

**REPORT OF THE
FIRST ANNUAL MEETING
OF THE
NORTH AMERICAN COMMISSION
OF THE
NORTH ATLANTIC SALMON
CONSERVATION ORGANIZATION**

**3 - 4 May, 1984 Ottawa
and
22 - 25 May 1984, Edinburgh**

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD

NORTH AMERICAN COMMISSION
COMMISSION NORD-AMERICAINE

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RAPPORTEUR:	MR TED I LILLESTOLEN
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NAC (84)40
REPORT OF THE FIRST ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION
OF THE NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
3-4 MAY 1984, OTTAWA AND 22-25 MAY 1984, EDINBURGH

1. OPENING OF THE MEETING

- 1.1 The meeting was opened on 3 May 1984 at 1000 hours by Dr Georges Nadeau, Chairman of the North American Commission. Opening statements were given by the heads of the US delegation and Canadian delegation as well as by the representative from the European Community (EC). A list of individuals attending the meeting is attached. (Annex 1).

2. ADOPTION OF THE AGENDA

- 2.1 The draft agenda, NAC (84)1, (Annex 2), was adopted by the Commission with the following changes:
- 2.1(1) The United States proposed that an additional item regarding future meetings of the North American Commission be inserted in the agenda. The Commission agreed that this item be inserted after agenda item 6.
- 2.1(2) The EC wanted to propose an additional item concerning a discussion of rules and regulations of the parties which is an item that is included on the draft Council agenda. The Canadian representative questioned whether the EC could propose changes to the agenda in the light of its status on the North American Commission. The Commission noted the comments of the EC representative might be discussed under agenda item 11, 'Other Business'.

3. NOMINATION OF A RAPPORTEUR

- 3.1 The Commission designated Mr Ted I Lillestolen (USA) as rapporteur for this meeting.

4. APPROVAL OF LAST MEETING'S MINUTES

4.1 The Commission approved the draft report of the meeting of the North American Commission of NASCO, (NASCO-NAC I/5 Revised), (Annex 3), held in Edinburgh on 18 January 1984.

5. REVIEW AND DISCUSSION OF PROPOSED 1984 CANADIAN AND US FISHERIES SALMON MANAGEMENT MEASURES AS THEY RELATE TO THE MANDATE OF THE COMMISSION

5.1 The Canadian representative presented the major elements of the 1984 Atlantic Salmon Management Plan, NAC (84)2, (Annex 4). He noted that a comprehensive study of the Canadian Atlantic salmon fishery, which had been recently completed, had shown a continued and alarming decline in abundance. Consultations with various user groups involved in the Canadian fishery had indicated support for immediate and drastic measures to avert the alarming decline in abundance and begin the process of stock rebuilding. The 1984 Canadian Atlantic Salmon Management Plan involved substantial cutbacks in all sectors of the fishery, and attempted to spread the burden of conservation equitably among all user groups.

5.2 The Canadian representative also indicated that considerable emphasis had been placed upon the reduction of interceptions, particularly of Canadian-origin fish, thus permitting the return of larger numbers of multi-sea-winter salmon to their rivers of origin.

5.3 He further noted that these draconian measures represented a considerable sacrifice for the various user groups but particularly for commercial salmon fishermen in areas where there are few other economic opportunities.

5.4 The US requested clarification of several points including the degree to which the salmon fishermen would be affected, the extent to which the by-catch affects the total salmon

harvest, whether the fishing effort would shift as a result of the regulations, and how much data is available concerning salmon of US origin. The Canadian representative responded by stating that 1984 management measures are anticipated to result in an estimated catch reduction of 25 to 40% in areas off eastern Newfoundland, 43 to 52% in areas off southern Newfoundland and in some areas of Newfoundland as much as 60 to 70% based on the fishing patterns during the years from 1978-1982. In the maritime provinces, the reductions in the commercial fishery would be in the order of 60 to 80% except for the Gaspé Peninsula where the commercial fishery had been closed by the Province of Quebec. The extent to which by-catch in other fisheries contributes to the total salmon harvest is estimated to be 10% in the area off Newfoundland and 3% off Labrador. The Canadian representative stated that a major shift in the fishing effort would not take place because of existing regulatory controls over the fishermen, including licences and gear quantity restrictions. In addition, the salmon that were not caught as a result of the 3 week delay in the season opening would no longer be available to that fishery. The Canadian representative indicated that data is not available to Canada to determine to what extent salmon of US origin occur in Canadian waters but that management measures in the plan should, to some extent provide beneficial effects for US salmon.

- 5.5 The US representative briefly reviewed the activities of the US salmon restoration and enhancement programs which have included the release of 1.4 million smolts and 1.3 million fry in 1984 and the improvement of fish passage and collection facilities in US rivers. The US has had no directed commercial salmon fishery; however, catch limit regulations restrict the recreational fishery. The US expressed concern that the 1984 management measures adopted by Canada do not take into consideration the interception of salmon of US origin. Based on the data available to the US, it expressed its view that the North Atlantic

salmon stocks are over-exploited in both the West Greenland and Canadian ocean fisheries; that a decline of Atlantic salmon stocks in Canada, coupled with the increase in US salmon production, would likely lead to an increase in mortality of salmon of US origin in the interception fisheries; that a reduction of catch in both the West Greenland and Canadian salmon fisheries is needed to stabilize or increase North American stocks; and that commercial fishing closures based on area and time are needed to alleviate the interception of salmon of US origin. The US proposed that Canada establish a quota of 1,706 metric tons on the overall fishery and that the catch off Newfoundland and Labrador be limited to 938 metric tons, NAC (84)3, (Annex 5). The US proposed that the reduction in these interception fisheries be achieved by delaying the season opening off Labrador and east Newfoundland to the end of July.

- 5.6 Pending an in-depth review of the US proposal, Canada provided some preliminary comments. Canada recognised that there are some interceptions of salmon of US origin in Canadian waters, but maintained that scientific data do not currently exist to substantiate specifically the extent and location of these fish. Canada further stated that its 1984 salmon plan would most likely have some beneficial effect on fish of US origin; however, until concrete data became available, Canada was unable to be specific on the impact of its measures on US fish. Canada stated that extensive review of the data used by the US to develop its proposal for Canadian fisheries would be required. Canada suggested that such a review be conducted by ICES, while the US suggested that an exchange and review of the data should also take place between US and Canadian scientists. Pending receipt of the ICES advice, Canada indicated that it could not agree to the US proposal for regulatory measures. However, the Canadian representative suggested that Canadian and US scientists meet as soon as possible to discuss the impact of the 1984 Canadian Atlantic Salmon Management Plan in terms of anticipated reductions of catch in particular areas.

