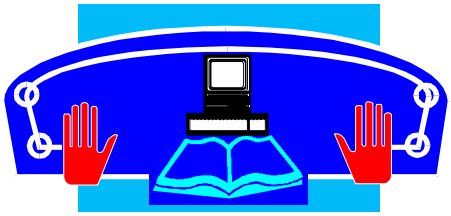

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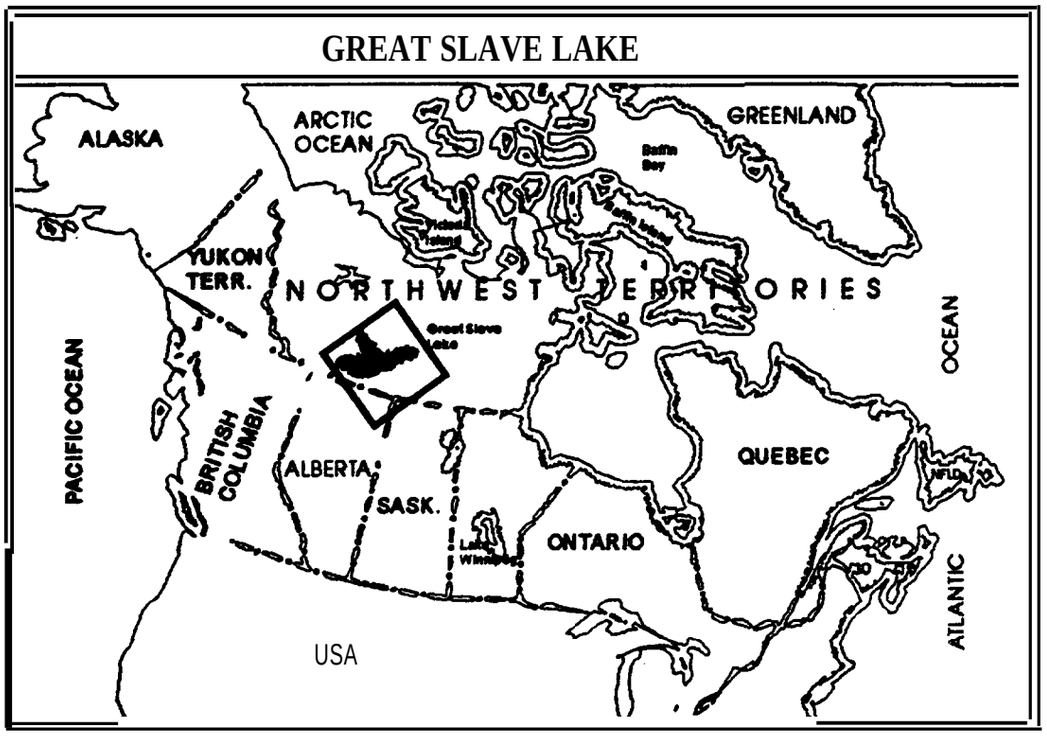
Nova Scotia

Department of
Fisheries

CERTIFICATION AND TRAINING PROGRAM



FOR GREAT SLAVE LAKE FISHERMEN

Fisheries
and Oceans

CERTIFICATION AND TRAINING PROGRAM FOR GREAT SLAVE LAKE FISHERMEN

Prepared for: The Great Slave Lake Advisory Committee
Hay River, N.W.T.

Prepared by: Training and Field Services Branch
Nova Scotia Department of Fisheries
Halifax, Nova Scotia

and

Fishing Industry Services Branch
Department of Fisheries and Oceans
Ottawa, Ontario

February, 1993

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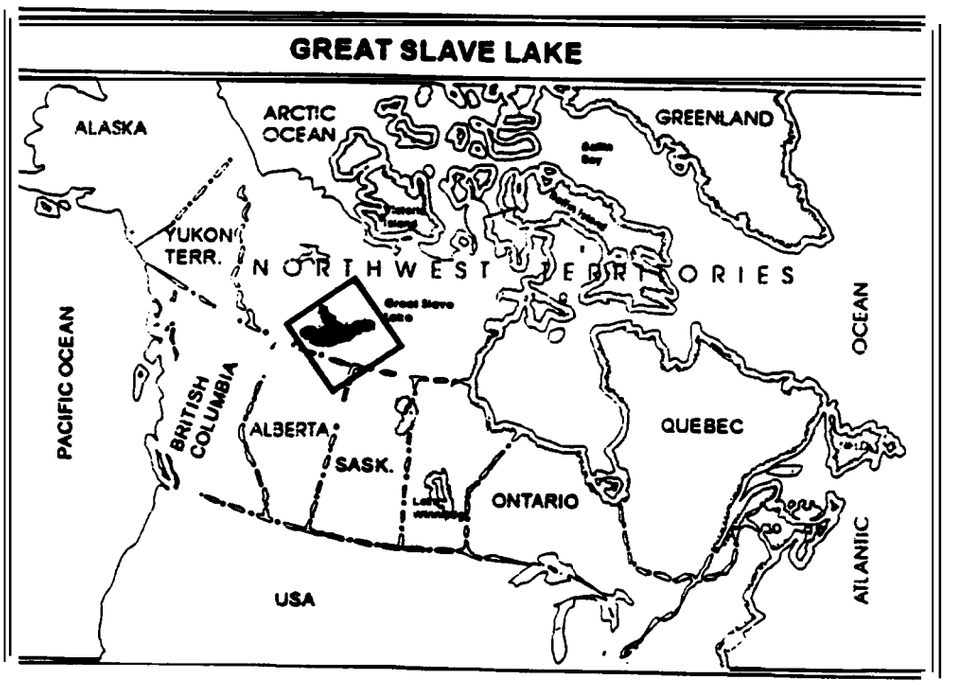
SECTION 1

