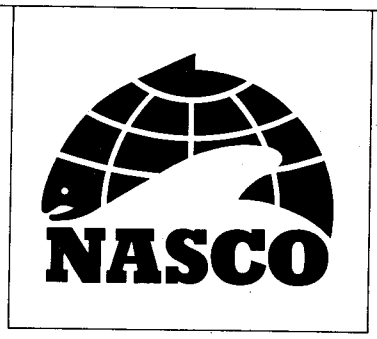
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD



REPORT OF THE SEVENTH ANNUAL MEETINGS OF THE

NORTH AMERICAN COMMISSION

22 FEBRUARY 1990
HALIFAX, NOVA SCOTIA, CANADA

12-15 JUNE 1990
HELSINKI, FINLAND

NORTH-EAST ATLANTIC COMMISSION

12-15 JUNE 1990
HELSINKI, FINLAND

WEST GREENLAND COMMISSION

12-15 JUNE 1990
HELSINKI, FINLAND

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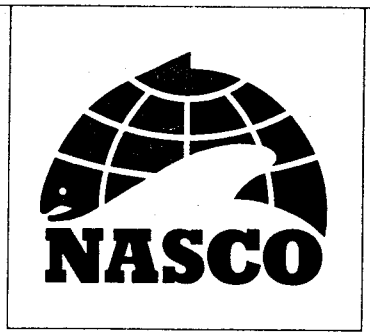

REPORT OF THE

SEVENTH ANNUAL MEETING

OF THE

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22 FEBRUARY 1990
HALIFAX, NOVA SCOTIA, CANADA

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HELSINKI, FINLAND

CHAIRMAN:	MR HOWARD LARSEN (USA)
VICE-CHAIRMAN:	DR GABY WARD (CANADA)
RAPPORTEUR:	MS LOUISE COTE (CANADA)
SECRETARY:	DR MALCOLM WINDSOR

NAC(90)20

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PAPER NAC(90)20

REPORT OF THE SEVENTH ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION OF THE NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION 22 FEBRUARY 1990, HALIFAX, NOVA SCOTIA, CANADA AND 12-15 JUNE 1990, HELSINKI, FINLAND

1. OPENING OF THE MEETING

1.1 The meeting was opened on February 22, 1990 by Howard Larsen, Chairman of the North American Commission.

1.2 The list of participants is given in NAC(90)5, (Annex 1).

2. ADOPTION OF THE AGENDA

2.1 The Commission adopted its agenda, NAC(90)7, (Annex 2).

3. ELECTION OF OFFICERS

3.1 The Commission elected Dr Gaby Ward (Canada) as its Chairman.

3.2 The Commission elected Mr Stetson Tinkham (USA) as its Vice-Chairman.

4. NOMINATION OF A RAPPORTEUR

4.1 The Commission nominated Louise Côté (Canada) as its rapporteur for the 1990 meeting.

5. ACFM REPORT FROM ICES ON SALMON STOCKS "SALMON IN THE NORTH AMERICAN COMMISSION AREA"

5.1 The Chairman of the ACFM, Mr Bernard Vaske, presented the scientific advice from ICES relevant to the North American Commission CNL(90)12, (Annex 3), prepared in response to a request from the Commission at its Sixth Annual Meeting.

5.2 The US representative drew the attention of the Commission to paragraph 4.2.1 of the Report and explained that the catch of 1SW salmon was 331% higher than the 1984-88 mean catch, suggesting a lack of MSW salmon.

6. REPORT OF THE NAC SCIENTIFIC WORKING GROUP ON SALMONID INTRODUCTIONS AND TRANSFERS

6.1 At the February meeting, the Canadian Co-Chairman of the Bilateral Working Group reported on the activities of the Working Group since the June 1989 meeting. Reports on introductions and transfers of salmonids have now been received from all agencies.

6.2 The Canadian representative expressed some concerns regarding the difficulties

which seem to be encountered by the U.S. regarding ratification of the protocols. Delays in implementing regulatory measures in the U.S. could undermine Canadian efforts.

6.3 The U.S. representative indicated that the federal government does not have the authority to insist that protocols be implemented by the various States. He believes, however, that obtaining the states' cooperation, at an early stage, would ensure a more efficient implementation in the long term. The U.S. representative also mentioned that the U.S. authorities were aware of the potential difficulties raised by Canada and will undertake to expedite the process.

6.4 The Canadian representative inquired about the nature of difficulties by questioning if they were of a technical nature or more related to a fundamental difference of opinion.

6.5. The U.S. representative confirmed that some substantive problems remained to be resolved. However a cautious but progressive approach should ensure the goodwill and collaboration of all concerned.

6.6 At the June meeting, the following documents were tabled: NAC(90)13, (Annex 4), Regulations in effect as of April 1, 1989 pertaining to introductions and transfers of salmonid/salmonid eggs within the Commission area; NAC(90)14, (Annex 5), Report of Activities, 1989/90 of NAC Scientific Working Group on Salmonid introductions and transfers; NAC(90)15, (Annex 6), Summary of Salmonid introductions and transfers in Eastern North America 1986-1989.

6.7 The Co-Chairman informed the Commission that although the industry in the state of Maine did not import Atlantic salmon eggs from Europe in 1989, the Working Group was recently informed that they imported about 1.2M Atlantic salmon eggs from Scotland in January and February of 1990. He also indicated that there was some discrepancy between the information provided to the Working Group regarding the discontinuation of the New Hampshire and Massachussetts coho program and the proposed introduction of 400,000 coho smolts in 1990. Both Canada and the US transferred rainbow trout from West of the Continental Divide in 1989. This is contrary to the principle endorsed by NAC to prohibit the transfer of salmonids from west of the Continental Divide due to the risk of disease transmission.

6.8 The Co-Chairman also indicated that document CNL(90)31 produced by the NASCO Secretariat should undergo a thorough review before being endorsed.

7. IMPACT OF ACID RAIN ON ATLANTIC SALMON

ACFM Report from ICES

7.1 As the Commission did not request advice from ICES on the impact of Acid Rain on Atlantic Salmon at its Sixth Annual meeting, no presentation was made.

Review of Mitigative Measures

7.2 The Canadian representative reiterated the importance and seriousness of this issue for Canada. He noted the progress made in recent months and the initiatives to be

taken in the coming year. However, he expressed some disappointment since the proposed measures have been designed to resolve problems related mostly to Ontario and Quebec. He stressed the urgent need for specific measures to be taken to improve salmon habitat on the East coast of Canada.

7.3 The U.S. representative indicated that although slow, progress was taking place. He mentioned that a representative has been appointed to lead the Canada-U.S. bilateral accord discussions. He added that we should see some real accomplishments during the present session. However, some American interests need to be reassured as to possible consequences of such an accord. This will no doubt impact on the legislation process. At the June meeting, he added that one step in the congressional process remains, namely the reconciliation of the two versions of the bill.

8. REVIEW OF THE 1989 FISHERY

8.1 At the February meeting, the Canadian representative summarized the various measures taken by the Government of Canada for the management of Atlantic salmon in recent years. He stressed the introduction of allowances for the commercial fishery in 1989 as well as the continued closure of the commercial fishery in the Maritime provinces. He stated that Canadian catches were extremely low in 1989, 1,166t i.e. 15.5% below the previous 5 year mean, 29.4% below the previous 10 year mean. A detailed report of preliminary catches was tabled, NAC (90)8, (Annex 7).

8.2 The Canadian representative also presented a review of the CAFSAC Report entitled Evaluation of the Five Year Salmon Management Plan and Status of Salmon Stocks in Atlantic Canada in 1989, NAC (90)6, (Annex 8).

8.3 The management measures applied during the five-year salmon management plan have resulted in increased egg deposition for seven of the eight river systems where such information is available. The analyses conducted to estimate the changes in interception rate indicate that commercial catches off Eastern Newfoundland have been delayed 1.5 to 2 weeks and that both the percentage of large salmon in commercial catches and the total catch of large salmon have declined.

8.4 Despite the positive results of the five-year plan, the estimated number of returns of grilse in 1989 has generally been low compared to 1988 and to the previous five or ten years. For most rivers, the observed large salmon returns were, as in 1987 and 1988, lower than the values forecast in previous years.

8.5 The above mentioned differences could be due to a number of factors, including varying marine survival from year to year, changes in sea-age maturation and drought conditions in rivers, factors which are difficult to predict.

8.6 The U.S. representative asked if Canada was considering a zonal/river system for 1990. The Canadian representative answered that no decision has been taken but that progress was being made in that direction.

8.7 At the February meeting, the U.S. representative presented a review of the status of U.S. Atlantic salmon stocks and tabled document NAC(90)19, (Annex 9), entitled A Comparison of 1989 With Previous 10-Year Period.

8.8 The U.S. representative indicated that there have been no major changes in 1989 to the salmon stocking strategies. However, the number of salmon smolts stocked in U.S. waters in 1989 declined slightly, but the numbers of fry and parr released in 1989 increased greatly over the 10-year average.

8.9 He indicated that the total adult returns for 1989 were 3,605, which is lower than the previous 10-year average of 3,609, with predominantly (70%) MSW runs in all rivers; the Penobscot river produced 86% of all 1989 MSW returns. The numbers of grilse in 1989 was the highest in 10 years at 1,099 fish (30% of the returns).

8.10 The reported 1989 sport harvest was 487 salmon while the previous 10-year average was 670. All fish were harvested in Maine, with 76% coming from the Penobscot River. There were no changes in the U.S. fishery regulations in 1989.

9. REVIEW AND DISCUSSION OF THE PROPOSED 1990 CANADIAN AND U.S. SALMON MANAGEMENT MEASURES AS THEY RELATE TO THE MANDATE OF THE COMMISSION AND TO THE FINDINGS OF THE ACFM REPORT FROM ICES

9.1 At the February meeting, the Canadian representative explained that Canada has been engaged in a series of consultation meetings regarding the development of the 1990 Atlantic Salmon Management plan. He stressed that although no decision has been taken so far, there was clear indication that additional steps would be taken in 1990. The issue of zonal/river management systems was under discussion with the various user groups.

9.2 The Canadian representative indicated that decisions regarding the management of Atlantic salmon will be made in the Department of Fisheries and Oceans at the same time as they are informed of the status of other important Canada - U.S. issues such as Yukon Salmon Negotiations. Although not directly related, the results of the latter negotiations may influence Canada's decisions regarding U.S. requests for Atlantic salmon management.

9.3 The U.S. representative indicated that while a better fishing policy coordination would be ideal, this was not always the case. He stressed the excellent work achieved within the framework of NASCO in the past and he asked that outside influences be kept to a minimum.

9.4 The U.S. representative also stressed his disappointment regarding Canada's lack of decision with respect to the U.S. 1989 proposal for river management. The fact that Canada has introduced in 1989 an allowance lower than the previous year's catches is an indication that Canada recognizes the problem. The U.S. representative also indicated that some user groups in Canada appear to be in favour of the implementation of such a system. He reiterated the U.S. desire that Canada would attach a particular importance to areas 3 and 4.

9.5 The Canadian representative indicated that the concept of allowance was viewed by Canada as a minimum step and that new steps forward will be taken for 1990. He indicated that although he could not make any commitment at this time, the U.S. concerns for areas 3 and 4 will be taken into consideration in the development of the 1990 management plan.

9.6. The U.S. representative explained that since Canadian catches have fluctuated a great deal in the past, the U.S. had serious concerns about an allowance which does not limit the interception in a specific zone.

9.7 The Canadian representative indicated that the implementation of a quota system was presently under consideration for 1990.

9.8 At the June meeting, the Canadian representative explained the guiding principles and major elements of the 1990 salmon management plan, NAC(90)16, (Annex 10), and indicated that this plan was made available to the U.S. representative, Mr Peterson, the same day it was announced in Canada. He stressed that quotas for the commercial fishery in Newfoundland have been introduced, indicating that this measure should address the problem of interception through controlled commercial catches. The total quota for areas 3 and 4 has been set at 255t.

9.9 The U.S. representative expressed his appreciation for the measures taken by Canada and for the progress made in reducing the interception of U.S. fish. He congratulated Canada on the initiation of a catch quota system. He stressed that Canada has demonstrated a willingness to respond to the challenge of conservation.

9.10 The U.S. representative asked for clarification regarding Canada's intention to implement a zonal/river management system and stricter limitations on licence transferability. He urged Canada to adopt these measures since they constitute very important devices to reduce fishing effort.

9.11 The Canadian representative explained that zonal management advisory committees had been extended to all salmon fishing areas of Newfoundland. In addition, certain areas within the Maritimes have been identified for the implementation of zonal/river management. He indicated, however, that Areas 3 and 4 were not among the target areas. He described the responsibilities of these zonal committees, i.e. closing the fishery, establishing new boundaries, depending on the status of the stocks.

9.12 With respect to the licence transferability, licences are presently transferable only to family members classed as full-time fishermen. The intent is to impose more restrictive measures in the future.

9.13 The U.S. representative congratulated the Government of Canada upon decisions taken in 1990 and for its continued efforts to conserve and rebuild Atlantic salmon stocks.

9.14 The U.S. introduced a proposal for Canada's consideration in the development of future management plans. The proposal called for

a) a 50% reduction of current interception off Labrador/Newfoundland.

b) a specific commitment to a plan for a complete in-river harvest and termination of all interception to be complete in 1990.

9.15 As the proposal introduced by the U.S. referred only to interception of Canadian salmon by Canadian fisheries, it was considered by Canada as inappropriate under Article 7(b). The proposal was modified to deal specifically with the interception

of US fish in Canadian waters and tabled NAC(90)18, (Annex 11), for later consideration by Canada.

9.16 The representative of Canada indicated astonishment at this new U.S. proposal given the U.S. recognition in its opening statement of Canada's actions and intention to rebuild salmon runs and Canada's commitment to the challenge of conservation.

9.17 The Canadian representative indicated that Canada intends to take further steps to address the conservation of salmon in its waters.

10. RECOMMENDATION TO THE COUNCIL CONCERNING REQUEST TO ICES FOR SCIENTIFIC RESEARCH AND SCIENTIFIC DATA

10.1 The Commission received and accepted the relevant section of document CNL(90)45, (Annex 12) and agreed to recommend it to the Council as part of the annual request for scientific advice to ICES.

11. REPORT ON THE NASCO TAG RETURN INCENTIVE SCHEME AND ANNOUNCEMENT OF AWARDS

11.1 The Chairman announced that the draw for the rewards in the Tag Return Incentive Scheme was made by the auditor at NASCO Headquarters, 1 June 1990. A list of all winners was presented to the Commission, NAC(90)12, (Annex 13). The winner of the first reward was P. W. Keough, Newfoundland. The Commission offered its congratulations to all winners.

12. DATE AND PLACE OF THE NEXT MEETING

12.1 The Commission agreed to hold its next meeting during the Eighth Annual Meeting of the Council, 10-14 June 1991 in Edinburgh. However, the Commission also agreed to consider the possibility of holding an executive meeting of Heads of Delegation in February 1991 should it become necessary.

13. OTHER BUSINESS

13.1 The Secretary indicated that, as requested by both the Canadian and the U.S. representatives at the February meeting in Halifax, he will pursue efforts to obtain detailed information regarding the St Pierre and Miquelon commercial salmon fishery. The information provided to the NASCO Secretary was at variance with that reported by ICES. A longer time series of catch, including distribution of catches by week along with biological characteristics, are needed.

14. CONSIDERATION OF A DRAFT REPORT

14.1 The Commission considered a draft report of the meeting.

15. ADOPTION OF A PRESS RELEASE

15.1 The Commission agreed to issue press related information in the Council press release.

JUNE 1990
HELSINKI

ANNEX 1

SEVENTH ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION 22 FEBRUARY 1990, HALIFAX, NOVA SCOTIA, CANADA AND 12-15 JUNE 1990, HELSINKI, FINLAND

NAC(90)5

LIST OF PARTICIPANTS

* Denotes Head of Delegation

MEMBERS OF THE COMMISSION:

CANADA

*MR WAYNE SHINNERS	Representative Department of Fisheries and Oceans, Ottawa, Ontario
DR GABY WARD	Representative Champlain College, Quebec
DR WILFRED CARTER	Representative Atlantic Salmon Federation, St Andrews, New Brunswick
MR DAVID MEERBURG	Department of Fisheries and Oceans, Ottawa, Ontario
MS LOUISE COTE	Department of Fisheries and Oceans, Ottawa, Ontario
MR REX PORTER	Department of Fisheries and Oceans, Ottawa, Ontario
MS EDITH DUSSAULT	Department of Fisheries and Oceans, Ottawa, Ontario
MR MALCOLM REDMOND	Department of Natural Resources and Energy, Fredericton, New Brunswick
MR MURRAY HILL	Department of Fisheries, Pictou, Nova Scotia
MR MICHEL BROUILLARD	Department of Recreation, Fish and Game, Quebec
MR DAVID VARDY	Newfoundland Department of Fisheries
MR GLENN BLACKWOOD	Newfoundland and Labrador Department of Fisheries

MR MAX SHORT	Fishermen Food and Allied Workers Union, St John's, Newfoundland
USA	
*MR ALLEN PETERSON	Representative National Marine Fisheries Service, Woods Hole, Mass.
DR FRANK CARLTON	Representative National Coalition for Marine Conservation, Savannah, Georgia
MR RICHARD BUCK	Representative Restoration of Atlantic Salmon in America Inc, Dublin, New Hampshire
MR ARTHUR NEILL	National Marine Fisheries Service, Woods Hole, Mass
MR STETSON TINKHAM	US Department of State, Washington DC
DR VAUGHN ANTHONY	National Marine Fisheries Service, Woods Hole, Mass
MR ALAN ERDOSSY	Atlantic Salmon Task Force Trout Unlimited, Worcester, USA
MR HOWARD LARSEN	US Fish and Wildlife Service, Gainesville, Florida
MR DAVID GOLDTHWAITE	US Fish and Wildlife Service, Newton Corner, Mass
MR BILL GIBBONS-FLY	National Marine Fisheries Service, Silver Spring, Maryland
MR CLINTON B TOWNSEND	Atlantic Salmon Federation, Boston, Mass
MR JOHN PHILLIPS	Atlantic Salmon Federation, Ipswich, Mass
MR ROBERT JONES	Connecticut Bureau of Fisheries and Wildlife, Hartford, Connecticut
MR RICHARD SEAMANS	National Marine Fisheries Service, Gloucester, Mass
OBSERVERS - PARTIES	
EEC(+)	
*MR JOHN SPENCER	Representative Directorate-General of Fisheries, EEC Commission, Brussels

MR PIETER BANGMA	Representative Directorate-General of Fisheries, EEC Commission, Brussels
MR EUGENE HUTCHINSON	Presidency, Irish Permanent Representation, Brussels
MR AUGUSTO BETTE	Secretariat of the Council of the European Communities, Brussels
MR JOHN CARBERY	Secretariat of the Council of the European Communities, Brussels
MR JOHN KEOHANE	Department of the Marine, Dublin
MR DOMINIQUE PINEY	Ministère de la Mer, Direction des Pêches Maritimes, Paris
MR CHARLES MCCALL	Ministry of Agriculture, Fisheries and Food, London
MR TED POTTER	Ministry of Agriculture, Fisheries and Food, Lowestoft
DR TONY BURNE	Ministry of Agriculture, Fisheries and Food, London
MR BOB WILLIAMSON	Department of Agriculture and Fisheries for Scotland, Edinburgh
MR DAVID DUNKLEY	Department of Agriculture and Fisheries for Scotland, Montrose
MRS HANNE LAUGER	Ministry of Fisheries, Copenhagen
DR KEVIN O'GRADY	National Rivers Authority, London

DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)

*MR EINAR LEMCHE	Representative Greenland Home Rule, Copenhagen Office
MR SOFUS POULSEN	Faroese Commercial Attache, Aberdeen
MR HJALTI I JAKUPSSTOVU	Fisheries Research Institute, Torshavn, Faroe Islands
MRS AMALIE JESSEN	Directorate of Fisheries, Greenland
MR JENS MOELLER JENSEN	Greenland Fisheries Research Institute, Copenhagen
MR HERGEIR NIELSEN	Member of Home Rule Parliament, Torshavn, Faroe Islands
MR MANNE NAES	Chairman of Faroese Salmon Fishermen's Association, Torshavn, Faroe Islands

MR PAVIA NIELSEN	Fishermen's and Hunters' Organization, Greenland
MR PAVIARAQ HEILMANN	Fishermen's and Hunters' Organization, Greenland

NORWAY

*MR SVEIN MEHLI	Representative Directorate for Nature Management, Trondheim
MR TORMOD KARLSTROEM	Representative Ministry of the Environment, Oslo
MR TROND HAUKEBOE	Representative Fylkesmannen i More og Romsdal, Molde
MR STEINAR HERMANSEN	Ministry of the Environment, Oslo
MR TROND WOLD	Norske fiskeoppdretteres forening, Trondheim
MR PER IVAR BERGAN	Directorate for Nature Management, Trondheim
DR LARS PETTER HANSEN	Norwegian Institute for Nature Research, Trondheim
MR GEORG RIEBER MOHN	Regional Board of Salmon Fishery, Oslo
MS ASTRID LANGVATN	Directorate for Nature Management, Trondheim
MR BORRE PETTERSEN	Norwegian Hunters and Anglers Organization
MS MAY BRITT BROFOSS	Royal Norwegian Embassy, Helsinki

OBSERVERS - NON PARTIES

ICES

DR EMORY ANDERSON	International Council for the Exploration of the Sea, Copenhagen
DR RICHARD GRAINGER	International Council for the Exploration of the Sea, Copenhagen
MR BERNARD VASKE	Institut fur Hochseefisherei und Fischverarbeitung, German Democratic Republic
MR JOHN BROWNE	Dept of the Marine, Dublin

SECRETARIAT

DR MALCOLM WINDSOR	Secretary
DR PETER HUTCHINSON	Assistant Secretary

(+) NOTE 1: 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 2: Not all participants were present at both the Halifax and Helsinki meetings.

JUNE 1990
HELSINKI

ANNEX 2

NAC(90)7
SEVENTH ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION 22 FEBRUARY 1990, DELTA BARRINGTON HOTEL, HALIFAX, N.S., CANADA AND 12-15 JUNE 1990, HELSINKI, FINLAND

AGENDA

1. Opening of the meeting
2. Adoption of the agenda
3. Election of Officers
4. Nomination of a rapporteur
5. ACFM report from ICES on salmon stocks "Salmon in the North American Commission area"
6. Report of the NAC Scientific Working Group on salmonid introductions and transfers
7. Impact of acid rain on Atlantic salmon
   (a) ACFM report from ICES
   (b) Review of mitigative measures
8. Review of the 1989 fishery
9. Review and discussion of the proposed 1990 Canadian and US salmon management measures as they relate to the mandate of the Commission and to the findings of the ACFM report from ICES.
10. Recommendations to the Council concerning request to ICES for scientific research and scientific advice
11. Report on the NASCO Tag Return Incentive Scheme and announcement of awards.
12. Date and place of the next meeting
13. Other business
14. Consideration of the draft report of the meeting
15. Adoption of a press release

JUNE 1990
HELSINKI

ANNEX 3

COUNCIL

PAPER CNL(90)12

REPORT OF THE ICES ADVISORY COMMITTEE ON FISHERIES MANAGEMENT (SECTION 4)

4. SALMON IN THE NORTH AMERICAN COMMISSION AREA

Source of Information: Report of the North Atlantic Salmon Working Group 1990 (ICES, C.M. 1990/Assess:11).