5.7 The representative of the EC asked the Chair for recognition to comment on the US proposal. The Chairman questioned whether the EC had the right under the Convention to comment on this issue. The EC representative claimed the right to intervene freely in discussions. In particular, he maintained that according to Article 11, paragraph 2, the EC has the right to discuss issues that involve catches of EEC-origin salmon. The EC noted that in the North American Commission area enough EEC-origin salmon have been caught in Canadian waters, and that, therefore, the EC has the right to address any issue which may affect these fish including the US proposal. The representatives of Canada and the US did not agree with the EC view and maintained that according to Article 10, paragraph 1(a), the membership of the North American Commission is limited to Canada and the US and that the EC is an observer, except when the EC submits a proposal for regulatory measures concerning salmon of EC origin. The EC representative expressed the desire to raise a point of order, as stipulated in Rule 22. The Commission did not recognise the point of order because it was not raised by a member of the Commission.

6. DISCUSSION ON EFFECT OF ACID RAIN ON ATLANTIC SALMON

6.1 The representative of Canada presented a paper on Canada's position on acid rain as it affects stocks of Atlantic salmon, NAC (84)5, (Annex 6) and expressed a strong desire for bilateral action to resolve this problem. Statement attached, NAC (84)6, (Annex 7). The representative of the US recognised that acid rain is a problem affecting the environment but stated that further research would be required before substantive and costly action could be taken.

7. (NEW ITEM) FUTURE MEETINGS OF THE NORTH AMERICAN COMMISSION OF NASCO

7.1 The representative of the US submitted a proposal, NAC (84)4, (Annex 8), that a regular meeting other than the annual

meeting of the Commission be held annually in February, at such time and place as the Chairman may determine. The Commission approved the proposal.

8. (OLD ITEM 7) DISCUSSION ON DRAFT PROPOSAL OF A STATEMENT BY NASCO COUNCIL ON RESEARCH PRIORITIES

8.1 It was agreed to defer any discussion on this item until ICES had an opportunity to review and submit a report on the terms of reference provided to it by the Commission. It was proposed that Dr W Doubleday (CA) and Dr V Anthony (US) meet to discuss the possibility of establishing a mechanism to analyse jointly the catch statistics of both members.

9. (OLD ITEM 8) STOCKING OF GREAT LAKES AND ATLANTIC SEABOARD WITH PACIFIC SALMONIDS AND RESULTING POTENTIAL FOR DISEASE SPREAD AND SPECIES INTERACTION WITH ATLANTIC SALMON STOCKS

9.1 The representative of Canada expressed concern over the introduction of new salmonids on the Atlantic seaboard and submitted a proposal, NAC (84)7 (Annex 9), to establish a scientific working group to examine this issue. The Commission accepted the proposal. Dr Pritchard (CA) and Dr D Goldthwaite (US) were appointed to pursue the establishment of the working group.

10. (OLD ITEM 9) DATE AND PLACE OF NEXT MEETING

10.1 The Commission agreed that this meeting was the first annual meeting of the Commission and would reconvene in Edinburgh during the first annual meeting of the organization, scheduled 22-25 May.

10.2 The Commission reconvened on May 25 in Edinburgh, Scotland, to deal with agenda items 10 (old item 9), 11 (old item 10) and 12 (old item 11).

10.3 The Commission agreed to hold the second annual meeting in Boston, MA, in February 1985. The specific dates of the meeting will be determined by the Chairman at a later date.

11 (OLD ITEM 10) OTHER BUSINESS

11.1 With respect to item 8 (old item 7) of the agenda, the representative of Canada submitted revised terms of reference for ICES, NAC (84)8, (Annex 10) which was developed by the Canadian and US scientists. The Commission adopted the terms of reference which will be forwarded to the Council.

11.2 The representative of the US made the following statement on the effects of Canadian regulatory measures on salmon of US origin:

11.2(1) 'Recognising the constructive regulatory measures taken by Canada for the 1984 salmon season, the United States strongly urges Canada to fulfil its obligations under the Convention by undertaking in 1985 management measures directed and designed specifically to minimize harvest of salmon of US origin'.

11.3 In response to this statement, the representative of Canada restated its position, as addressed under item 5, recognising that some salmon of US origin are intercepted in Canadian waters but data is not yet available to determine to what extent. The representative of Canada emphasised the willingness of Canada to work with US scientists. Consideration of any further management measures would have to await the results of further scientific analysis. The representative of Canada indicated that notwithstanding the results of such analysis, further regulatory action would not be possible in light of the failure of the West Greenland Commission to take regulatory action.

12. (OLD ITEM 11) CONSIDERATION OF DRAFT REPORT OF MEETING

12.1 The Commission agreed that it would not reconvene to consider the draft report. When completed the Chairman

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and the members would review it and, if acceptable, give it formal approval at the next meeting of the Commission.

13. (OLD ITEM 12) ADOPTION OF PRESS RELEASE

13.1 The Commission did not issue a press release.

Before the Chairman adjourned the meeting he expressed his appreciation to the members in working together on the many issues dealt with by the Commission.

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
MEETING OF THE NORTH AMERICAN COMMISSION
3-4 MAY 1984, OTTAWA
AND 22-25 MAY 1984, EDINBURGH, UK.

LIST OF PARTICIPANTS

* Denotes Chairman

** Denotes Head of Delegation

CANADA

*	DR G A NADEAU	Faculté des Sciences de l'Éducation, Université Laval, Quebec
**	MR L S PARSONS	Dept of Fisheries, Ottawa
	DR W M CARTER	Atlantic Salmon Federation, St Andrews, N.B.
	MR B MUISE	Nova Scotia Dept of Fisheries, Musquodoboit Harbour, N.S.
	MR D AGGETT	Newfoundland Dept of Fisheries
	MS E FELDMAN	Dept of External Affairs, Ottawa
	MR D MEERBURG	Dept of Fisheries, Ottawa
	MR B APPLEBAUM	Dept of Fisheries, Ottawa
	MR R STEIN	Dept of Fisheries, Ottawa
	MR J PIPPY	Dept of Fisheries, St John's, Nfld
	DR W D WATT	Dept of Fisheries, Halifax, N.S.
	MR J A MOORES	Dept of Fisheries, St John's, Nfld
	MR T SURETTE	Dept of Fisheries, Ottawa
	MR Y COTÉ	Dept of Fish and Game, Quebec
	MS D PETHICK	Dept of Fisheries, Ottawa

USA

**	MR A E PETERSON JR	National Marine Fisheries Service, Woods Hole, Mass
	MR R BUCK	Restoration of Atlantic Salmon in America Inc, Dublin, New Hampshire
	MR F E CARLTON	National Coalition for Marine Resource Conservation, Savannah, Georgia
	MR T LILLESTOLEN	National Marine Fisheries Service, Washington, D.C.
	MR L SNEAD	Dept of State, Washington, D.C.
	DR V C ANTHONY	National Marine Fisheries Service, Woods Hole, Mass
	MS B K ROTHSCHILD	National Marine Fisheries Service, Washington, D.C.
	DR P GOODYEAR	National Fisheries Center, Kearneyville, West Virginia.
	MR G MANUEL	Atlantic Sea-run Salmon Commission, Augusta, Maine
	MR S APOLLONIO	New England Fishery Management Council, Saugus, Mass

.../...