1. BACKGROUND INFORMATION

1.1 Location:

Great Slave Lake is located in the Northwest Territories 550 miles north of Edmonton, Alberta and extends from latitude 61o to 630 north and from longitude 109o to 1170 west.



The Great Slave Lake Fishery is the largest freshwater (inland) fishery in the Northwest Territories. The Lake is a large body of water covering approx 10,000 square miles and is divided into six commercial fishing areas, each with specific quotas established annually.

Currently, the quotas are as follows:

Area 1 West	**227,300** kgs.
Area 1 East	318,200
Area 2	318,200
Area 3	91,000
Area 4	409,100
Area 5	363,600

The **total** lake quota is, therefore, 1,727,400 kilograms annually and is based on the production of Lake Trout and Lake Whitefish. There are, however, other commercial species taken which are not considered quota species. These are: Northern Pike, Walleye, Inconnu, Mullet and Burbot. The season on Great Slave Lake starts on November 1 and ends on March 31 of the following year.

1.2 Seasons And Climatic Conditions

The fishery operates both in winter and summer, about 40% of the fishing effort occurs in winter and 60°/0 in summer. The main lake is usually open for navigation for a period of four months begiming around the first week of June and ending around October 7th. The freezing and ice breakup periods occupy about 2½ months during which the lake is covered with ice.

The surface water temperatures of the open lake are approximately as follows:

1. June: 40oF
2. July/August: 45-55oF
3. September 40oF

1.3 Water Depths

The maximum observed depths are as follows:

1. Central Sector: **535 feet**
2. Eastern Sector: 2,015 feet

Deep water areas appear to be less productive than water of moderate depth.

1.4 **Topography**

The south and west shores, which lie in the MacKenzie lowlands, consist mainly of forest covered with extensive areas of scrub. The north and east shorelines are of rugged Precambrian rocks and the rocky ridges support a few stunted trees with good forest cover in places.

1.5 **Profile of the Great Slave Lake Fishery**

Commercial fishing began on Great Slave Lake on July 29th, 1945. Two distinct fishing seasons have developed: the winter ice fishexy and the summer open water fishexy.

The original vessels averaged 29 feet in length and were of similar design to the Lesser Slave Lake vessels from Alberta. They were replaced by the 44 foot Lake Winnipeg type "white fish" vessel, constructed mainly of steel with diesel power. Snow machines are used in the winter.

Experiments have been conducted in the past using trap and trawl nets, but limited success was experienced with this gear. Now, the only gear used is the gill net.

Great Slave Lake is a restricted fishery, i.e. **a** person must be **a resident of the** N.W.T. for at least 5 years before they can **qualify for a** certificate to fish. There are only a limited **number** of certificates available. See below:

Winter Class A 32	Summer Class A 28
Winter Class B 49	Summer Class B 61

A Class A certificate is defined **as a vessel or** vehicle that **weighs over 900kgs with fishing gear attached.**

A "Class B" certificate is defined as a vessel or vehicle that weighs less than 900kgs with fishing gear attached.

A Class A winter certificate is a bombardier; a "Class B" winter certificate is a ski-doo. A Class A summer certificate is a vessel over 30 feet in length; a "Class B" summer certificate is a vessel less than 30 feet in length.

A Great Slave Lake CERTIFICATE is the authorization for specific equipment to fish on Great Slave Lake, and a commercial licence is the authorization for a specific person to operate that equipment and to sell fish commercially. Each certificate is restricted to the person who holds a commercial **licence** for Great Slave Lake.

The number of fishermen varies from year-to-year and season-to season. However, each "Class A"certificate represents on average a crew of about 4 persons and a "Class B"certificate represents an average crew of 2. For any number of reasons - cost factors, illness, alternative employment opportunities, etc. - not all certificates issued are fished in any given year. As well, many fishermen hold both A and B certificates – winter and summer. Helpers employed in the winter **fishery** are also sometimes employed in the summer fishery.

The Great Slave Lake Fishery is conducted by gill net. These nets are nylon or monofilament equivalent to 210/3 (heavy) thread. The use of 5.25 inch mesh is regulated, but there is at present no restriction on the number or size (length) of nets permitted. There is, however, a restriction on the time a net may be left in the water, 30 hours in the summer and 72 . hours in the winter.

