and improved grade over other technologies. It also could be used with less requirement for heavy lifting equipment. It seems so far that the densities used can almost double that used by the oyster gro. One unique design benefit of the BOBR is that sea birds cannot perch on it as it moves and is low in the water. In time a case could be made to eliminate the need to sink pre harvesting when used in open waters.

The mussel fouling may require to use hot water dipping or air drying in July when the sets occur. This device could be shared by more than one farm.

Off bottom oyster farming needs to utilize the surface waters for the higher temperatures and the density of phytoplankton upon which they feed. Like most oyster farms this one would not prohibit the use by kayak, canoe, or rowboat. In fact it would provide a destination of interest for avid paddlers from my experience.

It is vital that the farm is kept tidy with no floating debris such as floats or rope. As is done in St Ann's Harbour the Community Liaison Committee of which I am a contributor asks that the farms do regular shore inspections after storms to minimize any floating debris.

Section c) refers to fishery activity. My understanding is that the bottom over which the farm will be floating is mud bottom for the most part with few wild oysters present. My suggestion to the farmer would be to donate some of the poorer commercial grade oysters to be placed on the public beds to act as brood stock to improve wild recruitment.

Section b) refers to the economic development that would come as a result both primary and secondary. Locals would be hired to work on the farm and all goods and services required by the farm would be purchased locally. This impact could be substantial if you consider hardware stores, machine shops, university research, fuel, taxes paid. The list would be substantial.

I would be willing to answer any pertinent questions about the impact of the farm on the ecosystem. I have been monitoring the environmental impact of the largest mussel farm in Canada for over 20 years and the impact is negligible. The oyster farm proposed is tiny compared to the 1300 hectare farm in St Ann's. The impact with wild salmon at this large farm has been negligible compared to environmental changes and off shore bi-catch fishery.

Over 20 years ago the fear was that property values would decrease as a result of the farm. This did not happen and the same is true in PEI.

#### Community Liaison

I sit and have sat on several community liaison groups regarding aquaculture. I highly recommend the CLC as a vehicle of information exchange and input from the public. Thru time a trust will develop which has happened in St. Anns. Meeting a couple times a year with phone numbers to contact during or after an event would be crucial.