USA (CONTINUED)

MR J H KUTKUHN Dept of the Interior, Washington, D.C.

MR A W NEILL National Marine Fisheries Service,
Woods Hole, Mass.

EEC (*)

MR J SPENCER Fisheries Directorate-General, EEC
Commission, Brussels

NASCO

DR M L WINDSOR Interim Secretary, NASCO, Edinburgh

(*) Under Article 11, paragraph 2 of the Convention for the Conservation of Salmon in the North Atlantic Ocean the EEC has the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in the territories referred to in Article 18 of the same Convention.

NOTE: Not all participants were present at both the Ottawa and Edinburgh meetings.

NAC (84)1
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
MEETING OF THE NORTH AMERICAN COMMISSION
OTTAWA, 3-4 MAY 1984
AND 22-25 MAY 1984, EDINBURGH, UK.

AGENDA

1. Opening of the meeting
2. Adoption of the agenda
3. Nomination of a rapporteur
4. Approval of last meeting's minutes
5. Review and discussion of proposed 1984 Canadian and US fisheries salmon management measures as they relate to the mandate of the Commission
6. Discussion on effects of acid rain on Atlantic salmon stocks
7. Future meetings of the North American Commission of NASCO
8. Discussion on draft proposal of a statement by NASCO Council on research priorities
9. Stocking of Great Lakes and Atlantic seaboard with Pacific salmonids and resulting potential for disease spread and species interaction with Atlantic salmon stocks
10. Date and place of next meeting
11. Other business
12. Consideration of draft report of meeting
13. Adoption of press release

Edinburgh, May 1984

ANNEX 3

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

NASCO - NAC I/5 (Revised)

DRAFT REPORT OF THE MEETING OF THE
NORTH AMERICAN COMMISSION OF NASCO

DRAFT REPORT OF THE MEETING OF THE
NORTH AMERICAN COMMISSION OF NASCO
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1. Opening of the meeting

The meeting was opened on 18 January 1984 under the chairmanship of Mr. BORDES, representing the depositary, the Council of the European Communities.

2. Adoption of Rules of Procedure

The Commission adopted its Rules of Procedure which had been prepared during the three preparatory meetings (doc. NAC I/2) (Annex I).

3. Election of Chairman and Vice-Chairman

The Commission elected Dr. G.A. NADEAU (Canada) Chairman and Mr. R.A. BUCK (U.S.A.) Vice-Chairman.

From then on, the Chairman presided over the meeting.

4. Adoption of agenda

The Commission amended the draft agenda submitted by the EEC delegation (doc. NAC I/1) by inserting the following items :

- Nomination of a rapporteur, and
 - Date and place of next meeting
- and then adopted the agenda (doc. NAC I/3) (Annex II).

5. Nomination of a rapporteur

The Commission nominated Mr. D.A. REIFSNYDER (U.S.A.) rapporteur for this meeting.

.../...

At a later stage of the meeting, a new item was inserted into the agenda:

5 (a): Modification of the Rules of Procedure

The Commission decided, for reasons particular to this Commission (only two members, both situated in North America), to modify Rule 16 of its Rules of Procedure in such a way that in paragraphs 1 to 3 instead of 60, 45 and 30 days, these figures will read: 30, 15 and 10 days, respectively.

The EC delegation, referring to Article 11 paragraph 2 of the Convention, asked for the possibility to request, if necessary, a change in date for meetings proposed by the Commission. The Commission agreed to take into account, in establishing the dates for any of its meetings, the views expressed by other parties to the Convention.

.../...

6. Regulatory measures

The representative of the United States noted that the Government of Canada is currently in the process of developing regulations affecting its salmon fisheries. He expressed the great concern of the United States with respect to the status of intercepting fisheries in Canada. While noting that the primary effects of such regulations will be on home water fisheries in Canada, he also expressed the keen interest of the United States in having an opportunity to review Canada's regulations and to have input with respect to their effects on salmon of U.S. origin. He suggested that such review might be undertaken at the next meeting of the Commission.

The representative of Canada confirmed that his government is conducting an intensive review of its regulations for salmon fisheries. He said that he anticipated that some changes will be made in Canada's existing regulations by the time of the next meeting of the Commission. He agreed that the regulations should be reviewed at that meeting with respect to their impact on salmon of U.S. origin.

7. Recommendations to the Council on scientific research

Dr. W. Doubleday of Canada introduced two draft documents for consideration by the Commission:

- (1) Request by NASCO-North American Commission for Scientific Advice from ICES, and
- (2) Proposal of a Statement by the NASCO Council on Research Priorities.

Canadian and U.S. scientists drafted both documents at a meeting on January 18, 1984. The second document was subsequently revised based on discussions with scientists from other NASCO Contracting Parties. This second document thus represented the composite view of the scientists from all Contracting Parties.

After reviewing the draft Request by NASCO-North American Commission for Scientific Advice, the representatives of Canada and the United States agreed to adopt it and to recommend to the Council that it request ICES to undertake the programme of work.

With respect to the draft Proposal of a Statement by the NASCO Council, Dr. Doubleday further explained that the document reflects long-term research priorities which are not intended to provide information or advice in 1984. The document lists five programmes considered essential for NASCO to meet its objectives.

It also envisages that ICES will be responsible for coordinating research and compiling data, perhaps retaining the master copy of all data. In addition, the document lists two programmes considered desirable.

The representative of Canada reiterated that the document was not a Canadian proposal but one which represented the consensus view of scientists from all Contracting Parties. He proposed that the last two programmes, the ones "considered desirable" be deleted from the Proposal forwarded by the North American Commission to the Council. He said discussions would be held with other Contracting Parties concerning these two programmes before the Proposal is introduced in the North-East Atlantic and West Greenland Commission.