The fishery is primarily based in Hay River, NWT. There are also 6-8 people fishing out of Yellowknife. There has not been a great deal of involvement by other communities around Great Slave Lake in recent years, but there appears to be growing interest in communities such as Fort Resolution, Snowdrift and Fort Rae. Interestingly, there is a very low number of young people participating in the fishery.

1.6 **The Great Slave Lake Winter Fishery**

The winter fishery on Great Slave Lake generally starts around mid November and continues till mid April the following year. Gill nets are used and are set under the ice using a variety of power augers and ice chisels to open holes through which the nets are set. Once nets are deployed under the ice by hand, they are weighted down to stop them from freezing into the ice. The nets are generally also pulled out of the water by hand.

There are two basic types of winter operators: Type One is the “Class A“ operator who uses a bombardier to do his fishing. The bombardier is a twin track snow machine originally designed to transport up to 16 persons. Type Two is the “Class B“ operator who uses a ski-doo type machine. The fishing technique is basically the same used by the “Class A“ operator, however, it is generally done with less people and on a smaller scale. A “Class A“ operation

generally involves 3-4 people, whereas the "Class B" operation involves 1-2. The fishermen generally live in camps near the fishing sites and transport their catch to Hay River on a regular basis. Many of the fishermen have, in addition to their fishing equipment, freighting equipment to transport their catch.

1.7 The Great Slave Lake Summer Fishery

The summer fishery generally begins in early June and runs until some time in October, depending on weather conditions. It is similar to the winter fishery, with the obvious difference that vessels are used instead of snow machines. Again, there are two categories of fishermen, "Class A" and "Class B".

The "Class A" operator uses a vessel over 30 feet in length. On Great Slave Lake, "Class A" vessels range from 31 foot aluminium open vessels to 50 foot steel hulled enclosed vessels. The majority are 40-48 foot and steel hulled. The crews generally live aboard and work onboard.

The majority of "Class A" vessels use diesel engines of varying size; a few vessels use gas. The "Class B" operators use vessels that are less than 30 feet in length. These range from 14' Zodiacs to homemade plywood skiffs 16-24', aluminium Lunds 16-18', fibreglass yawls 20-22', to the occasional aluminium or steel skiff up to 26' in length. Most of the "Class B" vessels are powered by outboard motors ranging from 25- 100 horsepower. In most cases, a vessel will have more than one outboard.

Nets are generally hauled and set by hand, although some "Class B" operators have small mechanical lifters similar to those used on larger vessels. There are generally 3-4 people on a "Class A" vessel and 1-2 people on a "Class B" vessel.

In “&& cases operators have both A **and B Class certificate and fish them together**.

Few of the fishing vessels on Great Slave Lake are equipped with state of the art electronics. Of the “Class A“ vessels, only 5 have radar, but most have a depth .sounder, magnetic compass and mobile telephones. “Class B“ vessels generally have no electronics at all, although some”have a magnetic compass and depth sounder.

2.0 PROFESSIONALIZATION

Fishing is a **profession** and must come to be seen as such, but formalized entry requirements and professional standards are required. Training and apprenticeship programs are needed to deliver the **full** range of technical and managerial expertise needed by fishermen in order to succeed in a **modern** fishing enterprise. For some time, the Department has been assisting industry organizations in establishing the **necessary** criteria to introduce mandatory professionalization and certification, including codes of conduct for responsible fishing.

In a concerted effort to ensure that a satisfactory program is designed by fishermen for fishermen, a federal/provincial Working Group on **Professionalization** has been coordinating extensive consultations with fishermen in Atlantic Canada. Unions are working with their members and with the provinces to improve existing organizational structures. Meetings are being held to discuss proposed activities such as training standards and requirements and to provide information on the program so that all fishermen are aware of what is involved.

2.1 Professionalization and Certification in Other Fishing Nations

Experience in other fishing nations may provide some insight into the most advisable approach for Canada. An analysis of similar activities in three other fishing nations has produced the following information.

2.1.1 Norway

There are some 27,000 registered fishermen/women in Norway including the inshore and the offshore, skippers and crew. About 7,000 of these **people** are part-timers,

usually young people who stay in the industry for only a few years.

About 17,000 inshore and midshore fishermen/women, skippers and crew, belong to the Nonvegian Fishermen's Association (NFA). Membership and dues paying are voluntary, but nearly everyone belongs, partly because it is a national tradition, and partly because the Association is very powerful and offers many valuable services.

Norway has a complex system of legislated price supports that guarantees adequate prices to fishermen. The NFA plays a major role in administering this system and in organizing the sale of fish. It earns most of its revenues from charges to the government and processors for these services. The association administers a comprehensive income security system including pensions and health and life insurance.

Norway conforms to international agreements on training standards and qualifications for captains for fishing vessels over 50 tonnes. New rules are coming into effect requiring all skippers and crew on all fishing vessels to have taken a 40-hour safety and first aid course.