4.1 Canada

4.1.1 The fisheries in 1989

Total landings (tonnes)

Landings	1984	1985	1986	1987	1988	Mean 1984-1988	Mean 1979-1983	1989[1]
1SW	467	593	780	833	677	670	709	550
MSW	645	540	779	951	633	710	1,216	616
Total	1,112	1,133	1,559	1,784	1,311	1,380	1,925	1,166

[1] Preliminary

The total landings in 1989 were harvested by the following fisheries: commercial (84%), recreational (14%), and native (2%).

The landings of 1SW and MSW salmon in 1989 were 18% and 13%, respectively, below the mean landings for the period 1984-1988. The mean landings for 1979-83 are shown in the table for comparison because management measures were introduced in 1984, which significantly restricted the fisheries.

Landings in the Newfoundland-Labrador commercial fisheries (tonnes)

Landings	1984	1985	1986	1987	1988	Mean 1984-1988	Mean 1979-1983	1989
1SW	332	470	608	705	511	525	595	417
MSW	465	411	622	780	461	548	875	416
Total	797	881	1,230	1,485	972	1,073	1,470	823

The landings of 1SW and MSW salmon in 1989 were 21% and 24% below the mean landings for the period 1984-88.

4.1.2 Composition of the catch

The Canadian commercial fisheries harvest salmon of Canadian and USA origin. The estimate of 1SW Maine-origin fish in the Newfoundland/Labrador fishery in 1988 was 393 fish. Estimates of harvest of USA-origin salmon in 1989 cannot be made until adult salmon returns to homewaters

in 1990 have been enumerated.

4.1.3 Status of stock

In 1989, the target spawning biomass was achieved or exceeded in 6 of 11 river stocks assessed. The target spawning biomass was achieved on the Miramichi river, but on the Saint John and Restigouche rivers only 70% and 55%, respectively, of the target was achieved. On these rivers, 1SW target spawning numbers were achieved or exceeded but MSW numbers were not.

River	Target values			1989 spawning escapement		
	Eggs(10^6)	Fish		Eggs (10^6)	Fish	
		MSW	1SW		MSW	1SW
Restigouche	71.4	12,200	2,600	39.2	6,569	2,559
Miramichi	132.0	23,600	22,600	124.1	14,636	50,641
St John[1]	29.5	4,400	3,200	21.1	3,130	7,356
Margaree	6.7	1,036	579	7.8	1,219	606
LaHave[2]	1.7	94	575	4.3	450	2,466
Conne	7.8	-	4,000	7.6	303	3,386

[1] Above Mactaquac; wild and hatchery fish
[2] Above Morgan Falls; wild fish only

In many rivers in New Brunswick and Nova Scotia the percentage of MSW salmon has been lower during 1987-1989 than in previous years. No immediate explanation is available. The returns of grilse to rivers in Newfoundland, Nova Scotia and New Brunswick were generally below previous years. The 1SW returns to many Newfoundland rivers were 50% below the previous 5-year mean. The MSW salmon returns were below the previous 5-year mean at 6 out of 10 monitoring sites in Nova Scotia and New Brunswick and at 2 out of 4 sites in Quebec.

4.1.4 Exploitation rates

Exploitation rates on the 1SW component of 9 stocks in the recreational fishery in Newfoundland ranged from 0.08 to 0.53 during 1983-1989. The overall mean exploitation rate across rivers and years was 0.23. Mean rates were significantly different among river systems and years. Modelling of the exploitation patterns in the recreation fisheries in Newfoundland rivers may require annual estimates of exploitation rates.

The estimates of commercial exploitation on two 1SW stocks in Newfoundland are:

	1988	1989
Conne River		0.03
Exploits River	0.61	0.57

The low commercial exploitation rate on the Conne river stock is related to the early run timing of this stock. The mean exploitation rates during 1974-1988 for the Saint John river stock under the assumptions that 0.3, 0.5, and 0.7 of the total population is available to the fisheries are as follows:

	Nfld Lab (yr i)			Greenland (yr i)			Homewaters (yr i+1)
	0.3	0.5	0.7	0.7	0.5	0.3	
Mean 1974-1988	0.44	0.33	0.27	0.34	0.41	0.52	0.41

4.1.5 Harvest of USA (Maine origin) salmon in Canada

Harvest estimates in numbers

	1SW Mean		2SW Mean	
	1988	1983-1987	1989	1984-1988
Newfoundland/ Labrador	393	1,280	61	42
Other	0	27	0	0

The estimate of harvest of USA-origin 1SW salmon in the Newfoundland-Labrador commercial fishery in 1988 was 69% less than the mean harvest estimates for 1984-88. The above estimates are based on 85% efficiency of fish passages in Maine and are 5% lower than estimates based on 100% efficiency.

4.1.6 Effectiveness of management measures

No new management measures were introduced in 1989. The combined effects of all measures taken by Canada to reduce the harvest of USA-origin salmon was assessed by comparing the harvest of 1SW salmon of Maine origin in the Newfoundland and Labrador fishery with the run size of 2SW fish the following year in Maine. The harvest to run ratio of 0.13 for the year 1988 was the second lowest of the period 1967-1988.

4.2 USA

4.2.1 The fisheries in 1989

The recreational fishery in Maine is the only fishery on Atlantic salmon.

Nominal landings in numbers

Landings	1984	1985	1986	1987	1988	Mean 1984-1988	1989
1SW	50	23	76	33	49	46	157
MSW	559	534	465	249	210	403	330
Total	609	557	541	282	259	450	487

The recreational catch in Maine was 89% higher than in 1988, and 8% higher than the mean catch during 1984-1988. The catch of 1SW salmon is 331% higher than the 1984-1988 mean catch.

4.2.2 Composition of the catch

The catches in the USA rivers are believed to be only of USA-origin salmon.

4.2.3 Status of stocks

The estimated total run of 2SW salmon to Maine rivers in 1989 was 2,941 salmon. It is similar to the run size in 1988 (2,870 2SW salmon) and 25% below the mean run size (3,917) for the period 1979-1988. The spawning escapement to the Penobscot river in 1989 was 31% of its target spawning requirement. There has been a decline in the numbers of 3SW and PS salmon in the recreational fisheries since 1962.

The 1SW:MSW ratios of salmon of the 1985-1987 smolt classes for the Penobscot river were about 0.36 and are the highest recorded.

4.2.4 Exploitation rates

The exploitation rate in the Penobscot river in 1989 was 12.6%.

4.2.5 Effectiveness of management measures

No new management measures were introduced in 1989.

JUNE 1990
HELSINKI

ANNEX 4

NORTH AMERICAN COMMISSION

PAPER NAC(90)13

REGULATIONS IN EFFECT AS OF APRIL 1, 1989 PERTAINING TO INTRODUCTIONS AND TRANSFERS OF SALMONID/SALMONID EGGS WITHIN THE COMMISSION AREA

NORTH AMERICAN COMMISSION
NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

Regulations in Effect as of April 1, 1989
Pertaining to Introductions and Transfers of
Salmonid/Salmonid Eggs Within the Commission Area

by

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This document was prepared in response to a request by the Bilateral Scientific Working Group.

INTRODUCTION

Information on regulations pertaining to introductions and transfers of salmonid/salmonid eggs between states and provinces within the Commission area was compiled during the past year in response to a request by NAC/NASCO through the Bilateral Scientific Working Group. Information was provided as in effect April 1, 1989 by the following states and provinces: United States (federal regulations), Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, Canada (DFO regulations), New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island and Quebec.

Material is presented by regulatory agency and is summarized in Appendix 1. I would suggest that regulations be reviewed and updated in five years.

I would like to thank all state and provincial people who contributed information and Denise LaBarre, Diane Soucy, and Diana Osborne for their assistance in preparing the document.

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I UNITED STATES

Department of Interior
Fish and Wildlife Service

Extracted from Code of Federal Regulations, Title 50-Wildlife and Fisheries

Part 13 - General Permit Procedures

Subpart A - Introduction

13.1 General

Each person intending to engage in an activity for which a permit is required by this Subchapter B shall, before commencing such activity, obtain a valid permit authorizing such activity. Each person who desires to obtain the permit privileges authorized by this subchapter must make application for such permit in accordance with the requirements of this Part 13 and the other regulations in this subchapter which set forth the additional requirements for the specific permits desired. If the activity for which permission is sought is covered by the requirements of more than one part of this subchapter, the requirements of each part must be met. If the information required for each specific permitted activity is included, one application will be accepted for all permits required, and a single permit will be issued.

13.2 Purpose of regulations

The regulations contained in this part will provide uniform rules and procedures for application, issuance, renewal, conditions, revocation, and general administration of permits issuable pursuant to this Subchapter B.

13.3 Scope of regulations

The provisions in this part are in addition to, and are not in lieu of, other permit applications of this subchapter and apply to all permits issued thereunder, including "Import and Marking" (Part 14), "Feather Imports" (Part 15), "Injurious Wildlife" (Part 16), "Endangered Wildlife and Plants" (Part 17), "Marine Mammals" (Part 18), "Migratory Birds" (Part 21), "Eagles" (Part 22) and "Endangered Species Convention" (Part 23). As used in this Part 13, the term "permit" shall refer to either a license, permit, or certificate as the context may require.

13.4 Emergency variation from requirements

The Director may approve variations from the requirements of this part when he finds that an emergency exists and that the proposed variations will not hinder effective administration of this Subchapter B, and will not be lawful.

13.5 Information collection requirements

The information collection requirements contained within this Part 13 have been approved by the Office of Management and Budget under 44 USC 3507 and assigned Clearance Number 1018-0022. This information is being collected to provide information necessary to evaluate permit applications. This information will be used to review permit applications and make decisions, according to criteria established in various Federal wildlife conservation statutes and regulations,

on the issuance suspension, revocation or denial of permits. The obligation to respond is required to obtain or retain a permit.

Subpart B - Application for Permits

13.11 Procedure for obtaining a permit

(a) Forms. Applications must be submitted in writing on a Federal Fish and Wildlife License/Permit Application (Form 3-200) or as otherwise specifically directed by the Service.
(c) Time Notice. Applications for endangered species permits and marine mammal permits should be received by the Federal Wildlife Permit Office at least 75 calendar days prior to the desired effective date of the permit. Applications for other permits should be received by the issuing office at least 30 calendar days prior to the desired effective date. Although the Service will process all applications as quickly as possible, it cannot guarantee final action within such time frames.
(d) Permit fees.
(1) Applications for permits, certificates, licenses and registrations, and for their renewal and amendment, must be accompanied by an application fee in the form of a check or money order made payable to "US Fish and Wildlife Service". Application fees shall not be refunded if the permit is issued or if the application is denied or abandoned. The fee may be returned if an application is withdrawn prior to significant processing by the issuing office.
(2) Application fees shall be $25 unless specified in paragraph (d)(4) of this section as "Nonstandard". Where the regulations in this subchapter require more than one type of permit for a give transaction or series of transactions, the issuing office shall, wherever feasible, issue a single permit containing all the necessary authorizations, and charge a single application fee. In such a case the fee is the highest single permit fee applicable for the transaction.
(3) A fee shall not be charged to any Federal, State or local government agency, nor to any individual or institution under contract to such agency for the proposed activities. The fee may be waived or reduced for public institutions (see CFR 10.12). Proof of such status must accompany the application.
(4) Nonstandard fees.

Type of Permit	Fee
Import/Export License (Section 14.93)	$50
Marine Mammal (Section 18.31)	100
Migratory Bird (Part 21)	None
Bald or Golden Eagle (Part 22)	None

Part 13.12 Information requirements on permit applications

(a) General information required for all permit applications. All applications for permits must contain the following information:

(1) Applicant's name, mailing address, and phone number;
(2) Where the applicant is an individual, his date of birth, height, weight, colour of hair, colour of eyes, and sex; and business or institutional affiliation, if any, having to do with the wildlife or plants to be covered by the permit;
(3) Where the applicant is a corporation, firm, partnership, institution, or agency, either private or public, the name and address of the president or principal officer;
(4) Location where the permitted activity is to be conducted;

(5) Part and section of this Subchapter B under which the permit is requested and such additional information and justification, including supporting documents from appropriate authorities, as required by that section Paragraph (b) of this section contains a list of sections of this Subchapter B where the additional information needed on applications for various permits may be found.);
(6) Where the permitted activity involves an importation from any foreign country which restricts the taking, possession, transportation, exportation or sale of wildlife or plants, the appropriate documentation, as indicated in Part 14.52(c) of this subchapter;
(7) Certification in the following language:
I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13, of the Code of Federal Regulations and the other applicable parts in Subchapter B of Chapter 1 of Title 50, and I further certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement hereon may subject me to the criminal penalties of 18 USC 1001.
(8) Desired effective date of permit except where issuance date is fixed by the part under which the permit is issued;
(9) Date;
(10) Signature of the applicant; and
(11) Such other information as the Director determines relevant to the processing of the application.

Subpart C - Permit Administration

13.21 Issuance of permits

(a) No permit may be issued prior to the receipt of a written application therefor, unless a written variation from the requirements, as authorized by 13.4 is inserted into the official file of the Bureau. An oral or written representation of an employee or agent of the United States Government, or an action of such employee or agent, shall not be construed as a permit unless it meets the requirement of a permit as defined in 50 CFR 10.12.
(b) Upon receipt of a properly executed application for a permit, the Director shall issue the appropriate permit unless:
(1) The applicant has been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed, if such assessment or conviction evidences a lack of responsibility.
(2) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his application;
(3) The applicant has failed to demonstrate a valid justification for the permit and a showing of responsibility;
(4) The authorization requested potentially threatens a wildlife or plant population, or
(5) The Director finds through further inquiry or investigation, or otherwise, that the applicant is not qualified.
(c) Each permit shall bear a serial number. Such number may be reassigned to the permittee to whom issued so long as he maintains continuity of renewal.
(d) The applicant shall be notified in writing of the denial of any application for a permit and the reasons therefor.

13.22 Duration of permit

Permits shall entitle the person to whom issued to engage in the activity specified in the permit, within the limitations of the applicable statute and regulations contained in this Subchapter B, for the period stated on the permit, unless sooner terminated.

13.23 Amendment of applications or permits

Where circumstances have changed so that an applicant or permittee desires to have any term or condition of his application or permit modified, he must submit in writing full justification and supporting information in conformance with the provisions of this part and the part under which the permit has been issued or requested. Such applications for modification are subject to the same issuance criteria as are original applications, as provided in 13.21.

13.24 Renewal of permit

Where the permit is renewable and a permittee intends to continue the activity described in the permit during any portion of the year ensuing its expiration, he shall, unless otherwise notified in writing by the Director, file a request for permit renewal, together with a certified statement that the information in his original application, accompanied by any required fee at least 30 days prior to the expiration of his permit, who has compiled with the foregoing provision of this section, may continue such activities as were authorized by his expired permit until his renewal application is acted upon. The Director's intent to not to renew a permit or to renew it in substantially amended form shall be made known in writing to the permittee. The written notice shall contain the reasons for the Director's action and shall allow the permittee an opportunity, in writing or in person, to present reasons why the permit should be renewed or should not be substantially amended.

13.25 Permits not transferable; agents

(a) Permits issued under this part are not transferable or assignable. Some permits authorize certain activities in connection with a business or commercial enterprise and in the event of any lease, sale or transfer of such business entity, the successor must obtain a permit prior to continuing the permitted activity. However, certain limited rights of succession are provided in 13.26.
(b) Except as otherwise stated on the face of a permit, any person who is under the direct control of the permittee, or who is employed by or under contract to the permittee for the purposes authorized by the permit, may carry out the activity authorized by the permit.

13.26 Right of succession by certain persons

(a) Certain persons, other than the permittee are granted the right to carry on a permitted activity for the remainder of the term of a current permit provided they comply with the provisions of paragraph (b) of this section. Such persons are the following:
(1) The surviving spouse, child, executor, administrator, or other legal representative of a deceased permittee; and
(2) A receiver or trustee in bankruptcy or a court designated assignee for the benefit of creditors.
(b) In order to secure the right provided in this section, the person or persons desiring to continue the activity shall furnish the permit to the issuing officer for endorsement within 90 days from the date the successor begins to carry on the activity.

13.27 Change of mailing address

During the term of his permit, a permittee may change his mailing address without procuring a new permit. However, in every case notification of the new mailing address must be forwarded to the issuing official within 30 days after such change. This section does not authorize the change of location of the permitted activity for which an amendment must be obtained in

accordance with 13.23.

13.28 Change in name

A permittee continuing to conduct a permitted activity is not required to obtain a new permit by reason of a mere change in trade name under which a business is conducted or a change of name by reason of marriage or legal decree: Provided, that such permittee must furnish his permit to the issuing official for endorsement within the 30 days from the date the permittee begins conducting the permitted activity under the new name.

13.29 Official endorsement of changes required

Any change in a permit must be made by endorsement of the Director or issuing officer. Any modification or change in an issued permit, other than those specifically provided for in this subpart, may be granted or denied in the discretion of the Director.

13.30 Certain continuance of activity

A permittee who furnishes his permit to the issuing official for endorsement or correction in compliance with the provisions of this subpart may continue his operations pending its return.

13.31 Discontinuance of activity

When any permittee discontinues his activity, he shall, within 30 days thereof, mail his permit and request for cancellation to the issuing officer, and said permit shall be deemed void upon receipt. No refund of any part of an amount paid as a permit fee shall be made where the operations of the permittee are, for any reason, discontinued during the tenure of an issued permit.

13.32 Appeal procedure

(a) Any person in the following categories may appeal the Service's action:
(1) An applicant who has received written notice that his application has been denied;
(2) A permittee or applicant who has received written notice that a requested amendment of a term or condition of his permit has been denied;
(3) A permittee who has been notified that his permit has been recalled, amended on the Service's motion, revoked or suspended during its term;
(4) A permittee whose permit or amendment has been issued, but who has not been authorized to conduct part of the requested activity, or believes that modifications made to the requested activity are unacceptable.
(b) The appeal shall be submitted in writing to the office which took the action being appealed within 60 days of the date of notification of the action taken. It must address the reasons given for such action but may also contain new information or justification why the action in question should not be taken. Such further submissions shall not be considered a new application.
(c) A decision on the appeal shall be made within 30 days of receipt of the appeal and the issuing office shall notify the appellant in writing of its decision, and the reasons therefor.
(d) If the decision is not in favour of the appellant, the appeal file shall be forwarded by the issuing office to the Regional Director or Director as appropriate.
(e) The Regional Director or the Director may utilize such staff as necessary in assisting him to decide on the appeal. He may delegate this decision as authorized by Service procedure, provided that it may not be delegated to the issuing office. The appellant may offer arguments or additional evidence to the Regional Director or the Director, in writing or in person.

(f) The decision of the Regional Director or the Director shall be made within 60 days of receipt of appeals pursuant to paragraph (d) of this section and promptly communicated in writing to the appellant, along with the reasons therefor, except that the Regional Director or Director may extend the 60-day period for good cause notified in writing to the appellant.
(g) The decision of the Regional Director or the Director shall constitute the final administrative decision of the department.

Subpart D - Conditions

13.41 Recall and amendment of permit during its term

Except for marine mammal permits (See Part 18), all permits are issued subject to the condition that the Service reserves the right to recall and amend the provisions of a permit for just cause at any time during its term. Such amendments take effect on the date of notification, unless otherwise specified. Permittees shall be notified in writing of such intent and the reasons therefor not less than 30 days prior to the proposed date of such action and shall be allowed an opportunity, in writing or in person, to present reasons why the permit should not be recalled or amended.

13.42 Permits are specific

The authorizations on the face of a permit which set forth specific times, dates, places, methods of taking, numbers and kinds of wildlife or plants, location of activity, authorise certain circumscribed transactions, or otherwise permit a specifically limited matter, are to be strictly construed and shall not be interpreted to permit similar or related matters outside the scope of strict construction.

13.43 Alteration of permits

Permits shall not be altered, erased, or mutilated, and any permit which has been altered, erased, or mutilated shall immediately become invalid. Unless specifically permitted on the face thereof, no permit shall be copied, nor shall any copy of a permit issued pursuant to this Subchapter B be displayed, offered for inspection, or otherwise used for any official purpose for which the permit was issued.

13.44 Display of permit

Any permit issued under this part shall be displayed for inspection upon request to the Director or his agent, or to any other person relying upon its existence.

13.45 Filing of reports

Permittees may be required to file reports of the activities conducted under the permit. Any such reports shall be filed not later than March 31 for the preceding calendar year ending December 31, or any portion thereof, during which a permit was in force, unless the regulations of this Subchapter B or the provisions of the permit set forth other reporting requirements.

13.46 Maintenance of records

From the date of issuance of the permit, the permittee shall maintain complete and accurate records of any taking, possession, transportation, sales, purchase, barter, exportation, or importation

of plants obtained from the wild (excluding seeds) or wildlife pursuant to such permit. Such records shall be kept current and shall include names and addresses of persons with whom any plant obtained from the wild (excluding seeds) or wildlife has been purchased, sold, bartered, or otherwise transferred, and the date of such transaction, and such other information as may be required or appropriate. Such records, unless otherwise specified, shall be entered in books, legibly written in the English language. Such records shall be retained for 5 years from the date of issuance of the permit.

13.47 Inspection requirement

Any person holding a permit under this Subchapter B shall allow the Director's agent to enter his premises at any reasonable hour to inspect any wildlife or plant held or to inspect, audit, or copy any permits, books, or records required to be kept by regulations of this Subchapter B.

Subpart E - Violations of the Permit

Part 13.51 Penalties for violation of a permit, notice; demonstration of compliance

(a) Any violation of the applicable provisions of this subchapter, or of the statute under which the permit was issued, or a condition of the permit, may subject the permittee to the following penalties:
(1) The penalty provided in the statute under which the permit was issued;
(2) Temporary suspension of the permit for a specified period; and
(3) Revocation of the permit. When revoked, permits must be surrendered to the Director on demand.

(b) Except in cases of wilfulness or those in which the public health safety or interest requires, and prior to any suspension or revocation of a permit, the permittee shall be given:
(1) Notice by the Service in writing of the facts or conduct which may warrant the suspension or revocation; and
(2) Opportunity to demonstrate or achieve compliance with all permit requirements.

Part 14 - Importation, Exportation and Transportation of Wildlife

Subpart A - Introduction

14.1 Purpose of regulations

The regulations contained in this part provide uniform rules and procedures for the importation, exportation, and transportation of wildlife.

14.2 Scope of regulations

The provisions in this part are in addition to, and do not supersede other regulations of this Subchapter B which may require a permit or prescribe additional restrictions or conditions for the importation, exportation, and transportation of wildlife.

14.12 Designated ports

The following Customs ports of entry are designated for the importation or exportation of wildlife

and are referred to hereafter as "designated ports."