The representative of the United States expressed some concern with deleting the two programmes from the document, but accepted the first five programmes as well as the proposal that ICES coordinate the development of research plans to implement these programmes and agreed to move forward with the amended proposal.

Mr. Andreasen from the European Economic Community asked for further explanation from the scientists regarding the intent of the two "desirable" but not "essential" programmes. He also said it was his understanding that each Commission would recommend an identical proposal to the Council.

The Chairman noted that each Commission may make its own recommendation to the Council and noted further that both members of the North American Commission had agreed to adopt the Proposal, deleting two of the programmes.

The documents, as adopted, are attached to this Report as Annexes III and IV.

8. Date and place of next meeting

The Commission agreed next to meet in Ottawa on 3 May 1984, with the possibility of continuing the meeting on 4 May.

9. Other business

No matters were raised under this agenda item.

10. Consideration of draft Report of meeting

The Commission agreed that it need not reconvene to consider the draft Report. When completed, the Chairman and the members would review it and, if acceptable, give it formal approval at the next meeting of the Commission.

Edinburgh, May 1984

ANNEX 4

NAC (84)2
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

1984 ATLANTIC SALMON MANAGEMENT PLAN (CANADA)
MAJOR ELEMENTS



Fisheries
and Oceans

Pêches
et Océans

Information

1984 ATLANTIC SALMON MANAGEMENT PLAN

MAJOR ELEMENTS

Canada 

1984 Atlantic Salmon Management Plan

Major Elements

1. A delay in opening of the 1984 commercial fishing seasons for the province of Newfoundland. The fishing seasons will be:

Zones 1-2 (Labrador), 3-10, 11 (east), 14 -
June 11/December 31.
Zones 11 (west), 12, 13 - June 11/July 10.

All other existing regulations and weekend closures will apply. Immediate consideration will be given to a voluntary licence buyback program for all commercial salmon fishermen in the above zones.

2. Shorter seasons will be imposed for the commercial fisheries of the Maritime provinces. These seasons will be:

New Brunswick

Zone 1 Restigouche-July 9 - July 20
Zone 2 Miramichi-July 9-July 20(trapnets) and July 16-July 27
(driftnets)
Zone 3 St. John-July 16 - July 27

P.E.I

Zone 4 St. Peter's Bay-Sept. 3-Sept. 21
Gulf Shore-July 16 - August 10

Nova Scotia

Zone 5 Cape Breton East (including Louisbourg area) -June 18 -
July 6
Zone 6 Gulf Shore-July 2 - July 20
Zone 7 Eastern Shore-June 18 - July 6
Zone 8 Upper Bay of Fundy-July 23 - August 10
Zone 9 South West N.S.-June 18 - July 6.

All other existing regulations and weekend closures will apply.

3. There will be no new commercial salmon fishing licences issued on an Atlantic-wide basis.

4. Transfers of commercial fishing licences will be allowed, throughout the Atlantic, among immediate family members on the condition that the recipients are full time fishermen.
5. Only the retention of grilse will be permitted for the recreational fisheries for the provinces of Newfoundland, New Brunswick, PEI and Nova Scotia. All multi-sea winter salmon hooked by anglers will be required to be released immediately with the least possible harm to the fish. The Province of Quebec will be reviewing the adaptation of this program for the Restigouche river system.
6. The seasonal bag limit along with the possession and daily limits in Nova Scotia will be reduced to 10, 6 and 2 respectively which will now be required to be grilse.
7. The number of recreational salmon angling licences in each province should be limited to the levels of 1983, as an interim measure, pending the determination of appropriate angling effort by fishing districts for future years.
8. During 1984 the tagging system will be extended to all Atlantic provinces with the exception of Newfoundland where the system will be in place for 1985.
9. It will be illegal to retain, or be in possession of, salmon captured incidentally in non-salmon commercial gear.
10. Negotiations will be undertaken with native groups to; lower present fishing quotas, ensure the enforcement of regulations, and encourage the use of trap nets.
11. Negotiations will continue with all Atlantic provincial governments with the aim of developing and administering a surtax on all recreational licences. Subject to the development of a satisfactory recreational licence surtax mechanism a voluntary commercial licence buyback program will be established to further reduce commercial salmon fishing effort.
12. Development of programs to expand efforts in the enhancement of the Atlantic salmon resource will be continued and implemented as funding becomes available.

13. A Federal Provincial working group will be established immediately to develop mechanisms for the implementation of Proposal 7, 11 and 12 and to provide a forum for discussion of other aspects of a long-term comprehensive management plan for Atlantic salmon in conjunction with the Atlantic Salmon Advisory Board.
 14. The Department of Fisheries and Oceans will continue to seek a reduction in the quota for the West Greenland salmon fishery.
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Information leaflets are issued by the Department of Fisheries and Oceans to describe and explain departmental policies, programs and activities.