Although they are still developing their training standards and certification system in the costal sector (inshore and midshore), Norway has come a long way towards a comprehensive system of self-management by the fishermen using as a vehicle the NFA.

2.1.2 New Zealand

The New Zealand fishing industry is governed by the Fishing Industry Board (FIB) established in 1963 to promote the interests of the industry. All participants are required to belong to the FIB including fishermen/women, crew, fish farmers, exporters, processors and retailers.

The board promotes the full use of the resource, the sale of all fish, and the maintenance of quality standards. It also coordinates research, credit services, the activities of different fleet sectors and so on.

Government regulations require that all individuals working on fishing vessels obtain certificates of competence. The training is provided by different polytechnical schools (community colleges). The qualifications for each position vary according to the size of the boat and whether it operates in local waters or offshore.

The Training Council of the FIB provides a subsistence allowance for all fishermen who undertake training for specified certificates. In addition, the Ministry of Fisheries and Agriculture provides a 50% subsidy for individuals in the Coastal Masters Certification program.

The only way to obtain a certificate is to follow an appropriate program in a polytechnical institute. No credit is given for experience or at-sea apprenticeships. The effect of the whole system is to encourage young people to start their careers in the fishery by going to school.

In summary, New Zealand 'is a country where much of the management of the fishery is done by the industry itself through the FIB, and where there are mandatory training certificates and a highly developed education system in place to make it work.

2.1.3 The United Kingdom

Like New Zealand, the United Kingdom has a powerful non-governmental body to run its fishing industry. The Seafish Authority (SA) was created in 1981, has a staff of 20 and operates 10 offices around the country. It has three divisions corresponding to its major functions: the Marketing Division promotes consumer education, quality standards and sales development. The Technical division does research and development of vessels and gear, training and other development activities in aquiculture and the traditional fisheries. The administrative division runs the organization and also provides grants and credit services to the industry,

The SA gets its funding from a levy on all fish landed in the UK. The rate of the levy is set by Parliament. The organization gets additional grants from government to provide training programs and other services to the industxy.

The SA Board of Directors is made up of representatives of affiliated organizations including fishermen's associations and unions, processors' bodies, brokers and exporters. All of these participate in order to gain access to the substantial resources and services which the SA has at its disposal.

The SA has major involvement in training programs, providing courses in local communities for active

fishermen, and funding institutional programs for new entrants to the industry and for skippers and crew who wish to advance their careers through skills upgrading. Through its activities, the SA provides the entire industry with a more or less integrated career ladder. A person can enter the industry through a training program at one level, work there for a period, then re-enter training and move up to a higher level of responsibility and remuneration.

The UK has introduced mandatory certificates for all levels. The first training element made a requirement for all crew and skippers is a safety course. In future, further requirements will be specified as the UK, in line with other fishing nations within the european community, moves towards a more centrally and professionally organized fishery.

2.1.4 The North

Consultations with native and other fishermen in the North began with the Northern Inshore Fisheries Technology Transfer Workshop held in Iqaluit, Northwest Territories in September 1989. Delegates produced a series of recommendations including suggested training and technology transfer strategies.

The second in this series of consultations was held in Nain, Labrador in October 1990. Again, among the recommendations emerging were several related to training and technology transfer.

A third such consultation was recently held in the Hay River, Northwest Territories (October, 1992) to coincide with a regular meeting of the Great Slave Lake Advisory Committee. It included a session led by

Andrew Duthie, Fisheries and Oceans and Jim McLevey, Nova Scotia Department of Fisheries. The session sought to resolve three basic issues.

a. Is it an advantage to have fishing recognized as a career?

b. Should standards be developed as minimum requirements for professional certification?

c. What is the best method for developing, introducing and monitoring these standards?

As a result of this consultation, it was agreed that DFO and the Nova Scotia Department of Fisheries will prepare a strategy which could be adopted as a pilot project by the Committee in establishing and administering a professionalization and certification program for its membership.

The basic issue involved is: how can a program of professionalization and certification most effectively help people in the fishery deal with their problems and concerns in the 1990s and beyond?

To begin to develop an answer, we must define what is meant by professionalization and certification. Through initial consultations with fishermen and others, broad areas of concern have been identified.

Organization: most professionals are organized in one way or another to promote the common interest of their members.

Education @Certification: the members of a profession normally have some say over entrance

requirements and certification standards as well as educational and technical upgrading programs thereafter.

Income: most professions have developed ways to influence the prices they receive for their products or services or to play a part in market development for goods and services. Many groups have their own income security programs such as pension plans or life insurance.

It is clear from consultations to date that a program of professionalization and certification for the fishing industry will have to address these concerns.

SECTION 2

3.0 THE PROPOSAL

3.1 Professionalization

At the meeting held in Hay River on October 16th the work groups reviewed three basic issues. The consensus was that:

- It was an advantage to have fishing recognized as a career. Given the history and tradition of the fishery this will be a "slow" process but will ultimately lead to more recognition within society of the work and role of fishermen and create more goals for young new entrants to the industry.