(a) Los Angeles, California;
(b) San Francisco, California;
(c) Miami, Florida;
(d) Honolulu, Hawaii;
(e) Chicago, Illinois;
(f) New Orleans, Louisiana;
(g) New York, New York;
(h) Seattle, Washington; and
(i) Dallas/Fort Worth, Texas.

14.16 Border ports

(a) Except for wildlife requiring a permit pursuant to Part 16, 17, 18, 21, or 23 of this Subchapter B, wildlife whose country of origin is Canada or the United States may be imported or exported at any of the following Customs ports of entry:
(1) Alaska - Alcan;
(2) Idaho - Eastport;
(3) Maine - Calais, Houlton, Jackman;
(4) Massachusetts - Boston;
(5) Michigan - Detroit, Port Huron, Sault Sainte Marie;
(6) Minnesota _ Grand Portage, International Falls, Minneapolis - St Paul;
(7) Montana - Raymond, Sweetgrass;
(8) New York - Buffalo - Niagara Falls, Champlain;
(9) North Dakota - Dunseith, Pembina, Portal;
(10) Ohio - Cleveland;
(11) Vermont - Derby Line, Highgate Springs; and
(12) Washington - Blaine, Sumas

(b) Except for wildlife requiring a permit pursuant to Part 16, 17, 18, 21 or 23 of this Subchapter B, wildlife whose country of origin is Mexico or the United States may be imported or exported at any of the following Customs ports of entry:
(1) Arizona - Lukeville, Nogales;
(2) California - Calexico, San Diego-San Ysidro; and
(3) Texas - Brownsville, El Paso, Laredo.

(c) Except for wildlife requiring a permit pursuant to Part 16, 17, 18, or 21 of this Subchapter B, wildlife lawfully taken by US residents in the United States, Canada, or Mexico and imported or exported for non-commercial purposes, may be imported or exported at any Customs port of entry.

14.19 Special ports

(a) Except for wildlife requiring a permit pursuant to Part 16, 17, 18, 21 or 23 of this Subchapter B, wildlife which is imported for final destination in Alaska, Puerto Rico, or the Virgin Islands, may be imported through those Customs ports of entry named hereafter for the respective State or Territory of final destination:
(1) Alaska - Alcan, Anchorage, Fairbanks, Juneau;
(2) Puerto Rico - San Juan; and
(3) Virgin Islands - San Juan, Puerto Rico.

(b) Except for wildlife requiring a permit pursuant to Part 16, 17, 18, 21 or 23 of this Subchapter B, wildlife which originates in Alaska, Puerto Rico, or the Virgin Islands, may be exported through the following Customs ports for the respective State or Territory:
(1) Alaska - Alcan, Anchorage, Fairbanks, Juneau;
(2) Puerto Rico - San Juan; and
(3) Virgin Islands - San Juan, Puerto Rico.

(c) Except for wildlife requiring a permit pursuant to Part 16, 17, 18, 21 or 23 of this Subchapter B, wildlife which has a final destination of Guam, or which originates in Guam may be imported or exported, as appropriate, through the port of Agana, Guam.

14.20 Exceptions by permit

Wildlife may be imported into or exported from the United States at any Customs port of entry designated in the terms of a valid permit issued pursuant to Subpart C of this part.

Subpart C - Designated Port Exception Permits

14.31 Permits to import or export wildlife at non-designated port for scientific purposes

(a) General. The Director may, upon receipt of an application submitted in accordance with the provisions of this section and 13.11 and 13.12 of this subchapter, and in accordance with the issuance criteria of this section, issue a permit authorizing importation or exportation of wildlife for scientific purposes at one or more named Customs port(s) of entry not otherwise authorized by Subpart B. Such permits may authorize a single importation or exportation, a series of importations or exportation, or importation or exportation during a specified period of time.
(b) Application procedure. Applications for permits to import or export wildlife at a non-designated port for scientific purposes must be submitted to the Director. Each application must contain the general information required by 13.12(a) of this subchapter, plus the following additional information:
(1) The scientific purpose or uses of the wildlife to be imported or exported;
(2) The number and kinds of wildlife described by scientific and common names to be imported or exported where such number and kinds can be determined;
(3) The country or place in which the wildlife was removed from the wild (if known), or where born in captivity;
(4) The port(s) of entry where importation or exportation is requested, and the reasons why importation or exportation should be allowed at the requested port(s) of entry rather than at a designated port; and
(5) A statement as to whether the exception is being requested for a single shipment, a series of shipments, or shipments over a specified period of time and the date(s) involved.
(c) Additional permit conditions. In addition to the general conditions set forth in Part 13 of this Subchapter B, permits to import or export wildlife at a non-designated port issued under this section are subject to the following condition: Permittee shall file such reports as specified on the permit, if any.
(d) Issuance criteria. The Director shall consider the following in determining whether to issue a permit under this section:
(1) Benefit to a bona fide scientific research project, other scientific purpose, or facilitation of the exchange of preserved museum specimens;
(2) The kind of wildlife involved and its place of origin;
(3) The reasons why the exception is requested; and
(4) Availability of a Service officer.

(e) Duration of permits. Any permit issued under this section expires on the date designated on the face of the permit. In no case will the permit be valid for more than 2 years from the date of issuance.

14.32 Permits to import or export wildlife at non-designated port to minimize deterioration or loss

(a) General. The Director may, upon receipt of an application submitted in accordance with the provisions of this section and 13.11 and 13.12 of this subchapter, and in accordance with the issuance criteria of this section, issue a permit authorizing importation or exportation of wildlife, in order to minimize deterioration or loss, at one or more named customs port(s) of entry not otherwise authorized by Subpart B. Such permits may authorize a single importation or exportation, a series of importations or exportations, or importation or exportation during a specified period of time.

(b) Application procedure. Applications for permits to import or export wildlife at a non-designated port to minimize deterioration or loss must be submitted to the Director. Each application must contain the general information and certification required in 13.12(a) of this subchapter, plus the following additional information:

(1) The number and kinds of wildlife described by scientific and common names to be imported or exported where such number and kinds can be determined;

(2) The country or place in which the wildlife was removed from the wild (if known), or where born in captivity;

(3) The port(s) of entry where importation or exportation is requested, and the reasons why importation or exportation should be allowed at the requested port(s) of entry rather than at a designated port (information must be included to show that an importation or exportation at a designated port would result in a substantial deterioration or loss of the wildlife); and

(4) A statement as to whether the exception is being requested for a single shipment, a series of shipments, or shipments over a specified period of time and the date(s) involved.

(c) Additional permit conditions. In addition to the general conditions set forth in Part 13 of this Subchapter B, permits to import or export wildlife at a non-designated port issued under this section are to be subject to the following conditions:

(1) Permittee shall file such reports as may be specified on the permit, if any; and

(2) Permittee shall pay costs incurred by the Director in inspecting permittee's importations or exportations at non-designated ports, including salary, overtime, transportation and per diem of Service officers.

(d) Issuance criteria. The Director shall consider the following in determining whether to issue a permit under this section:

(1) Likelihood of a substantial deterioration or loss of the wildlife involved;

(2) The kind of wildlife involved and its place of origin; and

(3) Availability of a Service officer.

(e) Duration of permits. Any permit issued under this section expires on the date designated on the face of the permit.

In no case will the permit be valid more than 2 years from the date of issuance.

14.33 Permits to import or export wildlife at non-designated port to alleviate undue economic hardship

(a) General. The Director may, upon receipt of an application submitted in accordance with the provisions of this section and 13.11 and 13.12 of this subchapter, and in accordance with the issuance criteria of this section, issue a permit authorizing importation or exportation of wildlife in order to alleviate undue economic hardship at one or more names Customs port(s) of entry not

otherwise authorized by Subpart B. Such permits may authorize a single importation or exportation, a series of importations or exportations, or importation or exportation during a specified period of time.
(b) Application procedure. Applications for permits to import or export wildlife at a non-designated port to alleviate undue economic hardship must be submitted to the Director. Each application must contain the general information and certification required in 13.12 (a) of this subchapter, plus the following additional information:
(1) The number and kinds of wildlife described by scientific and common names to be imported or exported, where such number and kinds can be determined, and a description of the form in which it is to be imported, such as "live", "frozen", "raw hides", or a full description of any manufactured product;
(2) The country or place in which the wildlife was removed from the wild (if known), or where born in captivity;
(3) The name and address of the supplier or consignee;
(4) The port(s) of entry where importation or exportation is requested, and the reasons why importation or exportation should be allowed at the requested port(s) of entry rather than at a designated port (information must be included to show the monetary difference between the cost of importation or exportation at the port requested and the lowest cost of importation or exportation at the port through which importation or exportation is authorized by Subpart B without a permit); and
(5) A statement as to whether the exception is being requested for a single shipment, a series of shipments, or shipments over a specified period of time and the date(s) involved.
(c) Additional permit conditions. In addition to the general conditions set forth in Part 13 of this Subchapter B, permits to import or export wildlife at a non-designated port issued under this section are subject to the following conditions:
(1) Permittee shall file such reports as specified on the permit, if any; and
(2) Permittee shall pay costs incurred by the Director in inspecting permittee's importations or exportations at non-designated ports, including salary, overtime, transportation and per diem of Service officers.
(d) Issuance criteria. The Director shall consider the following in determining whether to issue a permit under this section:
(1) The difference between the cost of importing or exporting the wildlife at the port requested and the lowest cost of importing or exporting such wildlife at a port authorized by these regulations without a permit;
(2) The severity of the economic hardship that likely would result should the permit not be issued;
(3) The kind of wildlife involved, including its form and place of origin; and
(4) Availability of a Service officer.
(e) Duration of permits. Any permit issued under this section expires on the date designated on the face of the permit. In no case will the permit be valid for more than 2 years from the date of issuance.

Subpart E - Inspection and Clearance of Wildlife

14.55 Exception to clearance requirements

Except for wildlife requiring a permit pursuant to Part 17 of this Subchapter B, clearance is not required for the importation of the following wildlife:
(a) Shellfish and fishery products imported for purposes of human or animal consumption or taken in waters under the jurisdiction of the United States or on the high seas for recreational purposes;

(b) Marine mammals lawfully taken on the high seas by United States residents and imported directly into the United States; and
(c) Certain antique articles as specified in Part 14.22 which have been released from custody by Customs officers under 19 USC 1499.

Subpart F - Wildlife Declarations

14.61 Import declaration requirements

Except as otherwise provided by the regulations of this subpart, a completed Declaration for Importation or Exportation of Fish or Wildlife (Form 3-177), signed by the importer or the importer's agent, shall be filed with the Service at the time and place where clearance under 14.52 is requested, unless the wildlife is to be transshipped under bond to a different port for release from custody by Customs officers under 19 USC 1499 or is a certain antique article as specified in 14.22, in which case the Form 3-177 shall be filed with the District Director of Customs at that port before release from Customs custody. All applicable information requested on the Form 3-177 shall be furnished, and the importer, or the importer's agent, shall certify that the information furnished is true and complete to the best of his/her knowledge and belief.

Part 16 - Injurious Wildlife

Subpart A - Introduction

16.1 Purpose of regulations

The regulations contained in this part implement the Lacey Act (18 USC 42).

16.2 Scope of regulations

The provisions of this part are in addition to, and are not in lieu of, other regulations of this Subchapter B which may require a permit or prescribe additional restrictions or conditions for the importation, exportation, and interstate transportation of wildlife (see also Part 13).

16.3 General restrictions

Any importation or transportation of live wildlife or eggs thereof, or dead fish or eggs or salmonids of the fish family Salmonidae into the United States or its territories or possessions is deemed to be injurious or potentially injurious to the health and welfare of human beings, to the interest of forestry, agriculture, and horticulture, and to the welfare and survival of the wildlife or wildlife resources of the United States; and any such importation into or the transportation of live wildlife or eggs thereof between the continental United States, the District of Columbia, Hawaii, the Commonwealth of Puerto Rico, or any territory or possession of the United States by any means whatsoever, is prohibited except for certain purposes and under certain conditions as hereinafter provided in this part; Provided, that the provisions of this section shall not apply to psittacine birds (see also Parts 16.32 and 16.33 for other exemptions).

Subpart B - Importation or Shipment of Injurious Wildlife

Part 16.13 Importation of live or dead fish, molluscs, and crustaceans, of their eggs

(a)(1) The importation, transportation, or acquisition is prohibited of any live fish or viable eggs

of the family Clariidae: Provided, that the Director shall issue permits authorizing the importation, transportation, and possession of such live fish or viable eggs under the terms and conditions set forth in Part 16.22.

(2) Except as provided in paragraph (a)(1) of this section, and except for the salmonids of the fish family Salmonidae, as provided in paragraph (b) of this section, all species of live or dead fish, molluscs, and crustaceans, or parts thereof, or their eggs, may be imported, transported, and possessed in captivity without a permit, for scientific, medical, educational, sale, exhibition, or propagational purposes upon the filing of a written declaration with the District Director of Customs at the port of entry as required under Part 14.61. No such live fish, molluscs, crustacean, or any progeny or eggs thereof, may be released into the wild except by the State wildlife conservation agency having jurisdiction over the area of release or by persons having prior written permission from such agency.

(b)(1) Notwithstanding authority granted Federal agencies in Part 16.32, all live or dead fish or eggs of salmonids of the fish family Salmonidae are prohibited entry into the United States for any purpose unless such importations are by direct shipment, accompanied by a certification that the importation is free of the protozoan Myxobolus cerebralis, the causative agent of so-called "Whirling disease," and the virus causing viral haemorrhagic septicemia or "Egtved disease". The certification shall be signed in the country of origin by a designated official acceptable to the Secretary of the Interior as being qualified in fish pathology, or in the United States by a qualified fish pathologist designated for this purpose by the Secretary of the Interior.

(2) The certificate required by this section shall consist of a statement in the English language, printed or typewritten, stating that this shipment of fish or eggs if free from these two diseases by the methods outlined in Fish Disease Leaflet 9, and will contain (i) the date and port of export in the country of origin and the anticipated United States date of arrival and port of entry, (ii) surface or air carrier and flight number, or vessel name or number, (iii) bill of lading number or airway bill number, and (iv) the handwritten signature, in ink, of the authorized certifying officer, and may be substantially in the following form:

I, ----------, approved by the Secretary of the US Department of the Interior, on -------(date), as a certifying official for ---------- (country), as required by Title 50, CFR 13.7(b), do hereby certify, using the methodology described in Fish Disease Leaflet (FDL-9, July 1968), that this shipment of ---------- (weight in pounds) of dead or live fish or fish eggs to be shipped under ---------- (bill of lading number, or airway bill number) is free of the protozoan Myxobolus cerebralis, the causative agent of so-called "whirling disease," and the virus causing viral haemorrhagic septicemia or "Egtved disease".

The shipment is scheduled to depart ---------- (city and country) on ---------- (date), via ---------- (name of carrier) with anticipated arrival at the port of ---------- (city), USA, on ---------- (date). ---------- (Signature in ink of certifying officer) ------- (date).

(c) Nothing in this part shall restrict the importation and transportation of the fish family Salmonidae when such fish or eggs have been processed by canning, pickling, smoking, or otherwise prepared in a manner whereby all spores of the protozoan Myxobolus cerebralis, the causative agent on so-called "whirling disease," and the virus causing viral haemorrhagic septicemia or so-called "Egtved disease," have been killed. Salmon landed in North America and brought into the United States for processing or sale, or any salmonid caught in the wild in North America under a sport or a commercial fishing license shall be exempt from the requirements for certification and from the filing of the Declaration for Importation of Wildlife.

Subpart C - Permits

16.22 Injurious wildlife permits

The Director may, upon receipt of an application and in accordance with the issuance criteria of this section, issue a permit authorizing the importation into or shipment between the continental United States, the District of Columbia, Hawaii, the Commonwealth of Puerto Rico, or any possession of the United States of injurious wildlife (See Subpart B of this part) for zoological, educational, medical, or scientific purposes.

(a) Application requirements. Applications for permits to import or ship injurious wildlife for such purposes shall be submitted to the US Fish and Wildlife Service, Federal Wildlife Permit Office, P O Box 3654, Arlington, VA 22203. Each application must be submitted in writing on a Federal Fish and Wildlife License/Permit application (Form 3-200) provided by the Service and must include as an attachment all of the following information:

(1) The number of specimens and the common and scientific names (genus and species) of each species of live wildlife proposed to be imported or otherwise acquired, transported and possessed;

(2) The purpose of such importation or other acquisition, transportation and possession;

(3) The address of the premises where such live wildlife will be kept in captivity;

(4) A statement of the applicant's qualifications and previous experience in caring for and handling captive wildlife.

(b) Additional permit conditions. In addition to the general conditions set forth in Part 13 of this Subchapter B, permits to import or ship injurious wildlife for zoological, educational, medical, or scientific purposes shall be subject to the following conditions:

(1) All live wildlife acquired under permit and all progeny thereof, must be confined in the approved facilities on the premises authorized in the permit.

(2) No live wildlife, acquired under permit, or any eggs or progeny thereof, may be sold, donated, traded, loaned, or transferred to any other person unless such person has a permit issued by the Director under Part 16.22 authorizing him to acquire and possess such wildlife or the eggs or progeny thereof.

(3) Permittees shall notify the nearest Special Agent-in-Charge by telephone or other expedient means within 24 hours following the escape of any wildlife imported or transported under authority of a permit issued under this section, or the escape of any progeny of such wildlife, unless otherwise specifically exempted by terms of the permit.

(c) Issuance criteria. The Director shall consider the following in determining whether to issue a permit to import of ship injurious wildlife for zoological, educational, medical, or scientific purposes:

(1) Whether the wildlife is being imported or otherwise acquired for a bona fide scientific, medical, educational, or zoological exhibition purpose;

(2) Whether the facilities for holding the wildlife if captivity have been inspected and approved, and consist of a basic cage or structure of a design and material adequate to prevent escape which is maintained inside a building or other facility of such structure that the wildlife could not escape from the building or other facility after escaping from the cage or structure maintained therein;

(3) Whether the applicant is a responsible person who is aware of the potential dangers to public interests posed by such facilities reasonably can be expected to provide adequate protection for such public interests; and

(4) If such wildlife is to be imported or otherwise acquired for zoological or aquarium exhibition purposes, whether such exhibition or display will be open to the public during regular appropriate hours.

(d) The information collection requirements contained within this section have been approved by the Office of Management and Budget under 44 USC 3507 and assigned Clearance Number 1018-0022. This information is being collected to provide information necessary to evaluate permit application. This information will be used to review permit applications and make decisions, according to criteria established in various Federal wildlife conservation statutes and regulations,

on the issuance or denial of permits. The obligation to respond is required to obtain or retain a permit.

Subpart D - Additional Exemptions

16.32 Importation by Federal agencies

Nothing in this part shall restrict the importation and transportation, without a permit, of any live wildlife by Federal agencies solely for their own use, upon the filing of a written declaration with the District Director of Customs at the port of entry as required under Part 14.61: Provided, that the provisions of this section shall not apply to bald and golden eagles or their eggs, or to migratory birds or their eggs, the importations of which are governed by regulations under Parts 22 and 21 of this chapter, respectively.

II UNITED STATES

Department of Defense
Army Corps of Engineers

Extracted from Information Required for Department of the Army Permits

Aquaculture (Floating Fish Pens) Projects

11. Confirm that no fish or eggs from west of the Continental Divide would be used. Confirm that only fish from North American stock would be used. Confirm that only fish eggs from North American stock would be used after 1995.

III CONNECTICUT

Department of Environmental Protection
Bureau of Fisheries

Extracted from Importation, Exportation, Liberation of Live Fish and/or Live Fish Eggs

Introduction

Sections 26-25, 26-57, 26-127, and 26-128 of the Connecticut General Statutes require permits for, or otherwise control, the possession, transportation, importation, exportation and liberation of fish to protect native and established, introduced species of fish and to maintain present gamefish, panfish and commercial fish populations at productive levels. Indiscriminate importation, exportation or liberation of various species of fish poses a real threat to the ecological balance in the waters of this state.

Illegal importation, exportation and/or liberation of fish is a serious violation of state laws and violators are subject to arrest and prosecution. If you know of anyone planning to transport fish into or out of the state or to liberate fish in any of the waters of the state, please bring to their attention the permit requirements.

The following is provided for clarification of Connecticut statutes and regulations which govern

the importation, exportation, possession and liberation or stocking of live fish and live fish eggs. Interpretation or explanation of the material contained herein may be obtained from a DEP Conservation Officer, DEP District Headquarters, DEP Bureau of Law Enforcement (566-3978) or DEP Bureau of Fisheries (566-2287).

Permit applications and permits may be obtained from: Bureau of Fisheries, Room 255, State Office Building, Hartford, Connecticut 06106. There is no charge for the permits.

Permits

Three types of permit may be required to transport live fish or live fish eggs into or out of Connecticut. For the purposes of these activities, the importer, exporter, or liberator is the person residing in Connecticut and receiving or sending the shipment.

Importation Permit:

General: A permit from the Department of Environmental Protection is required for the importation into the state of any live fish or live fish eggs, except for common aquarium species.

An individual permit application is necessary for each importation. All applications must include the full name and address of the applicant and the vendor from whom the live fish or live fish eggs to be imported, the purpose of such importation and, if such live fish or live fish eggs are to be liberated, the name and location of the waters where such live fish or live fish eggs are to be liberated.

Permits issued are valid for not more than thirty days and may be issued or denied at the discretion of the Commissioner. A copy of this permit must accompany the shipment and must be available for inspection by any agent of the Commissioner of the Department of Environmental Protection.

Any live fish or live fish eggs originating outside of the United States must have official clearance, in writing, from the United States Fish and Wildlife Service.

Grass Carp: A special permit is required for the importation of triploid (sterile) grass carp or white amur. All grass carp imported must be available for inspection by any agent of the Commissioner.

After importation permit issuance, and at least fourteen (14) days prior to any importation of grass carp, the permittee must notify the Bureau of Fisheries of the date that these fish will enter the state and location where such fish may be inspected.

All imported grass carp will be inspected and shall be tested for triploidy by an agent of the Commissioner prior to liberation. Any shipment of grass carp which contains any diploid (fertile) individuals will be confiscated and disposed of at the discretion of the Commissioner.

Tropical Aquarium Fish and Goldfish: Most tropical fish and goldfish imported for use in aquaria, exclusively, do not require importation permits. However, restrictions and total prohibitions are in effect against certain species (see Sections 26-55-1h, i and 26-128).

Liberation Permit:

General: A separate liberation permit is necessary when an individual or agency, other than the Bureau of Fisheries, possesses, transports or liberates live fish or live fish eggs in waters of any pond, lake or stream in Connecticut. This requirement is in effect even when the subject live fish or live fish eggs originate inside the state.

An individual permit is necessary for each liberation. Grass Carp: A special permit is required for the liberation of triploid (sterile) grass carp or white amur. This requirement is in effect even when the subject live fish or live fish eggs originate inside the state.

All grass carp liberated must be certified as triploid, prior to shipment, by a person or persons acceptable to the Commissioner. Such certification, and a copy of the permit, must accompany the shipment and must be available for inspection by any agent of the Commissioner.