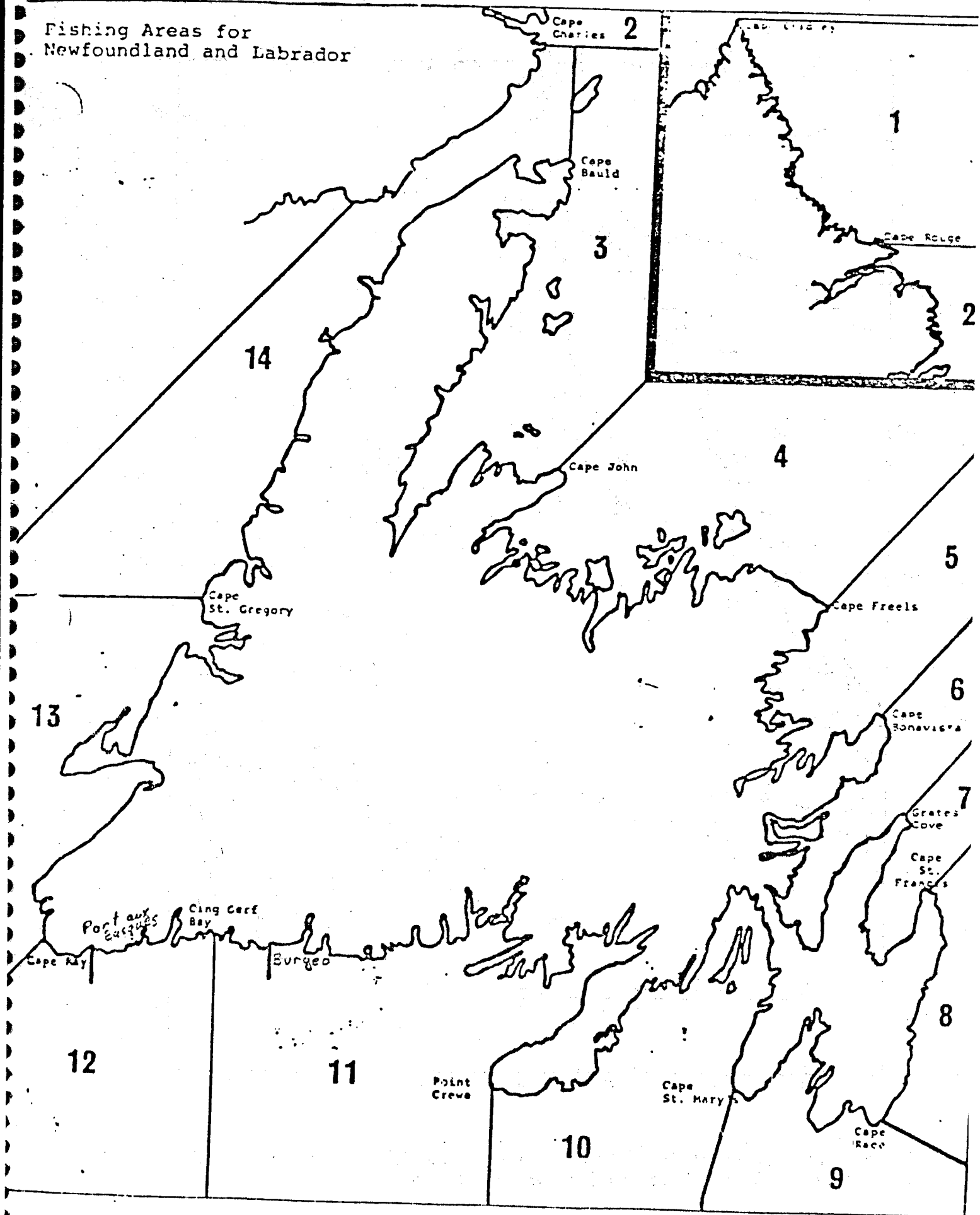
DFO/1682

Published by:

Communications Directorate
Department of Fisheries and Oceans
Ottawa, Ontario
K1A 0E6

I-HQ-84-07E

Fishing Areas for
Newfoundland and Labrador



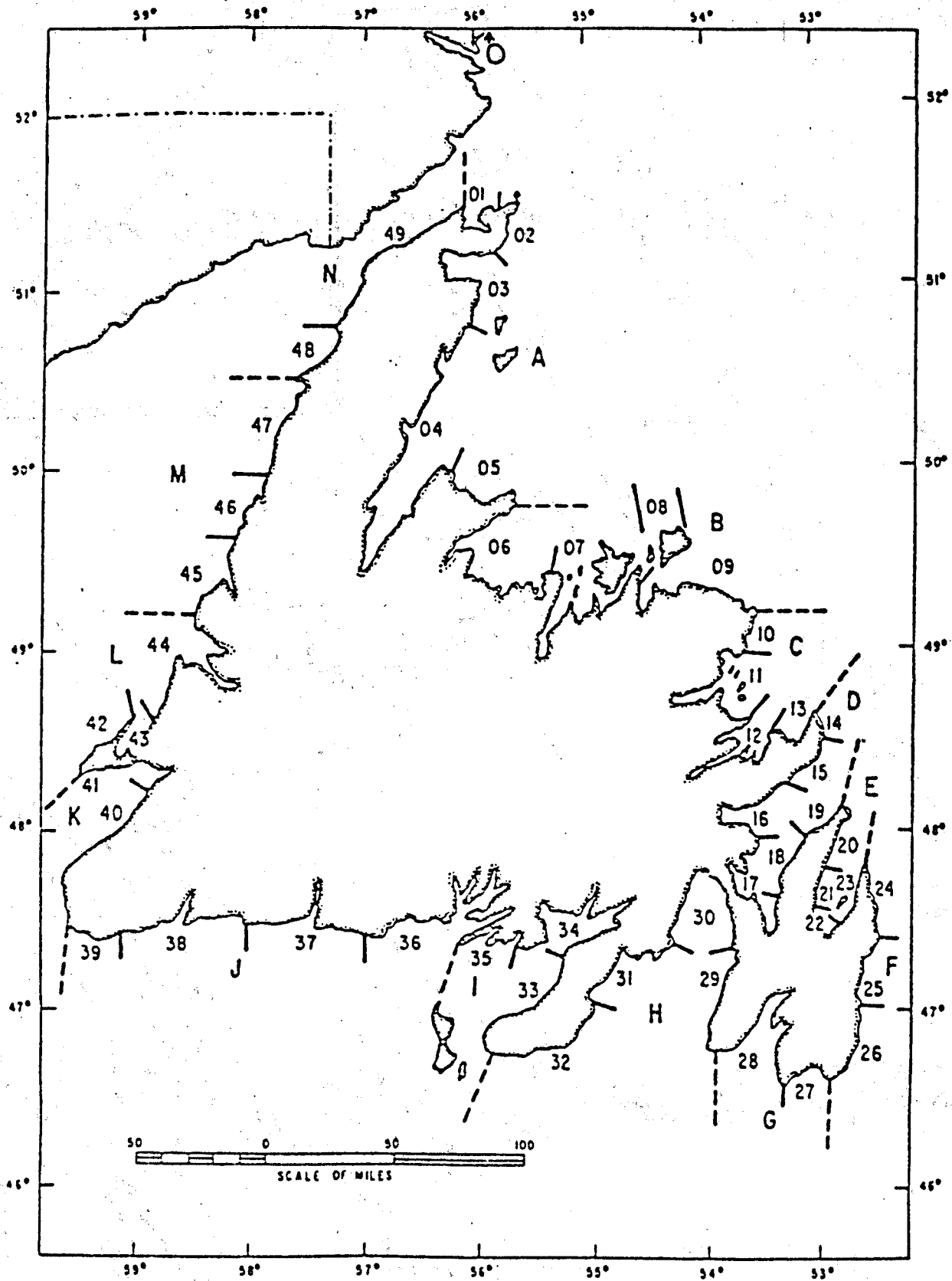


Fig. 4: Boundaries of Statistical Section (numerically indicated) and Statistical Areas (alphabetical) in insular Newfoundland.