- Standards of professional certification should not be related to obtaining a fishing license.

- The best mechanism for developing, introducing and monitoring these standards will be the Fishermenfs Federation, with assistance sought from related agencies. Certification for the fishermen should be through the Great Slave Lake Advisory Board.

The first draft of the professionalization model was presented at a meeting held in Hay River, N.W.T. on January 26-27, 1993. In attendance were:

Syd Kirwan, Economic Development and Tourism
George Low, Fisheries and Oceans
Archie Buckley, Fishermen's Federation
Nancy Bowrin, Fisherperson
Lawrence Catholique, Snowdrift Band
Del Hamilton, Fishermen's Federation
Dan Dechief, Fisheries and Oceans

James McLevey, Nova Scotia Department of Fisheries
Andrew Duthie, Fisheries and Oceans
Ed Studney, Fishermen's Federation
Paul Harrington, Dene/Metis Representative
Glen Soloy, Fresh Fish Marketing Corp.
Dave Bergunder, Fresh Fish Marketing Corp.
Sharon Dragon, C.E.I.C.
Burt Hunt, Fisheries and Oceans
Arthur Beck, Dene/Metis Representative
Kim Tybring, Fishermen's Federation

The group reviewed and modified the proposal. The following section contains the final version and reflects the consensus achieved at the meeting.

4.0 **PROFESSIONAL MODEL FOR REVIEW**

It is understood at the start that this system of professional certification will be directed to new entries to achieve a level of competency that is measurable, meaningful and recognizable. The present bonafide fishing persons will be encouraged to proceed with training that will improve their present financial investment or enterprise and will be accepted into this system as professional fishermen. (See Section on “Grandfathering”)

The Federation will ensure that training programs offered by any agency for the benefit of fishing persons meet the Federation’s standard of bonafide status. This will entail cooperation with the Department of Fisheries and other related agencies.

Three. levels of professionalization are suggested:

1. New Entry

2. Certified Fishermen
   - Level One
   - Level Two

3. Master Fisherman

Each of the above levels will require appropriate education and training credits, plus sea base experience.

The following credit system is proposed:

4.1 "Certification Process

	Land Based Education Credits	Sea Based Experience Credits	Total
New Entry	5	0	5
Certified Fisherman			
Level One	40	100	140
Level Two	40	200	240
Master Fisherman	85	300	385

NOTE: Sea Based Experience includes experience both in open water and under ice fishing.

4.1.1 New Entrant

A "new entrant" will either be a young person just out of school or an older person returning to fishing after a two year absence. Either wilI be required to receive a permit to fish from the Skipper of a fishing enterprise and be required to attend a five day safety course. This permit will be renewed each year for a maximum of three years.

If the new entrant is intending to make fishing their profession, they are entitled to take further land-based credits and accumulate a total of 100 fishing days over the first three years as a permit holder. The land based credits (one day's training equals 1 credit,) are only taught to permit holders or Level 1 fishing persons.

In parallel with the 100 days fishing, and a decision by the permit holder to continue fishing, then a total of 40 new land-based credits will be required in the first

three years. Failure to achieve or participate in future training during the three year period will cause the permit holders to lose that permit in the fourth year, and they will be considered a new entrant and have to accumulate more sea days and land-based credits. In other words, they would have to start over again.

4.1.2 **Requirements**

1. Sponsored by an owner/operator

2. Complete a five day Basic Safety Course.

3. Maintain an approved record of sea time and have same verified by the owner/operator.

4.1.3 Entitlements

1. Receive a permit to fish on a vessel with an owner/operator.

2. Advance to a Level I after completion of 40 Land Based Credits and accumulation of 100 sea days.

4.1.4 **Restrictions**

1. Permit holder must have primary commitment to the fishery.

2. Owner/operator responsible for obtaining and cancellation of permits.

3. Permit tied to the fishing operation - non transferable.

4. Permit valid for a 1 year period.

5. Permit not-renewed after 3 years. (Holder should be encouraged to progress to at least one additional level).

6. Number of permits available to each fishing enterprise will be two trainees for "A" Certificate and not to exceed one on a "B''Certificate..

7. Required number of sea days for progressing to another leveI served on open water.

8. Leave of absence could be provided to fishermen if new endeavour is related to the profession,

4.1,5 Conditions

1. Pennit holder required to fish for minimum 30 days in a season.

2, An entrant out of the fishery for more than 3 years, upon re-entry will be considered a new entrant.

4.2 Certified Fisherperson - Level I

Any new entrant who has completed the requirements listed during the first three years may decide that this is as far as they wish to go. That's fine! That person will be a bonafide fishing person with certificate working in a fishing enterprise, owned by someone else.

4.2.1 Requirements

1. Possess a valid Permit.

2. Have accumulated 100 sea days.

3. Have completed 40 Land Based Credits in addition to the five credits for the Basic Safety course to include standard first and cold water survival required for new entrants.