Tropical Aquarium Fish and Goldfish: It is illegal to release any aquarium fish into public or private waters without a permit.

Exportation Permit:

A permit is necessary to transport any live fish out of Connecticut, unless such fish originate in a licensed commercial hatchery.

No bait species shall be exported unless they are propagated and grown in private waters registered with the Department as such or in licensed commercial hatcheries.

Connecticut General Statutes

Section 26-55. Permit for importing, possessing or liberating fish, wild birds, wild quadrupeds, reptiles and amphibians

No person shall import or introduce into the state, or possess or liberate therein, any live fish, wild bird, wild quadruped, reptile or amphibian unless such person has obtained a permit therefore from the Commissioner. Such permit may be issued at the discretion of the Commissioner under such rules and regulations as he may prescribe. The Commissioner may by regulation prescribe the numbers of live fish, wild birds, wild quadrupeds, reptiles and amphibians of certain species which may be imported, possessed, introduced into the state or liberated therein. The Commissioner may by regulation exempt certain species or groups of live fish from the permit requirements. He may by regulation determine which species of wild birds, wild quadrupeds, reptiles and amphibians must meet permit requirements. He may totally prohibit the importation, possession introduction into the state or liberation therein of certain species which he has determined may be a potential threat to humans, agricultural crops or established species of plants, fish, birds, quadrupeds, reptiles or amphibians. The Commissioner may by regulation exempt from permit requirements organizations or institutions such as zoos, research laboratories, colleges, universities, public nonprofit aquaria or nature centres where live fish, birds, wild quadrupeds, reptiles and amphibians are held in strict confinement. Any such fish, bird, quadruped, reptile or amphibian illegally imported into the state or illegally possessed therein shall be seized by any representative of the Department of Environmental Protection and shall be disposed of as determined by the Commissioner. Any person who violated any provision of this section or any regulation issued by the Commissioner as herein provided shall be fined not more than one hundred dollars or imprisoned not more than thirty days or both. (Effective 1985)

Section 26-57. Permits for transportation and exportation of fish, birds, quadrupeds, reptiles and amphibians

No person shall transport within the state or transport out of the state any fish, bird, quadruped, reptile or amphibian for which a closed season is provided without a permit from the Commissioner, except as provided herein. The Commissioner may issue a permit to any person to transport within the state or to transfer out of the state any fish, bird, quadruped, reptile or amphibian protected under the provisions of this chapter under such regulations as he may prescribe. No fish, bird, quadruped, reptile or amphibian shall be transported out of the state unless each unit, package or container is conspicuously tagged or labelled, and such tag or label contains in legible writing the full name and address of the person legally authorized to transport out of the state such fish, bird, quadruped, reptile or amphibian. Any such fish, bird, quadruped, reptile or amphibian received by any person or any common carrier within the state, addressed for shipment to any point without the state and not having such tag or label conspicuously attached shall be prima facie evidence of a violation of the provisions of this section. A permit shall not be required to transport out of the state any fish, bird, quadruped, reptile or amphibian which has been legally taken, bred, propagated or possessed by a person to whom a license, registration or permit has been issued under the provisions of this chapter authorizing the taking, breeding, propagation or possession of fish, birds, quadrupeds, reptiles or amphibians, and no permit shall be required to transport within the state or to transport out of the state any fish, bird, quadruped, reptile or amphibian that has been legally taken or required by a person exempt from license requirements under the provisions of this chapter. Any person who violates any provision of this section shall be fined not less than ten dollars nor more than two hundred dollars or imprisoned not more than sixty days or be both fined and imprisoned. (Effective 1985)

Section 26-127. Conversation of bait species

Any person who transports out of this state any bait species taken from the waters of this state or who takes, assists in taking or attempts to take any bait species from any such waters for the purpose of transporting the same out of the state shall be fined not less than fifty dollars nor more than two hundred dollars or imprisoned not more than thirty days or both; but no provision hereof shall prevent the exportation of bait species propagated and grown in private waters registered with the board as such or in licensed commercial hatcheries. (Effective 1971)

Section 26-128. Carp and goldfish

No person shall sell, offer for sale, transport, transfer, possess or use any carp or goldfish for bait fish purposes. No person shall introduce any carp or goldfish into any inland waters of the state without first having secured a written permit from the Commissioner. Any person who violates any provision of this section shall be fined one hundred dollars or imprisoned not more than thirty days or be both fined and imprisoned. (Effective 1971)

Regulations of Connecticut State Agencies

Section 26-55-1. Importation, transportation or liberation of live fish or live fish eggs

No person, firm or corporation shall import into this state, transport for the purpose of liberation within this state or liberate into the waters of this state live fish or live fish eggs except as hereinafter provided.
(a) Permits for the importation or liberation of live fish and live fish eggs may be issued at the discretion of the Commissioner.

(b) No permit for the importation or liberation of live fish and live fish eggs shall be issued to cover a period of more than thirty days and a separate application must be made for each importation or liberation of live fish or live fish eggs.
(c) All applications for an importation permit or liberation permit shall include the full name and address of the applicant and the vendor from who the live fish or the live fish eggs will be obtained, the number of each species of live fish or live fish eggs to be imported or liberated, the purpose of such importation or liberation and, if such live fish or live fish eggs are to be liberated, the name and location of the waters where such live fish or live fish eggs are to be liberated.
(d) Any live fish or live fish eggs originating outside of the United States must have official clearance in writing, from the United States Fish and Wildlife Service.
(e) Representatives of the Commissioner may inspect any imported live fish or live fish eggs being brought into the state. The Commissioner may order that any live fish or live fish eggs, suspected of carrying diseases, pathogens or parasites capable of inducing any disease, be quarantined, at permittee's expense, for a period of up to one hundred and twenty days.
(f) Any fish which show evidence of disease, pathogen or parasite capable of inducing any disease shall be immediately taken to the animal disease laboratories at the University of Connecticut, Storrs, sent to the United States eastern fish disease laboratory in Leetown, West Virginia or such other fish disease laboratory as shall be determined by the Commissioner for examination and diagnosis. In the event that any disease, pathogen or parasite capable of inducing any disease is determined to be present by said laboratory the Commissioner may in the public interest, order that all imported fish as well as any other fish present in the waters containing such imported fish, be destroyed by whatever means he shall determine is the most practical and in the best public interest.
(g) No imported fish or fish eggs shall be liberated or introduced into the waters of the state if they are known to be infected with disease or infected with parasites which, in the opinion of the Commissioner, would make the liberation of such fish inadvisable in the interest of protecting humans, resident fish species or established exotic fish species from disease or parasitism.
(h) No permit shall be required to import live common aquarium species. The importation of possession of piranha of the sub-family: Serrasalminae, genera Serrasalmus, Serrasalmo, Pygocentrus, Teddyella, Rooseveltiella, and Pygopristus and walking catfish, of the family Clariidae, genera Clarias, Heteropneustes, Dinotopleurus and Heterobranchus is prohibited except that the Commissioner may at his discretion issue permits for the importation and possession, when it is in the public interest, for public display purposes, of single specimens of piranha and walking catfish. Such possession permits shall be issued for a calendar year and the applicant must request renewal of said permit prior to December thirty-first of the year said permit is in effect. Renewal of said permit shall be at the discretion of the Commissioner. Such permittee shall report annually to the Commissioner during the month of December on the status and health of the specimen for which said permit issued, except that in the case of death of said specimen the permittee shall report same to the Commissioner within seven days.
(i) The importation, possession or liberation of grass carp or white amur (Ctenopharyngodon idella) is prohibited except that the Commissioner, at his discretion, may issue a permit for the importation, possession and liberation of triploid (sterile) grass carp into waters that have been inspected by his agent and that meet the following criteria: (A) Ponds, under single ownership, with a surface area not over five (5) acres; (B) Ponds with an aquatic vegetation problem comprising at least forty (40) percent of the surface area, which problem cannot, in the judgement of the Commissioner, be controlled by other means; (C) Ponds the outlet of which is screened so as to prevent the emigration of fish.

(1) Such fish shall be certified as triploid prior to shipment by a person or persons acceptable to the Commissioner and such certification shall accompany the shipment of each fish.

(2) At least fourteen (14) days prior to importation of such fish, the permittee shall notify the Commissioner of the date that any grass carp are to be imported and the location where such fish may be inspected.
(3) Such fish shall be inspected and sampled and shall be tested for triploidy by an approved method by an agent of the Commissioner prior to liberation.
(4) Any shipment of grass carp which contains any diploid (fertile) individuals shall be confiscated and disposed of at the discretion of the Commissioner.
(5) The owner of any pond into which grass carps are liberated shall allow agents of the Commissioner to monitor the population dynamics of the grass carp and other environmental conditions of the pond in order to determine the long term efficacy of grass carp in Connecticut waters.
(6) In the event that any grass carp or white amur, that are capable of reproduction, are liberated into or found in any waters of this state, the Commissioner, may in the public interest, order that all such fish as well as any other fish present in such waters be destroyed by whatever means he shall determine to be the most practical and in the best public interest.
(j) Live fish or live fish eggs of the following species, genera of the following species, genera or families shall not be imported into the state or possessed: (1) bowfin (Amia calva); (2) gars (Lepososteidae); (3) gizzard shad (Dorosoma cepedianum); (4) white bass (Morone chrysops); (5) fresh-water drum (Aplodinotus gruniens); (6) snail carp or black carp (Mulopharynogodon piceus); (7) silver carp (Hypophthalmicthys molitrix); (8) big head carp (Aristichthys nobilis); (9) carp (Cyprinus carpio); (10) tench (Tinca tinca); (11) roho (Labeo rohita); (12) calbasu (Labeo calbasa); (13) catla (Catla catla); (14) mrigal (Cirrhina mrigala); (15) mahseer (Tor tor); (16) crucian carp (Carassius carassius); (17) rudd (Scardinius erythropthalmus); (18) eurpean white fish, orfe or ide (Leuciscus idus); (19) any species of fish whose importation into the United States is prohibited: (20) any species of fish designated rare, threatened or endangered: and (21) any species of fish which the Commissioner determines is potentially dangerous to humans, established species of fish or established aquatic plants.
In the event that any of the species listed previously in this subsection are liberated or introduced into any waters of the state, the Commissioner may, in the public interest, order that all such fish as well as any other fish present in such waters be destroyed by whatever means he shall determine is the most practical and in the best public interest.
(k) The transporter of any live fish or live fish eggs that are destined for any state waters shall be in possession of a copy of the importation or liberation permit covering such live fish or live fish eggs. Any box, package or container holding live fish or live fish eggs transported by a common carrier and destined for delivery in this state shall have attached thereto and in plain view a copy of the permit covering such importation. (Effective January 1, 1988)
Section 26-149-2. Commercial hatcheries, removal of fish from premises

Owners or operators of commercial fin fish hatcheries issued a license by the Department of Environmental Protection and their guests may remove any species of fish from the waters of such commercial hatcheries by any method, except by the use of chemicals or explosives. Fish taken from such hatcheries by the owner, operator or guests may be removed from the premises, possessed and transported at any season of the year without regard to legal lengths or daily creel limits, provided such fish or the package containing such fish, shall have attached thereto a tag or label showing the name and address of the owner of such hatchery, the number of the commercial fish hatchery license, the number and species of fish, the date such fish were removed from such hatchery and the name of the person removing such fish from such premises. The owner or operator of such hatchery shall not allow guests to remove live fish from the hatchery premises unless said guest is in possession of written authority from the Commissioner of the Department of Environmental Protection granted under the authority of Section 26-55 of the General Statutes to stock or introduce such species of fish in specified waters of the state.

(Effective January 1, 1987)

IV MAINE

Department of Inland Fisheries and Wildlife

Extracted from State of Maine Inland Fisheries and Wildlife Rules, Chapters 1-20

2.3 Commercially Grown or Imported Fish

A Scope

These rules shall be applicable only to freshwater fish which have been grown commercially within the State or imported from outside the State as provided in Title 12, MRSA, Section 7201 and Section 7205. Nothing in these rules shall in any way restrict or regulate the harvest, transportation or sale of live smelts, minnows and other unprotected fish commonly used for bait purposes.

B Identification

All live or dead freshwater fish taken from hatcheries, aquaculture operations or private ponds within the State and all live or dead freshwater fish imported from outside the State shall, while being transported, held in storage or offered for sale, be identified with the name and address of the original source in one of the following manners:
(1) Each fish shall bear a tag or seal which shall identify the source; or
(2) Each package, bag, box, or container of fish shall be marked in such a manner as to identify the source; or
(3) Each display case or tank containing fish for resale shall be marked with a sign which shall identify the source.
All fish shall bear identification as described above from the time they leave the original source until they reach their ultimate destination.

C Certain Permits Required

(1) All live freshwater fish imported into the State shall, while in transit, be accompanied by an importation permit from the Commissioner as described in Title 12, MRSA, Section 7202.
(2) All live freshwater fish taken from hatcheries, aquaculture operations or private ponds within the State or imported from outside the State shall, while in transit, be accompanied by an invoice or other documentation describing the species involved, the number of fish involved and the destination of the fish.
(3) All live freshwater fish which are to be introduced into either public or private waters of this State shall, while in transit, be accompanied by the appropriate written permit from the Commissioner as described in Title 12, MRSA, Section 7203 (inland waters) and Section 7204 (private waters).

Extracted from Title 12, MRSA

Chapter 705 Subchapter III Prohibited Acts

Section 7613. Importing live bait

A person is guilty of importing live bait if he imports into this State any live fish, including smelts, which are commonly used for bait fishing in inland waters.

Section 7616. Illegal importation or sale of certain fresh or frozen fish

A person is guilty of illegal importation or sale of fresh or frozen salmon, brook trout, brown trout, rainbow trout, lake trout or any member of the family salmonidae if he imports or offers for sale any of those fish, fresh or frozen, whose source is outside of the continental United States, Canada or Alaska or their adjacent waters.

Penalty

Class E crime. Jail term not to exceed 6 months and a maximum fine of $500.

Chapter 707 Subchapter VI Selling, Importing, Stocking and Cultivating Fish

Section 7201. License to sell commercially grown or imported fish

(1) Issuance. The commissioner may issue a license to sell fish which have been either commercially grown within the State or imported from without the State.
(2) Fee. The fee for a license to sell commercially grown or imported fish shall be $19 for 1985, $20 for 1986 and $21 for 1987 and every year thereafter.
(3) Restrictions.
(A) Licences shall be kept constantly and publicly posted in the office or place of business of the licensee.
(B) Whenever any person sells these fish in more than one wholesale or retail outlet, each outlet shall be licensed.
(C) All fish sold under this section shall be identified with the name and address of the source of the fish in a manner approved by the commissioner or his duly authorized agent.

Section 7202. Permit to import live freshwater fish or eggs

(1) Issuance. The commissioner may grant permits to introduce, import or transport any live freshwater fish or eggs into the State or to receive or have in possession fish or eggs so introduced, imported or transported.
(2) Application. Importers shall, when requesting a permit, provide the commissioner with the following information:
(A) The number and species to be imported;
(B) The name and address of the source; and
(C) A statement from a recognized fish pathologist, from a college or university, from a state conservation department or from the United States Fish and Wildlife Service, certifying that the fish or eggs are from sources which show no evidence or viral haemorrhagic septicemia, infectious pancreatic necrosis, infectious haematopoietic necrosis, Myxobolus cerebralis or other diseases which may threaten fish stocks within the State.

Section 7203. Permit to stock inland waters

1. Issuance. The commissioner may issue a written permit to introduce fish of any kind into any inland waters by means of live fish or otherwise.

Section 7204. Permit to introduce fish or fish spawn into a private pond

1. Issuance. The commissioner may issue a written permit to introduce fish or fish spawn into a private pond.

Section 7205. License to cultivate or harvest fish in private ponds

1. Issuance. The commissioner may issue a license to commercially cultivate or harvest fish in private ponds permitting the following:
(A) A riparian proprietor may construct, within the limits of his own property, a dam across the waters of a non-navigable brook, stream or river for the purpose of creating a private pond for cultivating or harvesting fish; and
(B) The riparian proprietor of such a private pond, or his designee, may fish for, possess, sell, transport or have transported fish cultivated in a private pond as set forth in this section. These fish may be taken regardless of existing regulations pertaining to manner, time, season, bag limit, length limit or fishing license requirements.
2. Fee. The fee for such a license shall be $19 for 1985, $20 for 1986 and $21 for 1987 and every year thereafter.
3. Restrictions.
(A) A riparian proprietor shall file a declaration of intent with the commissioner before constructing a dam as permitted in subsection 1, paragraph A. Existing private ponds are exempt from the requirement of filing a declaration of intent.
(B) The commissioner, after investigating, may require a riparian proprietor of a private pond created under subsection 1, paragraph A to furnish suitable passage for fish frequenting these waters.
(C) All fish taken from a private pond, or a portion thereof, used for commercial purposes shall, while transported or possessed at a place of storage, be tagged as provided by rules established by the commissioner.

Chapter 707 Subchapter XI Prohibited Acts

Section 7377. Exceptions

5. Importing live freshwater fish or eggs. Notwithstanding section 7371 as it applies to section 7202, section 7371 shall not apply to tropical fish and goldfish (Carassiusauratus) which are for aquarium purposes, except piranhas (Genus Serraslmus), walking catfish, and white amur (grass carp), nor to the chemically preserved eggs of either the Atlantic sea run salmon or landlocked salmon. For purposes of this subsection, "tropical fish" means any species of fish that cannot survive the year round in a wild environment north of 30 degrees north latitude or south of 30 degrees south latitude.
Extracted from Fish Health Guidelines for Importation of Live Salmonid Fish, Gametes, and Fertilized Eggs

Before a recommendation can be made upon a proposed importation of live salmonid fish, gametes and fertilized eggs, it is necessary to carefully review the fish health status of the source. It is the responsibility of the importer to provide all of the information required as outlined below:
(1) Provide a brief description of the physical facilities at the source(s), including a map showing the location(s), a sketch showing the layout of the facilities, a description of all sources of water utilized with a list of all species of fish that occur in the water supply, if any.

(2) The owner or manager of the source facility shall complete and sign a copy of the attached "Exporters Declaration" form.

(3) Importation of Fish. No live salmonid fish may be imported from areas known to be endemic for Infectious Haematopoietic Necrosis (IHN) virus. Currently, the entire western United States and Canada, all of Japan and part of Taiwan and France may be considered endemic for IHN. All other proposals to import live salmonid fish must come from sources that have had a minimum of three consecutive annual complete fish health inspections as outlined in section 6 below, without any evidence of the following fish pathogens:
Viral Haemorrhagic Septicemia (VHS) virus
Infectious Haematopoietic Necrosis (IHN) virus
Infectious Pancreatic Necrosis (IPN) virus
Any other filterable replicating agent capable of causing cytopathic effect (CPE) in appropriate fish cell lines.
Myxobolus cerebralis, causative agent of Whirling Disease
Aeromonas salmonicida, causative agent of Furunculosis
Yersinia ruckeri, causative agent of Enteric Redmouth (ERM)
Renibacterium salmoninarum, causative agent of Bacterial Kidney Disease, confirmed by fluorescent antibody test (FAT) or appropriate culture methods.
Any sources located in areas endemic for Ceratomyxa shasta, causative agent of Ceratomyxosis, or PKX, the causative agent of Proliferative Kidney Disease (PKD), must be inspected and found to be free of these pathogens as well. Any source where any other pathogens or disease syndromes have been diagnosed that are not known to occur at the receiving facility will be unacceptable for importation.

The most recent fish health inspection must have occurred within one year and there must not have been any introductions of fish, gametes, or eyed eggs into that source since the last inspection. In cases where introductions of fish, gametes or eyed eggs have been made since the last inspection, complete fish health documentation of the source(s) of introductions will be required and it may be necessary to have another complete fish health inspection.

(4) Importation of Eyed Eggs. All proposals to import eyed salmonid fish eggs must come from sources that have had a minimum of three consecutive annual fish health inspections as outlined in section 6 below, without any evidence of the following vertically transmitted fish pathogens:
Viral Haemorrhagic Septicemia (VHS) virus
Infectious Haematopoietic Necrosis (IHN) virus
Infectious Pancreatic Necrosis (IPN) virus
Any other filterable replicating agent capable of causing cytopathic effect (CPE) in appropriate fish cell lines.
Renibacterium salmoninarum, causative agent of Bacterial Kidney Disease (BKD), confirmed by fluorescent antibody test (FAT) or appropriate culture methods.

In cases where eggs are proposed to be imported from areas known to be endemic for infectious Haematopoietic Necrosis (IHN) virus as outlined in 3 above, the following conditions must be met:
(a) All lots of fish at the source must be tested and found to be negative for IHN virus either annually for a minimum of three consecutive years, or for the past number of consecutive years equal to the age of the oldest fish spawning at the source.
(b) All lots of sexually mature fish at the source shall be sampled at the 2% incidence level utilizing ovarian fluid/milt collected at spawning time or from post-spawning fish. In addition, 100% of the adult fish utilized to produce the lot of eggs to be imported will be sampled according to this procedure.
(c) Kidney/spleen samples will also be collected from 100% of the adult fish utilized to produce the lot of eggs to be imported and from all other post-spawning brood stock and all lots of sexually immature fish at the 5% incidence level.

(d) All cell cultures will be observed for 28 days or for 14 days, followed by a blind passage onto new cultures of the same cell line with incubation for a further 14 days.
(e) Fertilized eggs to be imported must be properly surface disinfected with PVP iodine and/or water hardened in iodophor at time of spawning.
(f) Eggs must be incubated in a virus-free water supply.
(g) Only properly treated and disinfected eggs as outlined below may be imported.
(h) All eggs imported from an IHN endemic area will be hatched and reared in an approved quarantine facility (effluent treated with chlorine) as outlined in section 8 below, for 6 months after hatching and the fry will be subjected to at least one inspection for IHN virus before being released from quarantine.

All salmonid eggs approved for importation shall be treated in formalin at 2000 mg./1. for 15 minutes, thoroughly rinsed in pathogen-free well water or ultraviolet (UV) light sterilized water and then disinfected in PVP iodine (Wescodyne, Betadyne, Argentyne, Buffodyne, etc) at 100 mg./1. active ingredients for 10 minutes and then thoroughly rinsed again in pathogen-free water immediately before packing for shipment. The eggs will be treated again with PVP iodine and formalin according to this procedure upon arrival at the destination.

(5) Importation of Green Eggs or Gametes. All sources of green fertilized eggs or gametes will meet the inspection requirements for importation of eyed eggs as outlined in 4 above. All green fertilized eggs imported or produced with imported gametes will be disinfected in PVP iodine and treated in formalin. These fertilized eggs will be incubated in a quarantine facility as outlined in section 8 until the results of the fish health inspection work done at spawning time has been completed.