<u>Area</u>	<u>% Loss</u>
A	2.9-5.8
B	6.9-14.6
C	20.8-33.5
D	20.5-36.9
E	37.2-57.5
F	25.6-43.4
G	5.5-11.0
H	13.9-22.1
I	13.3-20.2
J ₁	22.9-32.6
J ₂	59.6-67.8
K	7.7-17.1
L	4.3-9.9
M	3.0-7.2
N	0.1-0.3
O	0.1-0.2

NAC (84)3
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

POSITION STATEMENT RELATIVE TO INTERCEPTION FISHERIES

1. COLLECTIVELY BETWEEN THE WEST GREENLAND AND CANADIAN OCEAN FISHERIES THERE IS AN OVER-EXPLOITATION OF NORTH AMERICAN SALMON STOCKS

Although the catch of Atlantic salmon at West Greenland has only averaged one-fifth the catch of Canada, in terms of large salmon only (multi-sea-winter fish), the West Greenland fishery has been as important as the Canadian fishery. The West Greenland interception fishery has had a profound effect on the spawning escapement to the rivers of North America because this fishery catches only the large multi-sea-winter salmon which are so important in terms of egg production. From 1970 to 1982, the West Greenland fishery caught on the average the same amount of salmon (two-sea-winter fish) that were caught in the home waters of Canada had they been caught in Canada and not at West Greenland. From 1960-1982, during the period of the West Greenland fishery, 43% of the catch by weight was assumed to belong to the North American component which, if caught at home waters in North America, would have doubled in weight. The average catch from 1964 to 1982 was 3,669 metric tons. This, then, depicts the exploitation of North American salmon had they all been caught at home waters. This 3,669 metric tons is comparable to the average catch during the 1920's and 30's which presumably led to the steep decline in catches which ended in 1955. This level of catch is clearly excessive and may lead to a reduction in abundance.

2. THE DECLINE OF ATLANTIC SALMON STOCKS IN CANADA, COUPLED WITH THE INCREASE IN US SALMON PRODUCTION, WILL LIKELY LEAD TO AN INCREASE IN MORTALITY OF SALMON OF US ORIGIN IN THE INTERCEPTING FISHERIES.

The restoration of Atlantic salmon in New England rivers has been a major effort. We know what it means to have salmon

disappear from our rivers and what it takes to restore it. At present, the US has a total of 18 Atlantic salmon hatcheries, including nine production hatcheries, six adult holding facilities and three release ponds. Over 5 million eggs were taken in 1983 to support production and research. During 1984, 1.4 million smolts and 1.3 million fry will be released into rivers to rebuild the stocks. From previous stockings, the number of returns to home waters has been both significant and encouraging. However, as we increase our stockings and the production of wild salmon, the share of salmon of US origin in the interception fisheries will increase. When coupled with the decline of stocks in Canada, the catch of US fish could be greater still. The US cannot accept strong and costly enhancement measures only to support increases in catch in the interception fisheries.

3. REDUCTION OF CATCH IN BOTH THE WEST GREENLAND AND CANADIAN SALMON FISHERIES IS NEEDED TO STABILIZE OR INCREASE NORTH AMERICAN STOCKS.

The exploitation of 3,669 metric tons of North American salmon (had they all been caught at home waters) is excessive, and we believe the data would suggest that a catch of 2,500 metric tons is a more reasonable level to permit increased spawning escapement and arrest declines in abundance. Because West Greenland and Canada have, for the period of 1970-1982, caught about the same amount of large salmon (again, if taken in home waters), this reduction should be shared equally. We propose reducing the catch by 1,169 metric tons. This shared equally means about 585 metric tons should be reduced from the average catch of each fishery. (This implies multi-sea-winter fish in Canada and one-sea-winter fish at West Greenland). Since West Greenland fish are being expressed in terms of Canadian home water catches, this means 293 metric tons if caught at West Greenland. This would necessitate an actual reduction in catch at West Greenland of 681 metric tons, since the North American stock component is 43% (43% of 681 metric tons is 293). The average catch at West Greenland from 1964-1982 was 1,603 metric tons;

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therefore, reducing that by 681 metric tons would leave an allowable catch of 922 metric tons. In turn, by applying the principal of equal proportion of reduction in the fisheries, the Canadian allowable catch shall be 1,706 metric tons (average catch 2,291 - 585 = 1,706).

Based on the interception of salmon of US origin, we would propose that a significant portion of the reduction in Canadian fishery be in eastern Newfoundland and Labrador. From 1959 to 1971, this fishery accounts for 95% of the Canadian returns of US tags. The Labrador and Newfoundland commercial fishery caught 55% of the Canadian fish from 1959-1971, but increased to 78% from 1972-1982. Since this fishery has increased its percent of harvest in recent years and is the main Canadian interception fishery for salmon of US origin, it is reasonable to suggest that the percent of harvest should be reduced, at a minimum, to its earlier level of 55% of the Canadian catch. Accordingly, the Canadian TAC of 1,706 metric tons should be limited to a catch of 938 metric tons for the combined Labrador-Newfoundland fishery. In this area, over the period of 1969 to 1983, 38%, 45% and 17% of the Labrador-Newfoundland catch came from Labrador, eastern Newfoundland and southern Newfoundland respectively. A catch quota of 938 metric tons, therefore, could be proportioned into 356, 422 and 159 tons for these areas.

4. COMMERCIAL FISHING CLOSURES BASED ON AREA AND TIME IS NEEDED TO ALLEVIATE THE INTERCEPTION OF SALMON OF US ORIGIN.

The fisheries off eastern Newfoundland produce the greatest interceptions of US fish, with 33% of the tag returns occurring in July. This area also intercepts significant numbers during the fall (21.5% from September-December). The Labrador fishery intercepts 22% US fish. The southern Newfoundland is not of less concern to the United States. The most effective proposal to restrict fishing for area and time to alleviate the interception of salmon of US origin would be in eastern Newfoundland during June and July (45% of the tag returns).

THEREFORE, MR CHAIRMAN, THE US WOULD PROPOSE THAT THE GOC TAKE IMMEDIATE ACTION TO RESTRICT THE OVERALL FISHERY TO A CATCH OF 1,706 METRIC TONS. FURTHER, ONLY 938 TONS BE TAKEN IN THE INTERCEPTION FISHERY OF LABRADOR AND NEWFOUNDLAND. WE WOULD PROPOSE THAT THE REDUCTIONS IN THESE INTERCEPTION FISHERIES BE ACHIEVED BY SIGNIFICANT REDUCTIONS IN THE LABRADOR FISHERY, AND, SPECIFICALLY, CLOSURE OF THE FISHERY IN EAST NEWFOUNDLAND DURING JUNE AND JULY.