Credits

Introduction to Navigation and Safety - Mandatory	10
Care of Catch (mandatory)	5
Setting, Hauling Gill Nets Mandatory	5
Knots, spice - Repair Gill *Nets*	10
Optional Credits	5
TOTAL	40

4.2.2 Entitlements

1. Receive a Personal Fishing Certificate.

2. Entitled to advance after completion of additional 40 mandatory Land Based Credits and accumulation of additional 200 sea days.

4.3 Certified Fisherperson – Level II

For a person holding a Level I certificate and who wishes to go out on their own and start up their own enterprise, they will require a fishing certificate. They will have accumulated 200 sea days. This will designate them as a Professional Fisherperson.

4.3.1 Requirements

1. Possess a valid Level I License,
2. Have accumulated *300* sea days.
3. Have completed additional 60 mandatory Land Based Credits

Credits

Managing Your Fishing Enterprise	15
Chartwork	15
Radio telephone	10
Navigation Instruments	5
Engine Maintellallce	5
Genera] Seamanship	*5*
Navigation Safety	*5*

4.3.2 Entitlements

1. Designation as a Professional Fisherman.

4.4 Master Fisherman

Since Master Fisherman designation will be an honourary title there are no further sea or land based credits required. The commitment to the industry should be and will be recognized. It is important to give some thought to the considerations listed under "Grandfathering" which follows.

4.4.1 Requirements

1. To have made a recognized contribution to the Fishing Profession.

2. To have demonstrated leadership within the industry.

3. Recommendation from any of the following:

   - Fisheries Federation
     Department of Fisheries & Oceans
   - Department of Natural Resources

4.4.2 Entitlements

1. Designated as a Master Fisherman (Honourary Position)

2. Public Recognition.

3. Assist fishing persons to obtain Levels I and II by direct training.

The master fisherman will be encouraged to participate in the "Trainer" program. They will be given assistance in course design, construction and delivery such that they will conduct courses for local fishermen.

4.5 Grandfathering

4.5.1 Considerations

- May be necessary for fishermen to make an application and have an assessment completed.

  Will not be practical for all bonafide fishermen to be grandfathered as Master Fishermen.

  Grandfathering into different Levels may be the proper approach.

- Determining factor could be a combination of age and years experience.

APPENDIX 1

Education Credits

Certified kind based education credit (C. E. C.) values given in brackets.

SAFETY	Management	Fishing Techniques	Maintenance Repairs
introduction to Navigation and Safety (10) M.E.D. A2 (5) First Aid (2) Radio Telephone (Voluntary) -5 Radiotelephone (Restricted) -10 Chartwork (5) Meteorology (5) Instruments (5) General Seamanship (5) Navigation Safety (5)	Managing your Enterprise (15) Fisheries Resource Management (5) Record keeping (5) Instructors Training Course (IS) Leadership (2) Conducting a Meeting (3) Fisheries Bio10g3 (5)	Setting and Hauling Gillnets (5) Care of Catch (10)	Outboard Engines 3) Basic Maintenance Outboard Engines Maintenance Hydraulics (5) Diesel or Gas Engines Basic Maintenance (15) Diesel or Gas Engines Maintenance (15) Knows, Splicing, Repair and Construction Gillnets (10)

Training Proposal

The training proposal has the following objectives:

- To establish a broad base of trained fishermen initially during the period March-May, 1993. This will give emphasis to the longer range professionalization - certification process and facilitate in the selection of training of local fishermen as" trainers for the next 2-5 years.

- To meet the training needs expressed by the group at the meeting in Hay River, October 16th, 1992.

- Set the foundation for training trainers such that the local community will be in a strong position to conduct short workshops and longer term technical training.

We plan to send two of our instructors with our van filly equipped with working electronic instruments plus all materials for the M.E.D. program and Engine Maintenance program. We will have available tools and manuals which may be of assistance for short term training for the owners of vessels with V-6 and V8 Ford, Chrysler and Dodge engines.

Two more instructors will be flying in to Hay River mid March to be joined by the road traveling instructors around April lst.

Appendix 1 gives an outline of the land based credit system. Course outlines are given in Appendix 2 and following pages. The proposed schedule is set out in Appendix 3.

Course Costs

Course costs will be negotiated with finding agencies.

APPENDIX 2

Radio Telephone Operator

Purpose of Course

To prepare radio telephone operators to write the DOC examination for Radio Telephone Operation Restricted Certificate.

Duration

-Two *(2)* weeks

Content

- Radio legislation
- Equipment fundamentals
- Operating procedures
- -Distress, urgency and safety operating procedures
- Alarm signals
- Propagation
- Circuit operation
- Use of documents

Certification

Radio telephone operator. Certificate issued by the Department of Communications. Students examined by qualified examiner of Nova Scotia Department of Fisheries.

Fishing Master Class IV

Prerequisites

- Age 17 years
- Seatime: 12 months on a vessel of at least 5 gross tons
- Valid sight test

Required Courses and Examinations

- Radiotelephone
- 040- Chartwork and Pilotage
- 020- Navigating Instruments
- 061- Navigation Safety
- M.E.D. A2
- First Aid
- 166- General Seamanship

Duration

Nine (9) weeks.