(6) Fish health inspections on all lots of fish at the source(s) during the past three years shall be reported on the attached fish health inspection report form with each report bearing an original signature by the fish health inspector. The reports must be complete with the following information:
(a) Name and location of source(s)
(b) Type of water supply and treatment, if any
(c) Inspection dates, including previous inspections. When samples are collected on separate dates as part of a seasonal fish health inspection, all collection dates must be noted.
(d) Species of fish examined
(e) Lot(s). All lots must be sampled with each lot being maintained separately. A lot is defined as a group of fish of the same species and age that originated from the same discrete spawning population and have always shared a common water supply. In the case of adult brood stock, various age groups may comprise the same lot, provided they meet the conditions above and have shared the same container(s) for one brood cycle.
(f) Fish age is given in months or years for each lot
(g) Number of fish in each lot
(h) Sample sizes. The minimum sample size for each lot must be in accordance with a plan that provides 95% confidence that infected specimens will be included in the fish sampled, assuming a minimum prevalence of infection equal to or greater than 2%, 5% or 10% respectively. Table 1 gives this sampling scheme:

Table 1. Sampled Size Based on Assumed Pathogen Prevalence In Lot

Lot Size	At 2% Prevalence Size of Sample	At 5% Prevalence Size of Sample	At 10% Prevalence Size of Sample
50	50	35	20
100	75	45	23
250	110	50	25
500	130	55	26
1,000	140	55	27
1,500	140	55	27
2,000	145	60	27
4,000	145	60	27
10,000	145	60	27
100,000 or more	150	60	30

Brood stock lots may only have to be lethally sampled for all pathogens at the 10% prevalence level if there is a three-year sampling history of the progeny at the 2% and 5% prevalence level and the brood stock have been held in isolation (no opportunity for contamination or infection from other fish).

(i) Pathogens inspected for

(1) Viruses - Minimum sample size shall be at the 5% level or less with no more than five fish combined to form a pool. Procedures for various viral pathogens are as follows:
Viral Haemorrhagic Septicemia (VHS) virus - Kidney-spleen samples diluted no more than 1:100 and inoculated onto two of the following cell lines: EPC, FHM, CHSE-214, or RTG-2.
Infectious Haematopoietic Necrosis (IHN) virus - Ovarian fluid/milt collected at or just after spawning time should be absorbed raw or diluted 1:2 (whole milt 1:10) in appropriate antibiotics, antimycotics, and inoculated onto two of the following cell lines: EPC, FHM, or CHSE-214.
Infectious Pancreatic Necrosis (IPN) virus - Kidney-spleen samples diluted no more than 1:100 and inoculated onto two of the following cell lines: CHSE-214, BF-2, or RTG-2.

Any other filterable replicating agent capable of causing cytopathic effect (CPE) in any of the cell lines utilized shall be reported whether or not it is identified by serological or other confirmatory techniques.
(2) Bacteria - The minimum sample size shall be at the 10% assumed incidence level. However, due to the fact that fish are going to be sacrificed at least at the 5% level for other pathogens, bacterial samples should be taken at that level also. Procedures for various bacterial pathogens are as follows:
Aeromonas salmonicida (Furunculosis) - Material from the hindgut or kidney (2nd choice) should be utilized with standard culture and biochemical techniques. Confirmation can be done by fluorescent antibody technique (FAT) or agglutination tests.
Yersinia ruckeri (Enteric Redmouth or ERM) - Material from the hindgut or kidney (2nd choice) should be utilized with standard culture and biochemical techniques. Confirmation can be done by fluorescent antibody techniques (FAT) or agglutination tests.
Renibacterium salmoninarum (Bacterial Kidney Disease or BKD) - Material from the hindgut/feces or if the hindgut is atrophied, kidney material may be used to prepare smears for examination by fluorescent antibody technique (FAT). A minimum of 50 fields using 1000x magnification shall be examined. Ovarian/seminal fluid from sexually mature fish may be more sensitive. Smears collected from mortalities occurring in seemingly healthy stocks taken supplemental to the fish

health inspection can provide significant additional information. If culture methods are to be used for primary isolation, they should be incubated for a minimum of 12 weeks. Enzyme-linked immunosorbent assay (ELISA) is a very sensitive confirmation technique for BKD.
(3) Parasites - Minimum sample size shall be at least the 5% level or less with no more than five fish combined to form a pool. Procedures for various parasites are as follows:
Myxobolus cerebralis (Whirling Disease) - Fish sampled should be at least five months old (up to ten months for fish reared in water below 12 degrees C). Tissues sampled shall include gill arches and cranial cartilage and/or bone. Cranial samples from adult fish may be collected by taking core samples from the area of the head that includes the otoliths with a 19mm diameter cork borer. Samples may be examined utilizing either the plankton centrifuge or digestion methods.
Ceratomyxa shasta (Ceratomyxosis) - Fish must be inspected for this parasite only at facilities/populations in endemic areas. Fish to be sampled should be at least six months old. Tissues sampled shall be the intestine, gall bladder, ascitic fluid or lesions. The plankton centrifuge method as used for whirling disease is useful to concentrate intestinal material. Wet mounts can be examined with phase contrast or stained dried smears.
PKX, the causative agent of Proliferative Kidney Disease (PKD) - Fish must be inspected for this parasite only at facilities/populations in endemic areas. Histological sections of kidney tissue must be examined for the presence of PKX organism or characteristic fibrosis that occurs in affected fish.

In addition to the pathogens listed above, all diseases and parasites known to have been detected at any time at the source shall be reported.
(j) Methods utilized will be clearly defined. The current editions of Procedures For The Detection And Identification Of Certain Fish Pathogens published by the Fish Health Section of the American Fisheries Society and the Fish Health Protection Regulations Manual Of Compliance of the Department of Fisheries and Oceans, Canada provide the basis for these fish health inspections. If more sensitive or more definitive published procedures are available, they may be used, but any departures from these basic procedures outlined in the above two publications must be noted on the inspection reports.
(k) Results shall be noted as either + (positive) or - (negative).

(7) Inspecting biologists/pathologists must be qualified specialists in fish health diagnostic procedures and must have access to adequate laboratory facilities and qualified personnel to assure the prompt and accurate conduct on inspections as outlined. No owner, family member or employee may serve as fish health inspector of any commercial or private facility. Fish health inspectors may be asked to provide documentation of their competence, laboratory capabilities and references. Evidence that a fish health inspector is not following prescribed or accepted procedures may be cause to refuse any proposed importations.

(8) Quarantine. All imported green fertilized eggs and all fertilized eggs produced with imported gamets shall be incubated in a quarantine facility until the results of fish health inspection work done at the source at spawning time has been completed and found to be negative for all listed vertically transmitted fish pathogens. All eyed eggs imported from areas where IHN virus is known to be endemic will be incubated, hatched, and reared for at least six months after hatching. These fish will be held in quarantine until the fingerlings have been inspected and found to be negative for IHN virus before removing from the quarantine facility.

The quarantine facility must be inspected and accepted by fish health personnel from the agency granting the importation permit, but should meet the following requirements:
(a) The quarantine incubation/rearing facility must be physically separate from other fish cultural

activities, must be completely enclosed and secure to prevent entry of birds, animals and unauthorized personnel.

(b) The water supply must be known to be free of all fish pathogens. It can be from wells or if from a surface source it must be filtered with either microsieve or sand filters to exclude parasites, invertebrate vectors and solids and then must be sterilized with either ultraviolet (UV) or ozone.

(c) All of the effluent from the quarantine facility must be treated with chlorine at a concentration that will never be less than 5.0mg./1. with at least 10 minute retention time before being discharged. The chlorinated effluent must be neutralized before discharge into surface waters, so it is important that volume of water utilized is kept to the minimum essential level.

(d) Access to the quarantine facility should be limited to essential personnel. Foot baths with PVP iodine at 250 mg./1. or other appropriate disinfectant must be properly used and maintained. The facility must be fully supplied with essential equipment so that it will not be necessary to remove any equipment from facility to other locations. All equipment being removed must be thoroughly disinfected.

EXPORTERS DECLARATION

Name of Source	Address	Name of Owner or Manager Telephone Number

I declare that this shipment of _____ (Number) _____ (Species) ☐ eggs ☐ live fish is derived solely from this facility and that no fish, gametes, or fertilized eggs have been introduced into the above named source since the last fish health inspection which was done on _____ (Date) by _____ (Fish Health Inspector). If any fish, gametes, or fertilized eggs have been introduced to the above named source since this last fish health inspection, they came from _____ (Name of Source) _____ (Address) on _____ (Date) and were inspected by _____ (Fish Health Inspector). A copy of this fish health inspection report is appended.

The following is a list of therapeutic chemicals, antibiotics, bacterins and vaccines used at the source within the past year along with the dosages and dates applied.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

The fish eggs in this shipment will be treated in formalin at 2000 mg./l. for 15 minutes, thoroughly rinsed in pathogen-free well water or ultraviolet (UV) light sterilized water and then disinfected in PVP iodine (Wescodyne, Betadine, Argentyne, Buffodyne, etc.) at 100 mg./l. active ingredients for 10 minutes and thoroughly rinsed again in pathogen-free water immediately before packing for shipment.

_____ Date

_____ Signature

Fish Source	Address or Location	Name of Owner or Manager Telephone Number	Type of Fish Examined Hatchery _____ Sea Cage _____ Feral _____	Inspection Dates This _____ Prior _____	Classification[1.] _____ _____

Water Supply

Fresh Water_____ Lake/Impoundment_____ Spring_____ Enclosed_____ Open_____ Free of Fish_____ Salt Water_____

Sea _____ Well _____ Stream _____ Sand Filter _____ Microsieve Filter _____ UV Treatment _____

Fish Examined

Species [2.]	Lot Number	Age [3.]	Number In Lot	Obtained as Eggs (E) or Fish (P) from:	Sample [4] Date	Pathogens [5.] Inspected For Methods [6.] and Results [7.]										
						IPN	IHN	VHS	BF	ERM	BKD	WD				

Footnotes: See other side of sheet for explanation of coding.

Notes:

Samples Collected by:

Name _____ Address _____

Affiliation _____

Telephone _____

Inspecting Biologist:

Signature _____

Name and Title _____

Address _____

Telephone _____

1. A fish disease classification system similar to one developed by the U.S. Fish & Wildlife Service is utilized to present a disease history of the facility or free ranging population. This should give a clear understanding of the occurrence of designated fish pathogens in this facility/population for a minimum of one brood cycle.

Class A

The A classification is assigned to those salmonid fish cultural facilities and free-ranging spawning populations that have been inspected at 12-month or shorter intervals over a minimum of at least two years and found to be free of the designated fish pathogens listed in footnote 5., below. To maintain the A status, cultural facilities must assure that all fish or gametes have been obtained from properly inspected sources which have been found free of the designated fish pathogens.

Class B

The B classification is assigned to those salmonid fish cultural facilities and free-ranging spawning populations when one or more of the designated fish pathogens have been detected within the past two years. The abbreviation of the detected pathogen should be added to the B classification. For example, a facility where furunculosis has been confirmed would be classified B-BF. If a disinfection program is carried out following the detection of a pathogen, a suspect classification system is used by placing the pathogen abbreviation in parentheses. For example, the classification of B-BF would be changed to B-(BF) after disinfection. The suspect classification system is also used when eggs are inadvertantly (or intentionally) received from a source that is later found to be positive for a designated pathogen. For example, the classification of an A facility would be changed to B-(BKD) if eggs were received from a source classified B-BKD.

Class C

The C classification is assigned to those salmonid fish cultural facilities and free-ranging spawning populations having an unknown disease history, have not been inspected for all of the designated fish pathogens, or have undergone complete fish health inspections covering a period of less than two years. For example, the classification of a new facility would be C until the completion of the first full inspection. If, after the first inspection the facility is found to be free of all designated pathogens, the classification would be changed to C-A. The classification would be changed to A after completion of the second annual inspection if no designated pathogens were detected.

2. Species Abbreviations:

ARC	Arctic Charr	HYS	Hybrid Salmonid (Specify cross)
ARG	Arctic Grayling	KOK	Kokanee
ATS	Atlantic Salmon	LAS	Landlocked Atlantic Salmon
BKT	Brook Trout	LAT	Lake Trout
BNT	Brown Trout	OHT	Ohrid Trout
CHS	Chum Salmon	OSA	Other salmonid (specify)
COS	Coho Salmon	PKS	Pink Salmon
CKS	Chinook Salmon	RBT	Rainbow Trout
CUT	Cutthroat Trout	SOS	Sockeye Salmon
DOV	Dolly Varden Trout	STT	Steelhead Trout
GIT	Gila Trout	SNT	Sunapee Trout
GOT	Golden Trout	WHF	Whitefish (specify)

3. In lots of fish less than two years old, the age in months is expressed numerically. In lots two years old or older, the age in years in expressed in Roman numerals. ADM denotes brood stock of mixed ages.

4. When samples are collected on separate dates as part of a seasonal fish health inspection the dates should be noted.

5. Findings are reported as the number of fish examined over the method used (See footnote 6.) over the results.

Pathogen Abbreviations:

IPNV	Infectious Pancreatic Necrosis virus*
IHNV	Infectious Hematopoietic Necrosis virus*
VHSV	Viral Hemorrhagic Septicemia virus*
VEN	Viral Erythrocytic Necrosis
HPV	Herpesvirus salmonis
OMV	Oncorhynchus masou virus
YTV	Yamame Tumor virus
BF	Furunculosis (Aeromonas salmonicida)*
ERM	Enteric Redmouth (Yersinia ruckeri)*
BKD	Bacterial Kidney Disease (Renibacterium salmoninarum)*
BMA	Motile Aeromonad Septicemia (Aeromonas hydrophila complex
BP	Pseudomonad Septicemia (Pseudomonas spp.)
BV	Vibriosis.(Vibrio anguillarum)
BVS	Hitra Disease (Vibrio salmonicida)
BC	Columnaris Disease (Flexibacter columnaris)
WD	Whirling Disease (Myxobolus cerebralis)*
CS	Ceratomyxosis (Ceratomyxa shasta)
PKD	Proliferative Kidney Disease (PKX)

*Designated fish pathogens

Any history of pathogens or disease syndromes diagnosed in this facility/population should be reported in the notes.

6. Diagnostic Methods:

VIRAL DISEASES: The methods employed are designated by a three or four letter and digit code. The first letter of the code represents the sampling method (see below). The middle number(s) represents the cell line(s) used. The last letter represents the sample pooling scheme.

Sample Method:

A Whole fry homogenates.
B Whole viscera homogenates
C Visceral homogenates (kidney/spleen)
D Ovarian fluids

E Other _____

Cell Line(s) - give incubation temperature in the notes:

1 RTG-2 (rainbow trout gonad)
2 CHSE (chinook salmon embryo)
3 FHM (fathead minnow)
4 EPC (epithelioma papillosum cyprini)
5 BF-2 (bluegill fry)

6 Other _____

Sample Pooling:

A Individual fish
B 5-fish pools

C Other _____

Whirling Disease Detection: Indicate material sampled in the notes: A single letter code denotes the method used as follows:

A Pepsin/trypsin digestion method
B Plankton centrifuge method

C Other _____

Bacterial Diseases: The methods employed are designated by a three or four letter and digit code. The first letter of the code represents type of fish sampled (see below). The middle number represents the material sampled. The last letter(s) represents the techniques used:

Type of Fish Sampled:
A Live, healthy fish
B Moribund, diseased fish
C Mortalities

D Other _____

Material Sampled:
1. Kidney
2. Hindgut
3. Lesion
4. Gill
5. Ovarian fluid
6. Seminal fluid

7. Other _____

Techniques: Indicate incubation temperature under Notes:

Primary isolation
A. Standard culture media (TSA/BHIA)
B. Cytophaga agar culture for myxobacteria
C. BKD culture (Evelyn)

D. Other

Presumptive diagnosis
E. Gram staining of kidney smears (BKD only)
F. Standard methods of physical and biochemical differentiation.

G. Other

Confirmatory diagnosis
H. Slide agglutination
I. Direct fluorescent antibody technique (DFAT)
J. Indirect fluorescent antibody technique (IFA
K. Enzyme-linked immunosorbent assay (ELISA)

L. Other

7. The results are noted as either + (positive) or - (negative)

V. MAINE

Department of Marine Resources

Extracted from State of Maine, Department of Marine Resources Codified Regulations, Chapters 1-100

Chapter 24 - Importation of Live Marine Organisms

Summary:

As authorised by 12 MRSA Part 6071, the Commissioner adopts these regulations concerning the importation and introduction of live marine organisms, regardless of size or age, to prevent the entry of any infectious or contagious diseases or parasites, predators or other organisms that my be dangerous to indigenous marine life or its environment. These regulations are designed to prevent the entry of pests, diseases and parasites into Maine by controlling the deposit of marine organisms from disease or pest-ridden areas and to prevent the spread of diseases or pests within the Maine by controlling the deposit of marine organisms from possibly infested Maine coastal areas into disease free coastal areas. These regulations do not apply to transfers within Maine of indigenous organisms not originating in restricted areas in Maine.

24.03 Prohibited Activity

It shall be unlawful to import for introduction or to introduce into any coastal waters any live marine organisms whether indigenous or non-indigenous, without a permit issued by the Commissioner. It shall also be unlawful to possess any live marine organism which has been imported for introduction or introduces without a permit issued by the Commissioner.

24.05 Permit Application for Marine Organisms

Any person who wishes to import or introduce any marine organism or to possess any such marine organism, must apply for a permit from the Commissioner. Application for a permit shall be submitted on forms supplied by the Commissioner and shall contain all information required by the Commissioner, including without limitation the following:
(A) name, address, home and business phone of the applicant;
(B) species, life cycle stage and quantity of marine organisms to be imported or introduced;
(C) area or origin, including name and address of hatchery, if any;
(D) area of proposed introduction including name and address of hatchery, if any;
(E) date of proposed introduction;
(F) nature, duration and purpose of introduction;
(G) if a non-indigenous species, and explanation of the known habitat and biological and behavioural characteristics of the species, as well as epifauna and associated organisms; and
(H) a statement of examination by a state, federal or Department of Marine Resources approved private marine laboratory indicating its findings and certifying that the marine organisms to be imported or introduced are free of any infectious or contagious disease agents or pests or parasites based on standard methods of diagnosis.

24.15 Permit Issuance Criteria for Marine Organisms Other than Shellfish

(A) The commissioner may grant a permit to import or introduce any marine organism other than shellfish, or to possess such an organism, only if he finds to a reasonable degree of certainty that

those actions will not endanger the indigenous marine life or its environment.
(B) In determining whether to issue a permit, the Commissioner shall consider the potential effects of the introduction of the marine organism into the recipient area, including, but not limited to:
(1) The effects of any previous introduction of the same or a similar species;
(2) The relationship of the species of marine organism to be introduced with other members of the recipient area ecosystem; and
(3) The effects of infectious or contagious diseases, pests or parasites which might be associated with the species of marine organism to be introduced upon other members of the ecosystem of the recipient area.
(C) The Commissioner may include any permit conditions necessary to protect indigenous marine life or its environment, including but not limited to, quarantine of brood stock in a closed system hatchery in the recipient area, quarantine of F1 generation individuals in isolation from the brood stock and small-scale introduction of F2 generation individuals into the recipient area with continuing disease study.
(D) The Commissioner may accept certifications provided by the Maine Department of Inland Fisheries and Wildlife that introduction of finfish imported for introduction will not endanger the indigenous marine life or its environment.

24.20 Hearing

A hearing on a permit application is not required except that a hearing shall be required where an applicant requests permission to import for introduction, introduce, or possess a non-indigenous species which has not been introduced previously under a Department of Marine Resources permit.

24.25 Violation

Any violation of these regulations, or the conditions of permits issued under these regulations, shall be punishable as a Class D crime as provided.

VI MASSACHUSETTS

Division of Fisheries and Wildlife

Extracted from Massachusetts General Laws Annotated, V19

Chapter 131

Section 19. Licence to put fish or spawn into inland waters; permit to import live fish or viable eggs, certification, inspection for disease, and disposition

A person shall not put into any of the inland waters of the commonwealth any species of fish or spawn thereof unless he possesses a valid license so to do issued under section twenty-three, or unless he has secured the written approval of the director.

A person shall not bring or cause to be brought into the commonwealth any live fish or viable eggs of fish protected by this chapter unless he first obtains a permit so to do from the director. Any application for such permit shall be received not less than fifteen nor more than thirty days prior to shipment. Upon payment of a fee of five dollars, a permit may be issued if the director determines that such importation is not detrimental to the inland fisheries resources of the

commonwealth and provided that the immediate source of fish or eggs is certified by a person recognized by the director as qualified to diagnose fish diseases to be free of infectious disease and parasites. Fish or viable eggs imported under this permit shall be subject to inspection by agents of the director at any time or place. Such inspections may include the taking of fish or egg samples for biological examination. The cost of such inspection shall be paid by the permittee.

Any such fish or viable eggs of fish which is brought into the commonwealth in violation of this section, or which is so brought under authority of a permit granted hereunder and is found upon inspection to be diseased, may be confiscated by an officer empowered to enforce this chapter and shall be forfeited to the commonwealth and shall be disposed of by the director of law enforcement for the best interest of the commonwealth.

Section 22. Sale of fish and game

A person, except as provided in sections twenty-three to twenty-eight, inclusive, shall not buy, sell, barter, exchange, offer or expose for sale or have in his possession for the purpose of sale, or in any way deal in or trade with respect to, any trout, salmon, horned pout, yellow perch, pickerel, white perch, great northern pike or muskellunge, walleyed pike, pike perch or any member of the family Centrachadae (sunfish), taken from waters of the commonwealth, or any black bass taken from waters within or outside the limits of the commonwealth, or the bodies of dead of living birds or mammals, or parts thereof, except those named in section five, or the bodies of dead or living reptiles or amphibians, whenever or wherever taken or killed; but a person who has lawfully killed a deer during the prescribed open season on deer, and has reported such killing as required by any rule or regulation promulgated by the director, may sell the head and hide thereof to any person licensed as a fur buyer under section twenty-eight, or licensed as a taxidermist under section twenty-seven, and may sell the hoofs and shinbones to any person.

Nothing in this section shall be construed to prohibit the sale of white perch taken from the coastal waters of the commonwealth or from the waters of Dukes or Nantucket counties, or from waters now or hereafter held under lease from the department.

Section 23. Propagation, dealing, etc., in fish, birds, mammals, reptiles or amphibians; rules and regulations; licenses; fees

Except as otherwise provided by this section or any rule or regulation made under authority thereof, a person shall not engage in the propagation, cultivation, or maintenance of, or the dealing in, fish, birds, mammals, reptiles, or amphibians, or parts thereof, as provided in section twenty-four, twenty-five or forty-seven, without first having obtained a propagator's license or dealer's license, as the case may be, authorizing him so to do. For the purpose of this section, birds, mammals, reptiles and amphibians shall refer to undomesticated birds, mammals, reptiles and amphibians that are wild by nature. Nothing in this section shall be construed to prohibit the propagation, disposition, sale, possession or maintenance of domesticated species.

The director, after a public hearing, shall make and may alter, amend, or repeal, rules and regulations governing the possession, propagation, maintenance, disposition, purchase, exchange, sale or offering for sale of fish, birds, mammals, reptiles or amphibians, or parts thereof protected by this chapter, and may issue licenses in accordance with such rules and regulations.