NAC (84)5
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

THE DEPARTMENT OF FISHERIES AND OCEANS' RESEARCH PROGRAM
INTO THE EFFECTS OF ACID RAIN ON
ATLANTIC SALMON AND SALMON FISHERIES:

A BRIEF TO THE PARLIAMENTARY SUBCOMMITTEE ON FISHERIES & FORESTRY, MARCH 1984

Angling statistics show that Atlantic salmon have become severely depleted in many Nova Scotia rivers. The decline of many of these populations can be directly related to falling pH levels in their habitats. Declining salmon catches and low densities of juvenile salmon are found in rivers when average pH levels are 5.0 or less but not in similar rivers whose pH levels are above that value. Reproducing salmon populations are not found in rivers whose pH is below 4.7. In the pH range from 4.7 to 5.0 salmon may be present, but at unnaturally low population densities. No reduction of salmon populations can be attributed to acidification of their habitats above pH 5.0, but populations inhabiting rivers in the pH range 5.1 to 5.4 can be expected to start declining in the near future.

The acid rivers in Nova Scotia all enter the Atlantic Ocean south of a line drawn from Guysborough to Digby and are therefore in Digby, Yarmouth, Shelburne, Queens, Halifax and Guysborough Counties. The water chemistry of 38 former salmon rivers in this area has been measured. Twelve of these were too acidic to support any salmon and another twelve were acidic enough to kill many juvenile salmon. Acidification has destroyed or endangered the salmon habitat of nearly 85 percent of these rivers. This problem is most acute in the extreme south-western tip of Nova Scotia where the water of all the rivers of Shelburne County and parts of Yarmouth and Queens Counties are lethal to salmon.

If the acidification of our rivers continues at its present rate, we can expect that by the year 2000 about two-thirds of all salmon populations on the outer coast of Nova Scotia will be extinct and one-half of the remaining populations will be declining.

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Experience has shown that it is very hard to establish self-sustaining populations of salmon using parental fish which have been transplanted long distances between rivers. Therefore, the eradication of salmon from such large regions of Nova Scotia will probably hinder future programs to re-establish salmon in their former range when pollution of the atmosphere is eventually controlled and the acidity of rain reduced.

The Department of Fisheries and Oceans has undertaken experiments to test the feasibility of establishing high-pH refuges in some acid rivers by adding limestone or other substances to lakes and streams. This technique is considered a possible interim measure to preserve the genetic characteristics of the salmon populations which will be needed in the future to recolonize our former salmon rivers on the outer coast of Nova Scotia.

The experiments conducted to date indicate that the pH of lakes and streams can be adjusted to satisfactory levels by lake liming but that fresh lime must be added annually and in some cases, twice annually. Various different liming methods have been tested and estimates have been made of the relative costs and effectiveness. The most effective in both cost and pH control is the liming of headwater lakes, which then discharge their treated water to protect the salmon in the downstream areas.

The Department of Fisheries and Oceans does not propose this as a salmon restoration effort, since the cost per salmon is likely to be excessive (ca \$30/adult fish). We view the establishment of deacidified Atlantic salmon refuges along the Atlantic coast of Nova Scotia as a genetic salvage operation to preserve nuclei of these stocks for future restoration efforts when the rivers become again suitable for natural salmon reproduction.

In addition to this water chemistry monitoring program and studies of the effects of acid rain on salmon fisheries, the fisheries research station at St Andrews, N.B. is carrying out an intensive program of studies on the Westfield River, Queens County, N.S.

Fisheries research on the Westfield River was begun in the fall of 1980 when salmon eggs were planted in artificial redds in the Westfield and several other streams to determine the influence of the chemistry of redd interstitial water on survival of eggs and fry. The Westfield River was chosen because its pH regime (annual mean ca 5.1) was thought to be near the minimum tolerable for salmon reproduction. Some electrofishing data, obtained 15 years ago, indicated that it was one of the more productive survey areas in the Medway system at that time. It was also of suitable size for monitoring fish movements. The full-scale field program began in August 1981, with installation of fish-counting fences, discharge gauging stations and the initiation of fish, and other biological program. Precipitation and stream-water chemistry of the Westfield and the two tributaries are monitored on a weekly basis with more frequent sampling during some periods of heavy rain.

A number of laboratory projects are underway to provide information complementary to the field program. These projects include studies of low pH on the smoltification process; on egg, alevin and fry development, on sexual maturation and steriod production of Atlantic salmon adults, and on territorial and feeding behavior of salmon parr.

The results obtained from the field program have demonstrated that:

1. survival of salmon eggs and fry in the Westfield system is inversely correlated with pH of the redd interstitial water;
2. streamside experiments have demonstrated very high (70%) mortality of newly feeding fry in Westfield River water, and this mortality could be eliminated by raising the river water pH to 6.0 by passing it through a limestone filter;
3. possibly as a result of this increased mortality, densities of yearling salmon in the Westfield are extremely low.

The mortality of Westfield River salmon from egg to smolt stages was much higher than in the North River, a stream with a pH of 6.0, one unit higher than the Westfield.

The laboratory studies have demonstrated that:

1. pH levels within the range encountered in the Westfield can decrease ion and water uptake in Atlantic salmon eggs and alevins;
2. steroid hormone production or release is impaired in male salmon during residence in the Westfield - possibly resulting in decreased egg fertilization;
3. smoltification is impaired resulting in reduced survival upon entry into salt water.

The Westfield studies are incomplete as fewer than 2 years of research efforts have been expended to date, while 4-5 years are required just to monitor the salmon population through one generation. Should emissions be reduced, leading to a decrease in precipitation acidity, then the information obtained in the Westfield study will be useful background against which to assess recovery of salmon production in the acidic Nova Scotian streams.

NAC (84)6
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

STATEMENT ON ACID RAIN
BY MR L S PARSONS, HEAD OF CANADIAN DELEGATION

I've suggested acid rain be included on the agenda for today's meeting because it is a problem that cannot be minimized, particularly by those of us concerned about the future of Atlantic salmon. I am pleased that you too have acknowledged its importance and its appropriateness as a topic of conversation within the North American Commission.

The simple truth is that Atlantic salmon have become severely depleted in many of our rivers, and much of this depletion can be directly related to falling pH levels in their habitats. As Dr Watt on my delegation will be demonstrating more graphically in a few moments, the problem is most acute in the province of Nova Scotia. For instance, it is a fact that the water of all the rivers of Shelburne County and parts of those in Yarmouth and Queens County in southwestern Nova Scotia are lethal to salmon.

We have measured the chemistry of 38 former salmon rivers in southwestern Nova Scotia and have discovered that 12 of them were too acidic to support any salmon at all and another 12 were acidic enough to kill many juvenile salmon. In fact, acidification has destroyed or endangered the salmon habitat of nearly 85% of these rivers and if it continues at its present rate, we can expect that by the year 2000, about $\frac{2}{3}$ of all salmon populations on the outer coast of Nova Scotia will be extinct, and $\frac{1}{2}$ of the remaining populations will be declining.