Chartwork **and Pilotage**

Introduces the student to traditional methods of navigation. Upon completion of this course the candidate will be able to demonstrate a knowledge of:

- compass work
- true and magnetic courses and bearings
- positioning by latitude/longitude, ranges and bearings
- calculation of speed, time and distance
- the buoyage system
- chart projections
- use of chartwork tools

Navigating Instrument

Introduces the student to the more modem equipment and techniques of electronic navigation. Upon completion of the course the student will be able to demonstrate a proficient with:

- Marine Radar
- Loran "C"
- Echo Sounders
- Decca

The student will also be introduced to the other electronic navigation aids like G.P.S. (Global Positioning System), video plotters and electronic charts. A mobile instrument laboratory allows the students "hands.oil" training on the same instruments on which they are examined.

Navigation Safety

An integral part of all levels of certification, this course introduces the student to the International Collision Regulations with the Canadian Modifications. The successful candidate must demonstrate a thorough comprehension of the interpretation and application of the rules.

General Seamanship

Upon completion of all the written examinations, the candidate must Present himself to a Coast Guard Examiner for a final oral exam. The student is then challenged on a wide range of relevant topics which include:

1. Recognition and knowledge of the meanings of the lifesaving and distress signals contained in the INTERNATIONAL CODE OF SIGNALS.

2. A practical knowledge of safe working practices aboard fishing vessels.

3. Basic knowledge of pollution prevention.

4. Duties and responsibilities of watch members.

5. Action of the Officer of the Watch in emergencies at sea and in port.

6. Maintenance of a proper deck log concerning navigation progress, electronic instrument use and unusual occurrences.

7. Common steering procedures, their purpose and how to put them into effect.

8. Use of azimuth circle, pelorus or any selected method of taking a bearing.

9. Familiarity with changing over between automatic and hand steering, and emergency steering (refernng to operator's manual).

10. Reading bearings and headings.

11. The Master's responsibilities in emergencies.

12. Duties and responsibilities of the Master of a small vessel as required by the CANADA SHIPPING ACT.

13. Practical considerations of boat handling in heavy weather.

14, Knowledge of "CODE OF SAFE WORKING PRACTICES" as it applies to fishing vessels.

Marine Emergency Duties (M.E.D. A2)

Purpose of Course

To provide basic safety instructions to operators of small fishing vessels.

Duration

One (1) week

Content

- Hazards and emergencies associated with the marine environment.
- Firefighting
- Emergency response lifesaving appliances and abandonment "Survival"
- Rescue
- Inspection and maintenance of emergency equipment
- Passenger control
- First Aid

Certification

D.O.T. training certificate

Department of Transport Certificate.
EXN 24.

Fishing Gear - Gill Nets

Duration

Ten (10) days

Content

- Rope Knots
- Splices
- Basic Net Mending

Topics

Rope Knots

- Reef Knot
- Sheet Bend
- Double Sheet Bend
- Fisherman's Knot
- Bowline
- Clove Hitch
- Rolling Hitch

Rope Splices

- Eye Splice
- Short Splice
- Cut Splice
- Back Splice

Basic Net Mending Techniques

- Filling mending needles
- Basic hand braiding
- Basic net mending
- Mending plain holes
- Mending rips

Outboard Motor - Basic Maintenance

Purpose of course

Teach participants how to maintain their boat gas and diesel engines in good running order.

Duration

Two (2) days,

Selection

Introduction, 2 + 4 Stroke Cycle, Gasoline or Diesel Power, Size considerations, availability of service, costs.

Operating

Restart checks, break in procedures, positioning of motor, matching propeller to load.

Fouling problems, electrolysis, lubricating 2 cycle engines.

Steering systems, throttle, service and adjustment, tilt mechanisms, reverse lock and trim adjustment.

Maintenance

- Gear case operation, lubrication, sealing.
- Service cooling system, water pump, thermostat.
- Select and service spark plugs, secondary wiring service.
- Troubleshooting ignition systems, breaker type. electronic type.
- Clean and adjust carburetor, fuel pump, filters, tanks and hoses.
- Cranking system service, pull cord, electrical.

Small Business Management - Managing your Enterprise

Purpose of Course

To update and increase the efficiency of the fisherman's skill and knowledge in keeping accounts and records, analyzing financial statements and planning and managing their business more effectively.

This course in basic accounting and financial management is taught by lecture, demonstration, and simulated case studies, It is designed to enable a person to set up:

1. Appropriate accounts.
2. Understand the accounting terms.
3. Complete the required information returns,
4. Prepare and analyze financial statements.
5. Exercise financial control over the business and make sound business decisions based on resulting account information.

Duration

Ten (10) days.

Content

1. Constructing a Business Plan
2. Basic Accounting
3. Preparation of Financial Statements
4. Analysis
5. Forecasting and Budgeting, Costs and Control.

Marine Gas & Diesel Engine - Preventive Maintenance

Purpose of Course

Teach participants how to maintain their boat gas and diesel engines in good running order.