The director shall draw up a special exemption list of fish, birds, mammals, reptiles and amphibians. Animals to be thus listed shall meet the following criteria: (1) accidental release of

the fish, bird, mammal, reptile or amphibian will not result in an adverse effect on the ecology of the commonwealth; (2) the animal in captivity, or escaped therefrom poses no substantial danger to man, by either injury or disease; (3) proper care of the animal is no more demanding in any major respect than proper care of common domestic animals; and (4) trade in the fish, bird, mammal, reptile or amphibian has no significant adverse effect on the wild population of such animal in any of its natural habitats. No animal listed in any category of the International Union for Conservation of Nature and Natural Resources' Red Data Books shall be listed; no animal protected by either federal endangered species law or by section twenty-six A shall be listed. The special exemption list may be altered by the director after a public hearing. Any individual may possess as a pet, without a license, any animal on the special exemption list, and may continue to do so in case of subsequent removal of such animal from the list, for the lifetime of his animal, contingent upon evidence of acquisition of the animal while so listed.

The license issued by the director shall specify the degree to which fish, birds, mammals, reptiles or amphibians, or parts thereof, may be propagated, cultivated, maintained, disposed of, or dealt in, and the section of the law with respect to which such license is issued. For the granting of an individual license for an animal that is not on the special exemption list, the applicant shall satisfy the director that he can maintain in good health, properly confine and protect the animal; if however, depletion of the wild population of the species is an issue, proposed acquisition of a captive-bred animal or acquisition by a person whose ownership is likely to benefit the species shall be given preference.

A license to possess as a pet, a bird, mammal, fish, reptile or amphibian owned prior to January first, nineteen hundred and seventy-four shall, provided that any potentially injurious animal is properly confined in a suitable facility, be granted at any time to any individual upon presentation of evidence of ownership of the animal in question prior to January first, nineteen hundred and seventy-four.

A person, club or association operating under authority of a license issued as hereinbefore provided shall not sell for food fish of a size prohibited by this chapter or by any rule or regulation made under the authority thereof.

The following classes of licenses may be issued under this section:
(1) To any individual, a special propagator's license to possess, propagate and maintain fish at any time for the personal use of himself, his immediate family or guests; or to any club or association , or its members or guests; a special propagator's license to possess, propagate and maintain fish at any time for the purpose of fishing within waters under the control of such club or association for the personal use of the members and guests thereof.
(2) To any individual, club or association, a special propagator's license to possess, propagate and maintain fish for the purpose of liberation into public waters, for which there shall be no fee.
(3) To any individual, club or association, a propagator's license to possess, propagate, maintain, buy, sell or otherwise dispose of fish at any season of the year.
(6) To any individual, a dealer's license to possess, buy, sell, or offer for sale, fish, birds or mammals lawfully taken or lawfully propagated outside the commonwealth or lawfully propagated within the commonwealth.
The initial fee for a license issued in accordance with this section under clauses (1), (3) and (4) shall be seven dollars and fifty cents, and for each annual renewal thereof, five dollars; the initial fee for a license issued under clause (6) shall be seven dollars and fifty cents for one place of business and one dollar and fifty cents for each additional place of business of the same individual, and for each annual renewal thereof, the fee shall be five dollars for one place of business and one dollar and fifty cents for each additional place of business and one dollar and

fifty cents for each additional place of business of the same individual.

Any fish, bird, mammal, reptile or amphibian possessed, propagated, cultivated, maintained, sold, or offered for sale in violation of this section or of any rule or regulation made under authority thereof may be seized and shall be disposed of by the director of law enforcement for the best interest of the commonwealth.

Section 24. Dealers' licenses; sale for food purposes

The director, upon written application to him, may issue to any person a dealer's license under clause (6) of section twenty-three, authorizing the holder thereof to engage in the business of buying, selling or offering for sale, for food purposes, the carcasses, or parts thereof, of fish, birds or mammals protected by this chapter and tagged in accordance with the provisions of sections twenty-five and twenty-six and, as to fish, in accordance with such rules and regulations as the director may lawfully make; provided, that any person holding a propagator's license may sell or offer for sale, birds or mammal, alive or dead, or parts thereof, in accordance with section twenty-three without procuring a dealer's license; and provided, further, that any person licensed under clause (3) of section twenty-three, to propagate, cultivate and maintain fish, or to sell, or offer the same for sale , alive or for food purposes, may do so without procuring a license under said clause (6).

No license shall be required of any person purchasing any such fish, bird or mammal, or part thereof, for his own personal use for food, from a person holding a license under section twenty-three.

Section 25B. Destruction and disposal of diseased fish, birds, mammals, etc., under quarantine

If the director, by examination of a case of contagious or infectious disease or parasite of any fish, bird, mammal, reptile or amphibian, has imposed a quarantine as provided in section twenty-five A, and is of the opinion that the public good so requires or that the protection of the fish, bird, mammal, reptile or amphibian resources of the commonwealth is necessary or that the interest of other propagators are jeopardized, he may cause such fish, bird, mammal, reptile or amphibian to be destroyed without liability. An order for destroying shall be issued in writing by the director, shall be directed to the owner or to any person having an interest therein, or to the person in charge of such fish, bird, mammal, reptile or amphibian and shall contain such direction as to the examination and disposal of the carcass and the cleansing and disinfection of the premises where such fish, bird, mammal, reptile or amphibian was condemned as the director considers expedient. Destruction and disposal of any such fish, bird, mammal, reptile or amphibian shall be in a manner as determined by the director and shall be conducted under the direct supervision of the director or his appointed designee.

Section 25C. Fish, birds, mammals, etc., under quarantine deemed diseased; prohibited act; penalties

Any fish, bird, mammal, reptile or amphibian which has been quarantined or isolated by order or notice of the director as authorized by section twenty-five A, shall, during the continuance of such quarantine or isolation, be deemed to be afflicted with a contagious or infectious disease or parasite. Whoever knowingly breaks or authorizes or causes to be broken a quarantine so imposed or whoever, contrary to such order or notice of quarantine or isolation, knowingly removes any fish, bird, mammal, reptile or amphibian or authorizes or causes it to be removed from a building, place or enclosure where it is quarantined or isolated, or whoever, contrary to an order or notice

of quarantine, knowingly places or causes or authorizes to be placed any other fish, bird, mammal, reptile or amphibian within a building, place or enclosure, where any fish, bird, mammal, reptile or amphibian is quarantined, or in contact therewith, or knowingly causes or authorizes to be concealed , sold, removed or transported, any fish, bird, mammal, reptile or amphibian, knowing or having reasonable cause to believe that it is afflicted with a contagious or infectious disease or parasite, or whoever knowingly authorizes or permits such fish, bird, mammal, reptile or amphibian to go at large or be released to the wilds within the commonwealth, or whoever knowingly brings or authorizes or permits to be brought from another country, state, district or territory into the commonwealth any fish, bird, mammal, reptile or amphibian which is afflicted with or has been exposed to a contagious or infectious disease or parasite, shall be punished by a fine of not less than five hundred nor more than fifteen hundred dollars or by imprisonment for not more than two years, or both.

Section 26. Importation of fish, birds, mammals, reptiles or amphibians; shipments; tags; violations; seizure and disposition

Any fish, birds, mammals, reptiles or amphibians lawfully taken or lawfully propagated without the commonwealth may be purchased by any dealer licensed under section twenty-three; provided, that the export and sale is lawful in the state, province or country in which said fish, birds, mammals, reptiles or amphibians are taken or from which they are exported, as the case may be, and the import of any fish, bird, mammal, reptile or amphibian lawfully taken or lawfully propagated without the commonwealth is not in violation of said sections nineteen and nineteen A or any rule or regulation made under the authority thereof; and provided further, that all shipments shall bear the name of the consignee, the name of the consignor and, if enclosed, a statement of the contents contained therein, the tag, license or permit number, as the case may be, or the carton, package, box, or crate in which such shipped, transported or delivered to any point within the commonwealth, is attached whatever mark or identification is required by the state, province or country from which such carcasses or parts thereof are so shipped, transported or delivered; and provided further, that such sale, transportation, or export is not contrary to federal legislation or regulation. The burden of proof that skins of mammals and reptiles subject to this section were lawfully taken shall be upon the person possessing the same.

Every dealer purchasing or dealing in any birds or mammal subject to this section shall, before offering the same for sale, attach to the body of each bird or mammal or part thereof a numbered tag as provided in section twenty-five. Each dealer purchasing or dealing in any fish subject to this section shall, before offering the same for sale, attach to each container thereof such identification mark as the director may prescribe by rule or regulation which he is hereby authorized to make. Any tags required hereunder for fish shall be furnished by the director at cost.

Any fish, bird, mammal, reptile or amphibian possessed, shipped, transported or delivered in violation of this section or of any rule or regulation made under the authority thereof may be seized and shall be disposed of by the director of law enforcement for the best interest of the commonwealth.

Section 47. Riparian proprietors; enclosure of waters

No riparian proprietor of natural pond other than a great pond, or of an artificial pond of any size, or of a non-navigable stream, shall enclose the waters thereof within the limits of his own premises unless he furnishes a suitable passage for all anadromous fish naturally frequenting such waters to spawn; nor shall any riparian proprietor enclose the waters of any such pond or stream

for the purpose of artificial propagation, cultivation and maintenance of fish, except shiners as authorized in section fifty-two, unless he first procures a propagator's license under section twenty-three authorizing him so to do.

A person, without the written consent of the proprietor or lessee of a natural pond which is not a great pond or of an artificial pond of any size or of a non-navigable stream, where fish are lawfully propagated or maintained under the authority of a license under this chapter, shall not take or attempt to take, fish therefrom.

Extracted from 321 CMR: Division of Fisheries and Wildlife

4.08: Sale of Protected Fresh Water Fish by Licensed Dealers in Massachusetts

(1) All dealers' licenses shall be kept constantly and publicly posted in the office or place of business of the licensee.
(2) All fish sold by licensed dealers must be either tagged or packaged. If packaged in cartons, boxes, barrels, cans or other type of containers or wrappers, said containers or wrappers must be plainly marked or labelled with the following information:
(a) Name and address of supplier and producer.
(b) Kind, number and net weight of fish contained therein.
(3) Tags, containers or wrappers with the above information must be held by the consumer until said fish are consumed.
(4) All dealers shall keep invoices of fish so purchased under their licenses, and said invoices shall be available for inspection at reasonable times by the Director of the Division of Fisheries and Wildlife and/or the Director of the Division of Law Enforcement or their duly authorized agents.
(5) Tags, if used, will be supplied to dealers by the Division of Fisheries and Wildlife at reasonable cost.

4.09: Artificial Propagation and Maintenance of Fish

(8) The licensee shall keep a record of all fish disposed of, whether for propagation or otherwise, which shall be furnished to the Director within ten days following a written request.

9.01: Exemption List

Pursuant to the authority granted me in MGL c 131, s. 23, I herewith establish the following exemption list. This list includes wild (i.e., non-domesticated) vertebrate animals which may be imported, sold or possessed without a permit. Listed species are exempt from the licensing provisions of MGL c 131, s. 23, Note, however, that listing below does not affect other licensing requirements which may be applicable under Federal, State, or local laws, including special endangered species and export restrictions of other states.
(3) FISH. With the exception of species meeting criteria listed in 321 CMR 9.01(1), all aquarium trade fish are exempt except:
(a) Piranha or Pirambaba (Serrasalmus spp.)
(b) Walking Catfish (Clarias spp. and all members of the family Clariidae)
(c) Grass or Grass-cutting Carp (Ctenopharyngodon idella).

VIIMASSACHUSETTS

Division of Marine Fisheries

Extracted from Massachusetts General Laws Annotated, V19

Chapter 130

Section 17B. Notwithstanding the provisions of this chapter, the director may by issuance of a written permit under such terms and conditions as he may impose, authorize the possession and taking of fish at any season and of any size for purposes of propagation, rearing, harvesting or sale in connection with an aquacultural enterprise in which the fish being so propagated, reared, and harvested are kept separate from natural stocks of the same species.

VIII NEW HAMPSHIRE

Fish and Game Department

Extracted from New Hampshire Code of Administrative Rules

Importing or Releasing Wild Life

207:14 Importing and Releasing

Except as provided by RSA 207:14-a and 14-b, no living fish or the fry or the eggs of such fish, no living wild bird or its eggs, and no living wild animal shall be brought into this state by any person from any other state or country without first procuring a permit from the executive director to do so. The fee for such permit shall be $10. The executive director may refuse to issue a permit for such entry into this state upon a finding that their introduction would be detrimental to the best interests of the state.

207:14-a Director's Power to Regulate

The director may with the approval of the commission establish a list allowing certain living fish or the fry thereof, certain living wild birds or the eggs thereof, or certain living wild animals to be brought into this state, for the sale or release therein, from any other state or country without obtaining a permit as required by RSA 207:14.

207:14-b Exceptions

The following fish, birds and animals will be exempt from the provisions of RSA 207:14 and 14-a and shall not require a fish and game importation permit:
(I) Tropical fish commonly imported and sold for aquarium use, including ornamental goldfish. Specifically excluded from this category and requiring an importation permit are walking catfish, white amur, caribe (unless otherwise exempt) and piranha (Serrasalmus species).

207:15 Releasing Fish and Wildlife

No person shall release in this state any living fish, the fry or the eggs thereof, any living wild bird or the eggs thereof, or any living wild animal, without first procuring a permit from the

director so to do.

207:15-a Seizure

All fish or the fry thereof, living wild birds or the eggs thereof or wild animals imported or released in this state contrary to the provisions of this subdivision shall be seized and forfeited as provided in RSA 207:17.

Fis 406.07 Importation of Finfish for Bait

(a) Licensed bait dealers shall obtain the permit described in Fis 1104.03 before importing any shipment (or lot) of bait fish from hatchery sources or wild stock.

(b) Such permits shall be issued to import only:

Scientific name	**Common name(s)**
Catostomus commersoni	common/white sucker
Erimyzon oblongus	creek chub sucker
Fundulus sp	tomcod/killifish
Notemigonus crysoleucas	golden shiner/Arkansas shiner
Notropis cornutus	common shiner/redfin
Notropis hudsonius	spot tail shiner
Hybagnathus regius	hunt's shiner/silvery minnow
Notropis atherinoides	emerald shiner
Couesius plumeus	Northern/lake chub
Semotilus atromaculatus	Northern creek chub
Semotilus corporalis	fallfish

(c) Smelt shall not be imported, except as provided in section (g).

(d) Dealers shall not import a greater quantity of bait fish than the quantity specified on the permit.

(e) Except as provided in section (g), the following restrictions shall apply to the importation of bait fish from hatchery sources:
(1) Hatchery source is defined as a facility wherein all fish contained originated from eggs from within the facility or from eggs from another hatchery source.
(2) Before such permit to import shall be granted, an onsite inspection of the hatchery source from which imports are intended shall be conducted by a qualified personnel or agent approved by the executive director.
(3) Inspection shall include but not be limited to the following:
a. observation of all fish in the rearing pools (tanks, raceway);
b. pathological examination of a minimum of 12 fish from each lot and year class in the facility;
c. examination for fish pathogens such as, but not limited to Edwardsiella tarda, Bothriocephalus acheilognath, Pleistophora ovariae, Cryptobia sp (excluding ectoparasite species) and Sanguinicola sp.
(4) An inspection report, signed by the approved agent(s) shall be submitted to the executive director. The report shall include the following information:
a. Date of inspection.

b. Name of hatchery facility
c. Species, age in months, number of fish in, and the source of eggs and/or fish for each lot examined.
d. Pathogens inspected for, methods of determination and the results for each lot examined.
e. Verification that the facility is a hatchery source by definition.
(5) The executive director shall approve those hatchery source bait fish for importation, only when in his opinion, the fish are not infected with any biological pathogen that may be detrimental to the resources of the state. The data of importation from an approved hatchery source shall be within 6 months of the inspection.

(f) Except as provided in section (g), the following restrictions shall apply to the importation of bait from non-hatchery sources (wild/feral fish):
(1) Before such permit to import wild fish for bait shall be granted, an onsite inspection of the previously harvested non-hatchery fish shall be conducted by qualified personnel or agent approved by the executive director.
(2) The inspection shall include but not be limited to the following:
a. observation of fish in the holding facilities.
b. pathological examination of a minimum of 12 fish obtained from each pool or pen from which shipments are intended.
c. examination for fish pathogens such as, but not limited to Edwardsiella tarda, Bothriocephalus acheilognathi, Pleistophora ovariae, Cryptobia sp (excluding ectoparasitic species) and Sanguinicola sp.
d. phases (f)(2)a. and (f)(2)b. of the inspection need not be conducted by the same examining agent. If multiple agents are utilized, each must be separately approved by the executive director.
(3) Upon completion of the sampling phase of the inspection, no fish shall be added to the pools or holding facilities.
(4) An inspection report, signed by the approved agent(s) shall be submitted to the executive director. The report shall include the following information.
a. Date of inspection.
b. Species and approximate number of fish in pen or pool.
c. Source of fish (pond or stream, town or city and state or province).
d. Pathogens inspected for, methods of determination and results for each pen or pool examined.
(5) The executive director shall approve those non-hatchery bait fish for importation only when in his opinion the fish are not infected with any biological pathogen that may be detrimental to the resources of the state. The date of importation shall be within 90 days of the inspection.

(g) All bait fish listed in section (b) and smelt may be imported without a previous inspection of the source provided said fish are in good condition and natal to the following geographical areas:
(1) States of Maine, Vermont, Massachusetts, Connecticut, Rhode Island, and New Jersey.
(2) States of New York and Pennsylvania except the Great Lakes and their tributaries.
(3) That section of the Province of Quebec, Canada which is bordered: to the south by the United States; to the west by Highway F 15; to the north by Highway F 20; and to the east by Highway P 173.

(h) All shipments of imported finfish for bait shall be accompanied with a statement signed by the shipper indicating the species and the source of said fish.

(i) Any person who does not comply with the reporting requirements set forth in Fis 406.08 shall not be issued a permit.

Fis 1104.02 Importing Fish

(a) Applicants for a permit to import fish under RSA 207:14 shall make application on Form F&G 109, which shall include:
(1) The number, species and size of fish to be imported;
(2) The name and address of the source of said fish;
(3) The type and number of the license held by applicant;
(4) The type of federal permits, if any, held by applicant;
(5) The date proposed for said importation;
(6) The purpose of said importation;
(7) The name and address of applicant.

(b) A valid permit to import fish shall be issued on Form F&G 53 (revised 5/79) which shall include:
(1) The name and address of the permittee;
(2) The number, species and size of fish authorized for importation;
(3) The name and address of the source of said fish;
(4) The name of the conservation officer who shall be notified, in advance, of the date and time of arrival in the state of said fish, and who shall inspect same;
(5) The date of issuance;
(6) The date of expiration;
(7) The signature of the executive director.

Fis 1104.03 Importing Bait Fish

(a) Applicants for a permit to import bait fish under RSA 214:34-d shall make application on Form F&G 65, which shall include:
(1) The date of application;
(2) The number and species of bait fish to be imported;
(3) The name and address of the source, and the name and location of the waters of origin, of the bait fish;
(4) The location to which said bait fish will be delivered, and the date said delivery is to occur;
(5) The permittee's bait dealers license number, signature and address.

(b) A valid permit to import bait fish shall be issued on Form F&G 501, which shall include:
(1) The name and address of the permittee;
(2) The number and species of bait fish authorized for importation;
(3) The name and address of the source of said fish;
(4) The name of the conservation officer who shall be notified, in advance, of the date and time of arrival in the state of said bait fish, and who shall inspect same;
(5) The date of issuance;
(6) The date of expiration;
(7) The signature of the executive director.

Fis 1104.05 Releasing Fish

(a) Applicants for a permit to release fish under RSA 207:15 shall make application on Form F&G 132, which shall include:
(1) The number and species of fish to be released;
(2) The name and address of the source of said fish;
(3) The town, and the body of water into which the fish will be released;

(4) The date the release will occur;
(5) The name and address of the applicant.

(b) A valid permit to release fish shall be issued on department letterhead, which shall include:
(1) The name and address of the permittee;
(2) The numbers, sizes and species of fish authorized for release;
(3) The name and address of the source of the fish;
(4) The town, and body of water into which the release of fish is authorized;
(5) The date for which release is authorized;
(6) The date of expiration;
(7) The signature of the executive director.

F&G No. 109
Rev. 1/87

State of New Hampshire

Fish and Game Department
34 Bridge Street, Concord, N.H 03301

APPLICATION FOR PERMIT TO IMPORT FISH

Under the requirement of RSA 207:14, application is hereby made to import

---------- of ----------
(no. of fish) (Species and size of fish)

from ----------
(Source - Name and address)

Type of license (if applicable) held by applicant ----------

License Number ----------

Date Import is to be made ----------
(Permit good for 30 days only)

Purpose of Import ----------

Price $10.00 ----------

Fee .50 ----------

Total $10.50 ----------
(Name, address and zip code)

F&G 65
Rev/ 1/87

STATE OF NEW HAMPSHIRE
FISH & GAME DEPARTMENT
34 BRIDGE STREET, CONCORD, N.H 03301

As required by RSA 214:34-d, application is hereby made to import into the State of New Hampshire the following fish to be used as bait:

Date ---------- 19 -----

---------- ----------

(Number of fish to be imported) (Name of Fish (see list below))

(Give name and address of dealer and

---

name and location of waters of origin)

To be delivered to: ----------
(Destination)

on: ----------
(Date)

Five day notification of each intent to import shall be filed with local conservation officer.

Bait dealers license

number ----------

Signature

---------- Address

Permits will be issued only for the following fish:
Smelt
Common sucker
Fallfish
Golden shiner
Fundulus (Tom cod)
Creek chub sucker
Common shiner (Red-fin)
Spot tail shiner
Northern chub
Northern creek chub
Emerald shiner

Price	$9.50
Fee	.50
Total	$10.00

IX. NEW JERSEY

Department of Environmental Protection
Division of Fish, Game and Wildlife

Extracted from Title 23, New Jersey Statutes Annotated.

Article 6A. Propagation of Fish

23:5-33.1. Placing fish in fresh water; penalty; permit

Fish or fish eggs shall not be placed into, turned into, drained into, or placed where they can run, flow, wash or be emptied into, or where they can find their way into any of the fresh waters of the State unless a permit is first obtained from the division, under a penalty of $100.00 for each offense. No permit shall be required to place fish or fish eggs in an aquarium or waters privately owned and having no inlet or outlet.

X. NEW YORK

Department of Environmental Conservation
Bureau of Fisheries

Extracted from Environmental Conservation Law of the State of New York.

Part 11-0325. Control of dangerous diseases.

1. Whenever it is jointly determined by the Department of Environmental Conservation and the Department of Health or the Department of Agriculture and Markets, and certification is made to the Commissioner of Environmental Conservation by the Commissioner of Health or the Commissioner of Agriculture and Markets, that a disease, which endangers the health and welfare of fish or wildlife populations or of domestic livestock or of the human population, exists in any area of the state, or is in imminent danger of being introduced into the state, the department shall adopt measures or regulations with respect to the taking, transportation, sale offering for sale or possession of native fish or feral animals it may deem necessary in the public interest to prevent the introduction or spread of such disease. The department may undertake such fish or wildlife control measures it may deem necessary to eliminate, reduce or confine the disease.
2. Whenever it is determined by the Department of Environmental Conservation that an epizootic disease which endangers the health and welfare of native fish or feral animal populations only, exists in any area of the state, or is in imminent danger of developing or being introduced into the state, the department may adopt by order any measures or regulations with respect to the taking, transportation, sale, offering for sale or possession of native fish or feral animals deemed necessary in the public interest to prevent the development, spread or introduction of such disease.