Experience has shown that it is very hard to establish self-sustaining populations of salmon using paternal fish which have been transplanted long distances between rivers. Consequently, the eradication of salmon from these large regions of Nova Scotia will probably hinder future programs to re-establish salmon in their former range if and when pollution of the atmosphere is eventually controlled and the acidity of rain reduced.

The Department of Fisheries and Oceans has undertaken experiments to test the feasibility of establishing high pH refuges in some acid rivers by adding limestone or other substances to lakes and streams. This technique is considered a possible interim measure, and I underline "interim", to preserve the genetic characteristics of the salmon populations which will be needed in the future to recolonize our former salmon rivers on the outer coast of Nova Scotia.

We have concluded that the most effective liming method in both cost and pH control is the liming of headwater lakes which then discharge their treated water to protect the salmon in the downstream areas.

We do not propose this as a salmon restoration effort since the cost per salmon is likely to be excessive (ca \$30/adult fish) but see it only as a genetic salvage operation to preserve nuclei of these stocks for future restoration efforts when the rivers again become suitable for natural salmon reproduction.

While the effects of acid rain on Nova Scotian rivers has been the worst to date, the potential for serious impacts in Quebec and Newfoundland rivers is foreseeable.

It is essential that we work together to reduce the source emissions of acid rain or be prepared to lose many of our Atlantic salmon habitats forever.

The Department of Fisheries and Oceans began a major program 4 years ago to develop measures to combat acid rain and we have amassed a great deal of data on the subject. Dr Watt will highlight the results of this program but, let me say at this time, that the most significant conclusion is this: Canada simply cannot solve this problem by itself. We need your assistance and cooperation if these deadly emissions are to be controlled and the species conserved.

Our Governments have come close to achieving the kind of bilateral agreement needed to tackle this problem but there continue to be obstacles to it. First, there was the Memorandum of Intent signed in 1980 and directed to developing a bilateral agreement to reflect and further the development of effective domestic control programs

and other measures to combat transboundary air pollution. Unfortunately, despite President Reagan's confirmation of his Administration's support during his March 1981 visit to Ottawa, the USA ultimately rejected as premature the Canadian proposal of February 1982 to cut emissions in eastern North America by 50%.

Then in early 1983, with the appointment of Mr Ruckleshaus as EPA Administrator, whose mandate was to develop a new acid rain policy for the Administration, we became encouraged once again. Despite the EPA Task Force's finding that sufficient scientific evidence existed to start serious abatement measures, the persisting stalemate within the US on the issue once again precluded a clear course of action.

Furthermore, we were deeply disappointed by the Administration's decision announced January 25 not to adopt an emissions control program for the foreseeable future pending additional research. Canada is not opposed to additional research; indeed there will long be a need for research on this complex issue. We are opposed, however, to the use of research efforts to further delay remedial actions that are urgently needed.

On March 6, 1984, Canadian federal and provincial governments agreed to proceed "unilaterally" with a 50% emissions cut-back of sulphur dioxide by 1994, using 1980 as the base-case year. Until the USA which contributes fully half of the acid deposition, takes similar action, these measures can only marginally reduce the damage.

Finally, on March 20-21, 1984, a meeting of the Environment Ministers of nine European countries and Canada was held in Ottawa. Their governments have all agreed to a 30% reduction of sulphur dioxide emissions by 1993. Their commitments to spend considerable sums on acid rain clean up are based on a hard-headed rule of economics to which we heartily subscribe; in the long-run, the cost of inaction may well be greater than the cost of action.

I would urge you to exert whatever influence you have, as custodians of this important species, to bring about some positive action within the United States on this problem which is crucial to the survival of Atlantic salmon populations in many of our rivers.

NAC (84)4
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

A UNITED STATES PROPOSAL REGARDING
FUTURE MEETINGS OF THE NORTH AMERICAN COMMISSION OF NASCO

The United States is herewith making a proposal which relates to the agenda item "date and place of next meeting".

We propose that Canada and the United States agree that, commencing in 1985, a regular meeting other than the Annual Meeting of the NAC be held annually in February, at such time and place as the Chairman of NAC may determine.

The purpose of this meeting would be to review catch figures and other conditions that prevailed during the preceding year.

These February meetings would be primarily concerned with what might be termed short-term problems of a timely, temporary or emergency nature. This meeting would also provide a forum for discussion and planning with respect to future actions of a long-term nature. For instance, decisions could be made with respect to the parameters, terms of reference and timetables for the undertaking of research that will be presented at the next annual or special meeting of the Council and Commissions.

The US also believes that an early meeting each year offers a logical opportunity for discussion regarding the mutual interests of our two nations. For problems of other intercepting fisheries, such as West Greenland and the Faroe Islands, the meeting would allow us to develop proposals for the later annual meetings.

We urge the agreement by Canada to this proposal, and a concurrence in recommending to the Chairman of the NAC that he call the first regular meeting on this basis for February of 1985.

NAC (84)7
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

PROPOSAL TO NORTH AMERICAN COMMISSION OF NASCO

That the Commission establish a bilateral scientific working group to examine, and develop recommendations for the consideration of the Commission at its next 1985 meeting on the following matters:

1. The potential for adverse impacts on Atlantic salmon stocks resulting from the introduction of Pacific salmonids in the Great Lakes and along the Atlantic coast of North America and ways of minimizing such impact, if noted.
2. Options for protecting the genetic integrity of Atlantic salmon populations including the possible development of protocols for movement or transplants of stocks.
3. The feasibility of and possible ways for achieving more closely aligned fish health programs.

NAC (84)8
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
NORTH AMERICAN COMMISSION

REQUEST BY NASCO - NORTH AMERICAN COMMISSION
FOR SCIENTIFIC ADVICE FROM ICES

ICES is requested to describe historical fisheries (together with relevant regulatory measures) of members of the Commission which have caught salmon originating in rivers or artificial production facilities of another party to the Convention. Specifically:

1. Estimates should be provided of the number, weight, age and sex composition and river of origin of such salmon catches, categorized seasonally, geographically and by gear type. These estimates should take into consideration available information on the release and recovery of tagged salmon and on catches and exploitation rates for salmon in areas where such catches occur.
2. The description of fisheries catching salmon originating in another party's river or artificial production facility should include catch, effort, gear type, season and the composition by species, age and sex of annual historical catches.
3. Data deficiencies and research programs required to meet the needs of the North American Commission for scientific information on salmon stocks and fisheries should be identified.