Duration

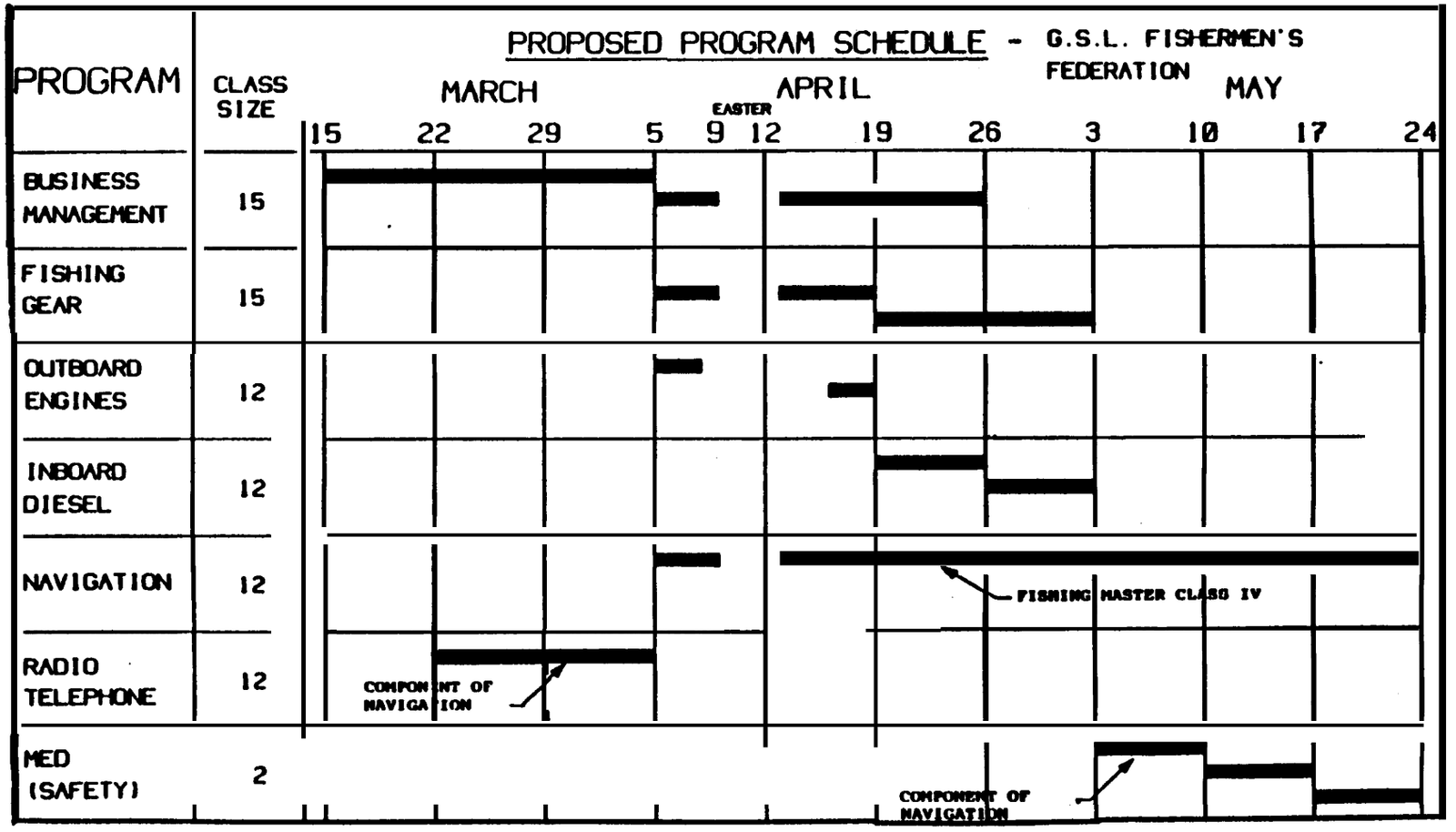
One (1) week

Content

- basic knowledge of internal combustion engine
- pre-start check
- start-up procedures
- scheduled maintenance
    - lubricating oil system (engine oil)
    - lubricating oil system (marine gear)
    - diesel fuel system
    - cooling system
    - air intake and exhaust
    - electrical system
    - trouble shooting

Certification

A certificate of completion horn the Department of Fisheries will be given. Maximum number of trainees per course - **12.**


PROPOSED PROGRAM SCHEDULE - G.S.L. FISHERMEN'S FEDERATION
PROGRAM
CLASS SIZE
MARCH
APRIL
MAY
EASTER
15
22
29
5
9
12
19
26
3
10
17
24
BUSINESS MANAGEMENT
15
FISHING GEAR
15
OUTBOARD ENGINES
12
INBOARD DIESEL
12
NAVIGATION
12
FISHING MASTER CLASS IV
RADIO TELEPHONE
12
COMPONENT OF NAVIGATION
MED (SAFETY)
2
COMPONENT OF NAVIGATION