Part 11-0507. Liberation of fish and wildlife.

1. Fish or fish eggs shall not be placed in any waters of the state unless a permit is first obtained from the department; but no permit shall be required to place fish or fish eggs in an aquarium.

Part 11-1703. Importation, possession and sale of fish without license or permit; prohibitions.

1. Except as provided in subdivision 3 and subdivision 4; (a) all species of fish taken outside the state, except trout, black bass, muskellunge and landlocked salmon other than Atlantic salmon, may be imported and transported by any means and in any number, and may be possessed, bought and sold without permit or license, during the open season; (b) Atlantic salmon taken outside the state may be imported, transported, bought and sold at any time.
2. Except as provided in subdivision 3 and subdivision 4, any person may, during the closed season, without license or permit, and without limitation by section 11-1707, transport into the state, buy, possess, transport and sell, lake sturgeon, lake trout, whitefish, pickerel, pike, walleye and striped bass taken outside the state, provided he keeps a record and enters therein the name, residence and post office address of every person from whom he buys and every person to whom he sells or ships such fish. But this subdivision does not require that a record be kept of persons to whom such fish are sold for personal or home consumption, nor by persons who purchase in this state for consumption and not for resale. A person required by this subdivision to keep records shall permit the department or its agents to examine all books and papers relating to such purchase and sale at any time and shall on demand furnish invoices, freight or express receipts used in such transactions.
3. (a) No person shall sell, offer for sale or expose for sale, under the name or designation of Lake Champlain fish, any fish other than fish that have been taken from the waters of lake Champlain, its bays, coves or tributaries, the Missisquoi Bay or the Richelieu River. No person shall wilfully and with intent to deceive, affix, apply or annex, or use in connection with any fish, or any container of the same, any words or other symbols, tending falsely to identify the origin of the contents as the waters described in this paragraph;
(b) No person shall possess or transport into the state any fish except eels caught in that part of Missisquoi Bay in Lake Champlain lying in the Province of Quebec or in the Richelieu River.
4. Fish of the following species taken outside the state shall not be bought or sold or otherwise trafficked in if they are of less than the size limits specified in this subdivision or in the sections to which it refers:
a. striped bass, fluke or summer flounder, blue porgie, weakfish, mackerel, sea bass, king fish, cod fish, blackfish, winter flounder, all as specified in section 13-0339;
b. lake trout, pickerel, Atlantic sturgeon, Atlantic (landlocked) salmon, whitefish, northern pike, all as specified in regulations of the department.
5. Fish named in subdivision 4 of less than the size limits specified, may be imported, transported and possessed as provided in section 11-1707.
6. No person shall import, export, own, possess, acquire or dispose of live piranha fish (Serraslmus, Rooseveltiella or Pyrocentrus), grass carp (Ctenopharyngodon idella) or hybrid grass carp within the state without a license or permit issued at the discretion of the department for scientific, biological or exhibition purposes.
7. Fish, except those specified in subdivision 6 of this section, may be imported and transported at any time, for propagation purposes, and the provisions of section 11-1707 do not apply.

Part 11-1707. Importation and possession of nonsalable fish, game and wildlife and saleable fish, game and wildlife imported during the closed season.

1. (a) Carcasses or parts thereof, of trout, black bass, muskellunge and landlocked salmon, other than Atlantic salmon, and fish, the sale of which is prohibited by subdivision 4 of section 11-1703, and of wildlife (other than migratory game birds), sale of which without license or permit is not authorized by section 11-1705, may be imported during the open season as provided in subdivision 2, and may be imported during the closed season as provided in subdivision 3 or subdivision 4.

(b) Carcasses and parts thereof, of other fish and wildlife, may be imported during the closed season as provided in subdivisions 3 or 4.

2. During the open season, carcasses described in paragraph (a) of subdivision 1 may be transported by the taker from without to within the state, without permit or license, in any manner except by parcel post, provided that if they are shipped by carrier, they or the parcel containing them shall have attached a card or label showing the name and address of the taker, the name address of the consignee, and if the shipment is a package, the nature of its contents.

3. During the closed season, the taker may transport carcasses or parts thereof of any fish or wildlife (other than migratory game birds), from without to within the state, provided he accompanies them and has with him a license issued by the department permitting such transportation; or he may ship such carcasses or parts thereof by carrier except parcel post if he has obtained a license issued by the department permitting such transportation and if the carcasses or the package containing them has attached thereto a card or label showing the name and address of the taker, the name and address of the consignee, and if the shipment is a package, the nature of its contents; or he may import into the state and transport therein carcasses and parts of lawfully taken big game animals without such license, provided he accompanies them and the carcasses and parts are tagged and identified in accordance with the laws of the jurisdiction where the big game animal was taken.

4. From September 1 to February 10 any resident of the state may cause to be transported, from without to within the state, in any manner except parcel post, (a) carcasses of fish and wildlife described in paragraph (a) of subdivision 1, or (b) carcasses of other fish and wildlife (other than migratory game birds) for which there is no open season at the time of such transportation , if he first obtains a license from the department permitting such transportation, and if the shipment has attached a tag showing the name and address of the shipper, and the name and address of the licensee and the number of his license permitting such transportation. The department may refuse to issue such a license to any person for any reason it deems sufficient.

5. Carcasses of fish and wildlife imported as provided in subdivision 2 or subdivision 3 may be possessed and transported within the state at any time. Carcasses of fish and wildlife imported pursuant to subdivision 4 may be possessed by the licensee and transported by him within the state during the term of the license and for thirty days immediately following.

Part 11-1709. Importation and transportation of certain fish or fish eggs.

Notwithstanding any other provision of the Fish and Wildlife Law the department may establish by order regulations governing the importation from without the state or transportation within the state of any live fish or viable eggs of any species of the family Salmonidae (trout, salmon, whitefish and grayling).

Part 11-1909. Private trout and black bass hatcheries.

1. The department in its discretion may issue to any person a hatchery permit, valid during the calendar year of issue, to propagate, raise and sell trout. The department shall establish by order regulations governing the identification of trout raised under such a permit which are offered for sale, sold or transported.

2. The department in its discretion may issue to any person a hatchery permit, valid during the calendar year of issue, to propagate, raise and sell black bass for propagation or stocking purposes. The department shall establish by order, regulations governing the transportation of black bass raised under such a permit.

Marine and Coastal Resources

Part 13-0316. Marine hatcheries; off-bottom and on-bottom culture permits.

a. Marine hatcheries. The department, in its discretion, may issue permits for operation of marine hatcheries. No person shall operate a marine hatchery without first obtaining a permit from the department. The fee for such permit shall be one hundred dollars annually, except that political subdivisions of the state shall be issued permits without fee. Each such permit shall expire on December 31 of the year of issue. A marine hatchery permit entitles the holder thereof, notwithstanding any other provision hereof, to possess, raise and breed marine plant and animal life, including but not limited to shellfish, lobster, crab, shrimp and food fish and to sell the products of a marine hatchery, where less than legal size, to other permitted marine hatcheries, persons holding a valid off-bottom or on-bottom culture permit, persons holding a valid permit issued pursuant to section 11-0515 of this chapter, and subject to department rules and regulations, to individual or commercial markets for consumption or resale. Products of a marine hatchery of legal size may be sold for consumption or resale. The department may by order make regulations with respect to the purchase, sale, harvesting, transplanting, relaying, receiving, possessing, transporting, exporting or otherwise trafficking in products of a marine hatchery including the sale to individual or commercial markets for consumption or resale.
b. Off-bottom and on-bottom culture. The department, in its discretion, may issue permit for off-bottom and on-bottom culture of marine plant and animal life, including but not limited to shellfish, lobster, crab, shrimp and fish. No person shall engage in such off-bottom or on-bottom culture without first obtaining a permit from the department. The fee for such permit shall be one hundred dollars annually, except that political subdivisions of the state shall be issued permits without fee. Each such permit shall expire on December 31 of the year of issue. No such permit shall be issued unless the applicant has obtained any necessary permits or licenses required under any state or federal law and has obtained the written authorization of the person or political subdivision having title or legal control of the underwater lands on or above which such an on-bottom or off-bottom culture shall take place. An off-bottom or on-bottom culture permit entitles the holder thereof, notwithstanding any other provision hereof, to purchase and possess, from within or without the state, marine plant and animal life of legal and less than legal size for purposes of off-bottom and on-bottom culture only and, subject to department rules and regulations, to sell such marine animal and plant life of less than legal size. Products of off-bottom and on-bottom culture of legal size may be sold to individual or commercial markets for consumption or resale. The department may by order make regulations, necessary to protect the marine environment and public health and safety, with respect to the construction, marketing and maintenance of off-bottom and on-bottom culture structures and the purchase, sale, harvesting, possessing, transporting, importing, exporting, or otherwise trafficking in products of off-bottom or on-bottom culture of marine animal and plant life.

XI. RHODE ISLAND

Department of Environmental Management
Division of Fish and Wildlife

Extracted from Title 20 of General Laws of Rhode Island.

Chapter 17 Artificial Propagation of Game

20-17-9. Importation of live fish and game.

The director may by regulation prohibit or otherwise regulate the importation of any live fish,

birds, or animals from any other state or from a foreign country which is not regulated by the Department of Health under Chapter 4-18 of the general laws.

XII. VERMONT

Agency of Natural Resources
Department of Fish and Wildlife

Extracted from Vermont Fish and Game Regulations Governing Importation of Fishes, Amphibians, and Reptiles.

It is the purpose of this supplement to the Vermont Fish and Game importation regulations to carry out the mandate of the Vermont General Assembly to control, through a permit program, the importation of fish into the State of Vermont, as provided in Title 10, Chapter III, sections 4605 and 4610 VSA, and to further include in such program members of two vertebrate classes, amphibians and reptile , not previously distinguished under the definition of wild animals. It is the purpose of this supplement to the Vermont Fish and Game importation regulations to protect the health and welfare of animals (fish, amphibian, reptiles, birds, and mammals), both domestic and wild, and to protect the health, safety and welfare of human inhabitants of the State of Vermont.

Rule 1 - Definitions.

(a) Amphibians - All frogs, toads, and salamanders.
(b) Board - The Vermont Fish and Game Board, or its delegated authority.
(c) Dealer - A person who buys, sells or trades in fishes,, amphibians, or reptiles or eggs thereof.
(d) Department - The Vermont Fish and Game Department.
(e) Fishes - All fresh water fish and any saltwater fish capable of adapting to fresh water.
(f) Person - An individual, association, corporation, partnership, or municipality.
(g) Pet Shop - A store or department of a large store which buys, sells, or trades in fishes, amphibians, or reptiles or eggs thereof.
(h) Reptiles - All snakes, lizards, turtles, alligators, crocodiles, and caimans.
(i) Salmonid - Any fish of the family Salmonidae, trout, salmon, and char.
(j) State - The state of Vermont.

Rule 2 - Importation of Fishes, Amphibians, and Reptiles.

No person shall bring any live or dead fishes, amphibians, or reptiles, or any live or dead eggs thereof into the State of Vermont, unless, prior to such importation, the person obtains from the Board a permit to do so.

Rule 3 - Importation Permits.

The Board shall issue a permit for the importation of live or dead fishes, amphibians, or reptiles, or live or dead eggs thereof, if it finds that the fishes, amphibians, or reptiles proposed to be brought into the State will not be detrimental in any way to resident fish and wildlife resources, domestic birds and animals, or to the safety and health of the people of the State, under such conditions as the Board may require. The Board shall issue its permit or denial of an application within thirty (30) days of receipt of a complete and adequate applications submitted on a form provided by the Department, as hereinafter described.

Rule 4 - Dealers Permits.

(a) - All commercial dealers in the State including, but not limited to, bait dealers, pet shop owners, private hatchery managers, and anyone raising frogs for sale as institutional experimental animals, and all other persons who import and sell fishes, amphibians, and reptiles must obtain a dealers permit in addition to an importation permit.
(b) - The Board shall determine after receiving the completed application whether a person seeking an important permit to bring fishes, amphibians, or reptiles into the State is doing so for commercial purposes and shall issue a dealer's permit to sell such animals in conjunction with the issuance of an importation permit. Individuals not qualifying as dealers on the basis of required information on the application will be considered for an importation permit only. Holders of importation permits may not sell animals imported into the State as provided here without having a dealer's permit in possession.
(c) - Dealers shall apply for amendments to their importation permits before importing additional species.
(d) - Dealers shall renew their importation permits each year on the date of first issuance.

Rule 5 - Issuance Criteria.

1. Salmonids - In addition to the criteria contained in Rule 3, herein-before, the Board shall consider the following criteria in determining whether to issue a permit for the importation of Salmonids:
(a) - Whether live fish or eggs of the family Salmonidae proposed for importation, including brook trout, brown trout, rainbow trout, steelhead rainbow trout, lake trout, hybrid crosses, Atlantic salmon, landlocked salmon, and all Pacific salmon, are a potential threat to the fisheries resources of the State through disease or competition.
(b) - Whether live fish or eggs of the family Salmonidae proposed for introduction into the waters of the State, or for hatching and rearing privately, are free of all disease organisms such as Myxobolus cerebralis which causes Whirling Disease, and other pathogens which cause Egtved disease (viral haemorrhagic septicemia), IPN (infectious pancreatic necrosis), IHN (infectious haematopoietic necrosis), and any other such infectious organisms as the Board may specify.
(c) - Whether dead fish or eggs of the family Salmonidae intended for sale as food for human consumption, or brought into the State by fishermen for consumption or trophy, are adequately processed or disposed of to guard against diseases which may be detrimental to the fisheries resources of the State, both wild and cultured, and to the health of humans within the State, and whether such processing or disposal methods are used to insure the destruction of the protozoan Myxobolus cerebralis and such other infectious organisms as the Board may specify. Burying at least 100 feet from stream or lake shore, or incineration, is considered adequate disposition of salmonid remains. The subsection (c) shall not, however, establish a permit requirement for trophy Salmonids already stuffed or mounted outside the State.

2. Other Fish, Reptiles, and Amphibians - The Board shall consider the following criteria in determining whether to issue a permit for the importation of other fresh water fishes, amphibians, and reptiles:
(a) - Whether such other fresh water fishes, amphibians, and reptiles are carriers of parasites and diseases which may infect humans or resident species belonging to any of these three groups of animals.
(b) - Whether such other fresh water fishes, amphibians, and reptiles may be a significant competitor with resident fish and wildlife for food and habitat.
(c) - Whether such other fresh water fishes, amphibians, and reptiles may be destructive to habitat.
(d) - Whether such other fresh water fishes, amphibians, and reptiles may be a threat to the

physical well-being of resident fishes, wildlife, or humans.
(e) - Whether such other fresh water fishes, amphibians, and reptiles may pose any other threat to public or private interests as may be determined by the Board.

3. Public Health, Safety and Welfare - In addition to the foregoing criteria, the Board shall make specific findings with regard to the public health, safety and welfare in granting or denying applications.

Rule 6 - Applications.

(a) - Application for an individual or a dealer's importation permit to bring into the State any live or dead fishes, amphibians, or reptiles, or any live or dead eggs thereof shall be made to the Department of an application form to be provided by the Department to the applicant.
(b) - With regard to salmonids and such other fishes as the Board may direct, the applicant shall present to the Department as a requirement of the permit a written certification that the source of fish or eggs, alive or dead, is free of disease organisms such as Myxobolus cerebralis which causes Whirling disease, and other pathogens which cause Egtved disease (viral haemorrhagic septicemia), IPN (infectious pancreatic necrosis), IHN (infectious haematopoietic necrosis), and such other infectious organisms as the Board may specify. Such certification shall be made in the state of origin by recognized qualified fish pathologist either Federal, Provincial, or State. Certification shall be made by inspection of the fish and the Hatchery of source.
The required certification shall consist of a statement in the English language, printed or typewritten, stating that the shipment of fish and eggs throughout the permit period are free of the specific causative agents of the diseases listed in paragraph (b) above and are of such other organisms as the Board may direct.
(c) - Nothing in these regulations, unless otherwise directed by the Board, shall require disease-free certification of fishes intended for display in aquariums, goldfish, bait minnows, amphibians, and reptiles.
(d) - Samples of application forms approved by the Department of Interior are attached as supplements hereto.

Rule 7 - Certain Poisonous and Endangered Species Prohibited.

(a) - Permit shall not be issued for importation into Vermont of any North American poisonous snakes, including rattlesnakes, copperheads, moccasins, and the eastern coral snake; or any other poisonous snakes from foreign countries; the Asian fish (Ctenopharyngodon idellus) known as white amur or grass carp; and any other species of fish, amphibians, or reptiles as may be determined by the Board to be harmful to the public health, safety or welfare or to pose an undue threat to Vermont wildlife.
(b) - No species of fishes, amphibians, or reptiles that are considered endangered or threatened by State or Federal agencies shall be permitted into the State unless the Board determines that the intent of such importation is for scientific purposes or for purposes of re-establishment.

Rule 8 - Inspections.

(a) - Persons holding a dealer's permit for fishes, amphibians, and reptiles shall allow inspection at reasonable times of their premises, facilities, records and animals by State Game Wardens or other duly authorized persons as the Board may direct. (And at such time as may be established by the Board.)
(b) - Importation and Dealer's permits shall be kept on the premises of the permittee and shall be available for inspection by any state or municipal official. If possible, the permit shall be

framed and publicly displayed at the location referred to in said permit.

Rule 9 - Retention Facilities.

All fishes, amphibians, and reptiles imported into the State shall be provided with adequate facilities designed and constructed to prevent escape and excessive public handling. All shall be kept under such conditions as may be applicable and suitable to the specific habitat requirements of each, and shall be appropriately fed and cared for.

Rule 10 - Quarantine, Destruction or Sterilization Where Disease is Present.

(a) - If, upon inspection, the presence of disease is confirmed by a qualified pathologist, the Department may require a period of a quarantine and treatment, the destruction of an animal or group of animals, or order whatever remedial action the Department may determine to be necessary.
(b) - Commercial hatcheries or ponds under private ownership shall be immediately sterilized and reclaimed by the Department at the expense of the owner, if upon inspection, the presence of Whirling Disease, so called, is confirmed by a qualified pathologist.

Rule 11 - Release.

No fishes, amphibians, or reptiles shall be released into public or private lands unless a person first obtains approval to do so from the Department.

Rule 12 - Hearing.

If any applicant or interested person is aggrieved by the decision of the board, he may request a hearing before the Board on his application within thirty (30) days of said decision. The hearing shall be considered a contested case and shall be held pursuant to the provisions of Vermont Administrative Procedures Act, Title 3 VSA Chapter 25.

Rule 13 - Violations; Penalty.

Any fishes, amphibians, or reptiles which are brought into the State in violation of these regulations or kept in violation of any permit issued hereunder, may be confiscated and disposed of as provided by Title 10, Section 4193 and Section 4515.

APPLICATION FOR AN IMPORTATION PERMIT

PROVISIONS

A. If a dealer, one application may list different kinds (species) of fishes, amphibians, reptiles, birds and mammals on the forms provided. A permit must be amended when permittee adds a new species after the initial permit is issued.

B. A dealer must renew his importation permit each year on the anniversary date of first issuance even though his initial importation permit has been amended as required above.

C. If mixed lots of tropical aquarium fishes, birds, etc., it will be necessary to list on a separate sheet by common or scientific name, and attach to the forms provided.

D. Return completed forms and attachments to the Vermont Fish and Game Department, Agency of Environmental Conservation, Montpelier, Vermont, 05602.

Information required from Applicant:

1. Name of Applicant: ----------

Home Address of Applicant: ----------
Street

Town County State Zip

Phone

Business Address of Applicant, if one of the following categories:

Pet Shop ---------- Bait dealer ---------- Commercial Hatchery ----------

Retail Store ---------- Other ---------- (Check One)

Street

Town County State Zip

Phone

APPLICATION-IMPORTATION OF FISHES

Common
Name ----------

Scientific
Name ----------

Number ----------

Age Class (Check One)

---------- ---------- ----------
Egg Immature Mature

State of Origin in
U.S. ----------

Country of Origin, if
foreign ----------

Name of seller or
consignor ----------

Address of seller or
consignor ----------

Disposition: (Check One)

Household pet or display ------ Sale: as household pet ------

Experimental or scientific ------ Propagation & Culture ------

Stocking ------Food ------

Other: ----------

Common
Name ----------

Scientific
Name ----------

Number ----------

Age Class (Check One)

---------- ---------- ----------
Egg Immature Mature

State of Origin in
U.S. ----------

Country of Origin, if foreign ----------

Name of seller or consignor ----------

Address of seller or consignor ----------

Disposition: (Check One)

Household pet or display ------ Sale: as household pet ------

Experimental or scientific ------ Propagation & culture ------

Stocking ------

Food ------

XIII. CANADA

Department of Fisheries and Oceans

Extracted from Fish Health Protection Regulations (made under the Fisheries Act).

Regulations Respecting the Protection of Health of Fish

Prohibition

3. No person shall import cultured fish or eggs of wild fish without an import permit.

Permits

4. Subject to section 5, a local fish health officer for a province may issue an import permit to a person who applies therefore authorizing him to import cultured fish or eggs of wild fish into that province.

5. No import permit shall be issued unless
(a) the person who applies for the permit has obtained a certificate; and
(b) the local fish health officer is satisfied that any disease or disease agent listed in Schedule IV indicated on the certificate pursuant to subsection 6(2) will not be harmful to the protection or conservation of fish in the province of importation.

Certificates

6. (1) A certificate required by paragraph 5(a) shall be issued by a fish health official certifying in respect of
(a) live cultured fish that
(i) the fish come from a source that was inspected in an approved manner and found to be free of any disease or disease agent listed in Schedule II, and
(ii) no fish, other than a fish from a source referred to in subparagraph (i), has been introduced to the source of importation within the two years immediately preceding the date of certification;
(b) eggs of wild fish, that the eggs were taken from wild fish that were inspected in an approved manner and found to be free of any disease or disease agent listed in Schedule II; or
(c) dead cultured fish, that the fish come from a source that was inspected in an approved manner and found to be free of any disease or disease agent listed in Schedule III.

(2) A certificate referred to in paragraph (1)(a), in respect of a live cultured fish, or paragraph (1)(b) in respect of eggs of wild fish, shall have indicated thereon the presence of any disease or disease agent listed in Schedule IV that has been detected in the fish during the inspection referred to in that paragraph.

Schedule I: Fish

All species and hybrids derived from species of fish belonging to the family Salmonidae, including the following genera:

Pacific salmon	Oncorhynchus spp
Danube salmon and Taimens	Huncho spp
Atlantic salmon	Salmo spp

Trout	Salmo spp
Char	Salvelinus spp
Grayling	Thymallus spp
Lenok	Brachymystax spp
Inconnus	Stenodus spp
Whitefish	Coregonus spp
Whitefish	Prosopium spp
Ayu	Plecoglossus spp

Schedule II: Disease or Disease Agents Found in Live Fish or Their Source

1. Any filterable replicating agent capable of causing cytopathic effects in the cell lines of fish specified by the Minister, including but not limited to
(a) Viral Haemorrhagic Septicemia (Egtved) (Egtved virus, VHSV)
(b) Infectious Haematopoietic Necrosis (IHNV)
(c) Infectious Pancreatic Necrosis (IPNV)
2. Whirling Disease (Myxobolus cerebralis)
3. Ceratomyxosis (Ceratomyxa shasta)
4. Furunculosis (Aeromonas salmonicida)
5. Enteric Redmouth Disease (RM bacterium)

Schedule III: Disease or Disease Agents Found in Dead Fish or Their Source

1. Viral Haemorrhagic Septicemia (Egtved) (Egtved virus, VHSV)
2. Whirling Disease (Myxobolus cerebralis)

Schedule IV: Disease or Disease Agents Found in Live Fish or Their Source

1. Myxobacterial infections
2. Motile Aeromonad Septicemia (Motile Aeromonas sp)
3. Pseudomonad Septicemia (Pseudomonas spp)
4. Vibriosis (Vibrio spp)
5. Bacterial Kidney Disease (Renibacterium salmoninarum)

Penalty: As outlined under the Fisheries Act, Chapter F-14.

61. (1) Except as otherwise provided in this Act, every person who contravenes any provision of this Act or the regulations is guilty of an offense and liable on summary conviction to a fine not exceeding five thousand dollars or to imprisonment for a term not exceeding twelve months or to both.

XIV. NEW BRUNSWICK

Extracted from New Brunswick Fishery Regulations (made under the Fisheries Act).

(8) No person shall, except with the written permission of the Minister, introduce into any waters of the Province or into any tidal waters adjacent to the Province any fish that is not native or indigenous to those waters.
(9) Any container that has been used to transport any fish described in subsection (8) shall be disposed of as directed by the Regional Director.

XV. NEWFOUNDLAND

Extracted from Newfoundland Fishery Regulations (made under the Fisheries Act).

5. (1) Subject to subsection (2), no person shall introduce live fish into any waters of the Province or transfer such fish from any waters of the Province to any other water thereof.
(2) The Minister may authorize the introduction into the waters of the Province, or the transfer from any waters of the Province to any other waters thereof, of any fish that
(a) do not have any disease that may be harmful to the protection and conservation of fish in the Province; and
(b) will not have an adverse affect on
(i) the stock size of fish in the Province; and
(ii) the genetic characteristics of fish or fish stocks in the Province.

XVI. NOVA SCOTIA

Extracted from Nova Scotia Fishery Regulations (made under the Fisheries Act).

17.1 (1) Subject to subsections (2) and (3), no person shall, except under a permit issued pursuant to subsection (4),
(a) introduce into any waters of the Province any fish or portion thereof: or
(b) transfer any fish or portion thereof from any waters of the Province to any other waters of the Province.
(2) Shellfish taken in the waters of the Province of New Brunswick or the Province of Prince Edward Island may be introduced into any waters of the Province, other than the waters of Cape Breton Island, without the permit referred to in subsection (1).
(3) Shellfish taken in the waters of the Province may be transferred from any waters of the Province, other than the waters of Cape Breton Island, without the permit referred to in subsection (1).
(4) The Minister may issue permits permitting the introduction of fish into the waters of the Province, or the transfer of fish from any waters of the Province to any other waters of the Province for commercial or research purposes if
(a) such fish are certified to be free of disease; and
(b) the introduction or transfer of such fish to an area will not adversely affect fish in that area.

XVII. PRINCE EDWARD ISLAND

Extracted from Prince Edward Island Fishery Regulations (made under the Fisheries Act).

Part II Fishing Methods and Equipment

General Prohibitions

7. (1) Except under a permit, no person shall introduce into the waters of the Province any fish that are not native or indigenous to those waters.
(2) Subsection 1 does not apply to shellfish taken from the coastal waters of the provinces of Nova Scotia and New Brunswick.

XVIII. QUEBEC

Extracted from Quebec Fishery Regulations (made under the Fisheries Act).

Restocking

13. No person shall, except under a permit in writing from the Minister,
(a) transfer live fish from waters in which they are caught to other waters;
(b) catch fish and keep them in a pond for the purpose of extracting their eggs for breeding or restocking;
(c) extract fish eggs for the purpose of breeding or restocking;
or
(d) deposit anywhere fish eggs or live fish.

Import and Export

14. (1) Subject to subsection (2), no person shall, except under a permit in writing from the Minister, bring into or export from the Province live fish or live fish eggs for the purpose of rearing or stocking or for use as bait.
(2) Subsection (1) does not apply to exotic fish or to fish that are unable to survive naturally in the waters of the Province.
(3) Subject to subsection (4), no person shall ship out of the Province any dead fish
(a) of a species named in subsection 7(1) or (2); or
(b) of any other species the sale of which is prohibited by a provincial regulation.
(4) Subsection (3) does not apply to a non-resident who takes out of the Province any fish caught by the non-resident in the Province.

Hatchery Establishments

28. (12) No person shall rear, transport live or deposit fish in the waters of the Zones set out in Schedule XIV except
(a) in Zone II of the said Schedule, speckled trout, grey trout, Quebec red trout, ouananiche or anadromous Atlantic salmon; or
(b) in Zone III of the said Schedule, speckled trout, sea trout, grey trout, Quebec red trout, rainbow trout, brown trout, ouananiche, anadromous Atlantic salmon, hybrids of those salmonids or smallmouth bass.
(14) Paragraph (12)(a) shall come into force two years after its publication in the Canada Gazette.
(15) No person shall introduce into Zone II of Schedule XIV fish or fish eggs of a species other than those mentioned in paragraph (12)(a).
(16) Notwithstanding subsection (12) but subject to section (17), bait fish may be reared, possessed and transported in Zones II and III of Schedule XIV.
(17) Notwithstanding subsection (12), rainbow trout may, with written authorization from the Minister, be possessed and transported live in Zones I and II set out in Schedule XIV for the purposes of biological tests, on condition that such trout are killed immediately on completion of the tests.

SCHEDULE XIV

1. ZONE I. That portion of the Province of Quebec north of the 49th parallel of latitude and not included in Zone II.
2. ZONE II: That portion of the Province of Quebec bounded as follows; Commencing at the

intersection of the 49th parallel of latitude and the eastern limit of Highway 109, thence southerly following the eastern limit of Highway 109 to the eastern limit of the first secondary road linking Highway 109 to Highway 395; thence southeasterly along the said limit and its prolongation to the southern limit of Highway 395; thence westerly and southerly, along the said limit to the eastern limit of the first secondary road linking Highway 395 to Highway 111; thence southwesterly along the said limit to the northern limit of Highway 111; thence easterly and southeasterly, along the said limit and following the northern limit of Highway 386 and, at Landrienne, the northern limit of the railway line to the eastern limit of the secondary road linking Barraute to Lake Fiedmont; thence southerly, easterly and northerly, along the said limit and the western, southern and eastern shores of Lake Fiedmont to the northern limit of the road linking lake Fiedmont to Highway 397; thence southeasterly along the said limit and its prolongation to the eastern limit of Highway 397, thence southerly, along the said limit, to Val-Senneville, and long the northern limit of the secondary road, passing by Perron to the northern limit of Highway 117; thence westerly along the said limit to the eastern limit of the road linking Colombiere to Lake Ben; thence in a southerly and northeasterly direction along the said limit, the western, southern and eastern shores of Lake Ben, the right bank of the Marrias River to the western shore of Lake Trivia; thence southerly and easterly along the said bank, the left bank of the stream linking Lake Trivia to Lake Louvicourt, the western shore of Lake Louvicourt, the left bank of the stream located above Lake Louvicourt, the northern limit of the road and its prolongation, to Highway 117; thence southerly along the said limit to the northern boundary of LaVerondrye Reserve; thence westerly, southerly and easterly along the said boundary, the northern, western and southern boundary of Kipawa Reserve to the right bank of the Dumoine River, thence southerly along the said bank, passing by the southern shore of Lake Brulart and the western shore of Lake Laforge, to the northern limit of the road that crosses the Dumoine River 3 kilometres directly southwest of Rowanton; thence in a northeasterly direction along the said limit to Lake Nigault, and the southern and eastern shores of Lake Nigault to a point closest to Lake Hough; thence northeasterly in a straight line to that point of Lake Hough that is closest to Lake Nigault; thence southeasterly along the southern limit of Lake Hough and the north bank of its outlet, the south bank of lake Rochette and the right bank of its outlet, the southwest bank of Lake a l'Argent, the right bank of the a l'Argent Stream and its prolongation to the outlet of Lake Bryson; thence in a southeasterly direction along the said bank and the right bank of the Coulonge River to the prolongation of the right bank of the Corneille River; thence in a northeasterly direction along the said prolongation and the left bank of the Corneille River to a point in the northern extremity of Dauphine Township that is closest to the eastern limit of Lake Stewart Road; thence easterly and southerly in a straight line to the eastern limit of Lake Steward Road and along the said limit to the western boundary of the Pontiac Reserve; thence southerly and easterly along the said boundary, the southern boundary of the said reserve and its prolongation to the northern limit of the road to Highway 105; passing by the Maniwaki Indian Reservation; and thence, southeasterly along the said limit to the western limit of Highway 105; thence northerly along the said limit and its prolongation to the northern limit of Highway 117; thence southeasterly along the said limit to the right bank of the Gatineau River; thence northwesterly and northeasterly, along the said bank and the south bank of the Baskalong Reservoir to the eastern limit of Ferme-Neuve Road; and thence, southeasterly along the said limit to the northern limit of Highway 309; thence northeasterly along the said limit to the point of intersection with the road that crosses the Tapani River and follows the right bank of the due Lievre River, 4 kilometres northeast of Mont-Saint-Michel; thence northeasterly along the limit of the said road for 24 kilometres, to its intersection with the road that crosses the du Lievre River; thence southeasterly along the northern limit of the road that crosses the du Lievre River, along Beaudin Stream and lake Beaudin and the southern limit of the road that follows Lakes Baker, Dowd, and Francere, Casteinau Stream, Lakes Pernon and Carriere and Dix-Milles Stream to l'Ascension; thence northeasterly along the northern limit of the road that crosses the Rouge River and follows the left bank of the said River to the

western boundary of Mont-Tremblant Park; thence southerly and northeasterly along the said boundary and the southern boundary of the said park, thence the western, southern, eastern and northern boundaries of the Jollette Reserve to the northern limit of the road to Saint-Michel-des-Saints; thence northeasterly along the said limit, to Saint-Michel-des-Saints, thence along the northern limit of the road that passes nearest the south bank of the Taureau Reservoir to the western boundary of the Mastigouche Reserve; thence southerly and northeasterly, along the said boundary and the southern boundary of the said reserve, and thence along the southern boundary of the la Mauricie National Park Reserve to the right bank of the Saint-Maurice River; thence northerly along the said bank to the downstream side of the dam in the City of LaTuque; thence northeasterly along the said side and the left bank of the Saint-Maurice River to its intersection with the left bank of the Bostonnais River; thence southeasterly in a straight line to the dam located on the Petite Bostonnais River as the outlet of Lake Wayagamac; thence southerly and northeasterly along the western and southern shores of Lake Wayagamac, the left bank of the Petite Bostonnais River, the southwest and east banks of lake Petit Wayagamac and the left bank of Boulon Stream to the southern limit of the road located to the north of Lake Petit Wayagamac; thence in a southeasterly direction along the said limit to the western boundary of the Portneuf Reserve; thence southerly, southeasterly and northeasterly, along the said boundary and the southeastern and northeastern boundaries of the said reserve to the left bank of the outlet of Lake Petit Batiscan; thence easterly along the said bank and the south bank of Lake Petit Batiscan to the point nearest Lake Delaney; thence southeasterly in a straight line to the point in Lake Delaney nearest Lake Petit Batiscan, thence along the south shore of Lake Delaney, the right bank of Delaney Stream and its prolongation, to the left bank of the north arm of the Sainte-Anne River; thence northeasterly along the said bank and the left bank of the Neilson River, passing by the east banks of Lakes Neilson, Helene and Miraude, to the southwestern boundary of Laurentides Park; thence southeasterly and northeasterly along the said boundary, the southern and southeastern boundaries of the said park to the right bank of the Montmorency River, thence southeasterly along the said bank to the northern limit of the road that crosses the Montmorency River and follows the Decharge and Chiens-Nord-Quest Rivers; thence southeasterly along the said limit to the first power line crossing Mont-Sainte-Anne Park; thence northeasterly along the said power line to the western boundary of Mont-Sainte-Anne Park; thence southeasterly, northeasterly and northwesterly along the said boundary, the southern and eastern boundaries of the park to a point located on the prolongation in a southwesterly direction of the northwest limit of lot 74 of Saint-Nicolas Range; thence northeasterly along the said prolongation and the northwestern limit of lot 74 to the boundary of Saint-Nicolas and Saint-Michel Ranges; thence southeasterly along the said boundary to the eastern limit of Saint-Nicholas Range Road; thence southeasterly along the said limit to the northern limit of Highway 360; and thence northeasterly and southeasterly along the said limit and its prolongation to the southern limit of old Highway 138; thence southwesterly along the said limit and the southern limit of Highway 138, passing by Sainte-Tita-dos-Caps and la Miche, to Beaupre; thence southeasterly, in a straight line across the St Lawrence, passing by Grosse Ile and aux Ruaux Islands, to the right bank of the St Lawrence facing Montmagny; thence southeasterly along the said bank to the boundary of Montmagny-L'Islet and Kamouraska-Temiscouata Counties; thence southeasterly along the said boundary to the northern limit of Highway 132; thence northeasterly along the said limit to the eastern limit of Jeffrey Road; thence southerly along the said limit to the power line; thence southwesterly along the power line to the eastern limit of Highway 283; thence southeasterly along the said limit, passing by Saint-Fabien-de-Panet and Bernatchez to the southern limit of Highway 204 at Daaquam; thence southwesterly along the said limit to Saint-Jusie-de-Bretenieres; thence southeasterly along the eastern limit of the road that leads to the sawmill, crosses the Daaquam River and continues on to the United States border; thence northeasterly along the said border, thence along the Quebec-New Brunswick boundary to the downstream side of the Campbellton Bridge; thence easterly, northerly and westerly along the downstream side of the bridge, thence around the Gaspe Peninsula, including

all the islands directly off the coast of the peninsula, to Cap-Chat; thence northeasterly in a straight line to the intersection of the left bank of the St Lawrence and the 50th parallel of latitude, thence westerly along the said parallel and the southern contour of the Baie-Comeau-Hauterive Reserve to the western limit of the Chibougamau Reserve, thence southwesterly along the said limit to the 49th parallel of latitude and thence along the said parallel to the point of commencement. This zone also includes the Magdalen Island and Anticosti Island.

3. ZONE III. That portion of the Province of Quebec south of the 49th parallel of latitude and not included in Zone II.

JUNE 1990
HELSINKI

ANNEX 5

NORTH AMERICAN COMMISSION

PAPER NAC(90)14

REPORT OF ACTIVITIES, 1989/90 OF NAC SCIENTIFIC WORKING GROUP ON SALMONID INTRODUCTIONS AND TRANSFERS

REPORT OF ACTIVITIES, 1989/90 OF NAC SCIENTIFIC WORKING GROUP ON SALMONID INTRODUCTIONS AND TRANSFERS

by

T R Porter
Canadian Co-chairman

D Goldthwaite
USA Co-chairman

The NAC, Scientific Working Group on Salmonid Introductions and Transfers met twice during the past year. The following is a synopsis of the Working Group's activities.

1. Inventory of Introductions and Transfers

The inventory of Salmonid Introductions from 1986 to 1989 has been put in a new format (See NAC(90)15) which provides more complete information on the interim and final disposition of introductions and transfers. All agencies have provided information for 1989. Table 1 presents the salmonid introductions and transfers in 1989 that originated from West of the Continental Divide or from Europe. Rainbow trout eggs continue to be brought in from West of the Continental Divide. However no Atlantic salmon eggs were reported to have been transferred into the State of Maine from Europe. In 1989 Maine imported 2.96M eggs New Brunswick. Subsequent to the compilation of the inventory, the Working Group was informed that industry in Maine imported about 1.2M eggs from Scotland in January and February of 1990.

It is noted that in 1989 in excess of 1,000,000 Atlantic salmon smolts of European origin were placed in marine cages in Maine. About 300,000 coho smolts were released by Massachusetts and New Hampshire combined and about 631,000 chinook salmon smolts were released by New Hampshire. The Working Group was informed that New Hampshire and Massachusetts have discontinued their coho program.

Connecticut, New Hampshire and Ontario are the only agencies that submitted proposals for introductions in 1990 (see Table 2).

2. Compendium of Regulations

A compendium of regulations pertaining to the introduction and transfer of salmonids in the Commission Area was compiled (see NAC(90)13). This compendium resulted from inquiries from a commissioner on regulations which were in effect on this subject. This document will provide a useful reference.

3. Draft Guidelines

The Scientific Working Group had a very preliminary review of Council Paper CNL(90)31 "Draft Guidelines for Developing Advisory Codes of Practice to Minimize Threats to Wild Salmon Stocks". The Working Group felt that these guidelines were primarily developed with the N.E. Commission Area in mind. They were much too general in some areas, yet very specific in others. The Working Group questioned why no reference was made to the

draft protocols developed by the NAC Scientific Working Group. There are several minor errors and omissions in Annex II of the paper, eg the Bilateral Scientific Working Group Report (1987) is under USA and the Great Lakes Fish Disease Control Policy is under Canada. Reference to the requirements for a marine cage site permit in the NE USA by the US Department of Defence, Corps of Engineers, is omitted.

The NAC Scientific Working Group recommends that CNL(90)31 undergo a more thorough review before being endorsed.

4. Draft Protocols

The Scientific Working Group, including the chairman of the Genetics Subgroup, met with officials of the State of Maine to discuss their concerns with the draft protocols as outlined in the Discussion Document (NAC(89)13). There were 3 main issues: (1) the Zone designation for Maine, (2) the prohibition of importation of Atlantic salmon from Europe, and (3) the scientific review procedure for evaluating proposals. Maine did not disagree with the science behind the protocols. Their difficulties were with problems of management of other species in habitat not suitable for Atlantic salmon production. Also, there was no clear solution for alternate sources of egg supply for aquaculture. Some of the difficulties expressed by Maine were from a misunderstanding of the recommended protocols and interpretation of the document. Certainly some rewording of the protocols would be beneficial for future consultation. It appeared from our discussions that most of Maine's concerns can be accommodated within the existing protocols without changing the intent of the protocols. The Scientific Working Group, however, did reaffirm its position that no European-origin Atlantic salmon should be released or reared in cages. It is recognized that, under some circumstances, European salmon could be imported with low risk of adverse effects on wild populations. An example would be where rearing occurs in land-based facilities where the risk of escapement is low.

The Working Group found the consultations to be very beneficial and it appears that this approach may be the best mechanism to get acceptance of the protocols.

Table 1. Summary of salmonid introductions and transfers in 1989 from west of the Continental Divide and from Europe.

Species	Receiving State/Prov	Donor	Life Stage	Quantity	Comments
Rainbow trout	ME (USA)	Finland	Eggs	110,000	
	MA (USA)	Washington	Eggs	550,000	
	MA (USA)	Idaho	Eggs	30,000	
	NS	Washington	Eggs	150,000	
	PEI	Washington	Eggs	24,400	
At. Salmon	PEI	Scotland	Eggs	10,000	For research purposes;
	PEI	Norway	Eggs	10,000	to be destroyed

Table 2. Summary of proposed salmonid introductions and transfers in 1990 and 1991 as provided by participating agencies.

Species	Receiving State/Prov	Donor	Life Stage	Quantity	Year
Rainbow trout	Connecticut	Montana	Eggs	15,000	1990
		Montana	Eggs	15,000	1991
Chinook salmon	New Hampshire	New York	Eggs	800,000	1990
		New York	Eggs	800,000	1991
At. Salmon	Ontario	NS (Can)	Eggs	~50,000	1990
		NS (Can)	Eggs	~60,000	1991
Landlocked At. Salmon	Ontario	ME (USA)	Eggs	~125,000	1990
		ME (USA)	Eggs	~100,000	1991
Arctic Charr	Ontario	Manitoba	Eggs	~20,000	1990
		Manitoba	Eggs	~20,000	1991

JUNE 1990
HELSINKI

ANNEX 6

NORTH AMERICAN COMMISSION

PAPER NAC(90)15

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS IN EASTERN NORTH AMERICA 1986-1989

PREPARED FOR THE:
NORTH AMERICAN COMMISSION (NASCO) SCIENTIFIC WORKING GROUP ON INTRODUCTIONS AND TRANSFERS OF SALMONIDS

JUNE 5, 1990

ABBREVIATIONS USED IN TABLES

Countries/Provinces/States

AK	ALASKA	BC	BRITISH COLUMBIA
CAN	CANADA	CA	CALIFORNIA
CO	COLORADO	CT	CONNECTICUT
FIN	FINLAND	ICE	ICELAND
ID	IDAHO	IN	INDIANA
LAB	LABRADOR	ME	MAINE
MAN	MANITOBA	MA	MASSACHUSETTS
MI	MICHIGAN	MT	MONTANA
NB	NEW BRUNSWICK	NFLD	NEWFOUNDLAND
NH	NEW HAMPSHIRE	NJ	NEW JERSEY
NOR	NORWAY	NY	NEW YORK
NS	NOVA SCOTIA	ONT	ONTARIO
OR	OREGON	PA	PENNSYLVANIA
PEI	PRINCE EDWARD ISLAND	QUE	QUEBEC
RI	RHODE ISLAND	SCO	SCOTLAND
TN	TENNESSEE	US	UNITED STATES OF AMERICA
VT	VERMONT	WA	WASHINGTON
WV	WEST VIRGINIA	WY	WYOMING

Other Terms

ANAD	ANADROMOUS	ATL	ATLANTIC
AQC	AQUACULTURE	BOF	BAY OF FUNDY
BK	BROOK	CK	CREEK
CM	CENTIMETRE(S)	CNTR	CENTRE
DOM	DOMESTIC	E EGGS	EYED EGGS
ENV	ENVIRONMENT	EXP	EXPERIMENTAL/ RESEARCH
FCS	FISH CULTURE STATION	FF	FISH FARM
FING	FINGERLING(S)	G	GRAM
G EGGS	GREEN EGGS	H	HATCHERY
HARB	HARBOUR	IS	ISLAND
JUV	JUVENILE	LAB	LABORATORY
LK	LAKE	LL	LANDLOCKED
MO	MONTH	NW	NORTHWEST
P	PROPOSED	PS	PUBLIC STOCKING
P/S	PARR/SMOLT TRANSITION	PYP	POST-YEARLING PARR
QUAR	QUARANTINE (FACILITY)	REV	REVISION
R	RIVER	RET	RETURN(ING)
SJR	SAINT JOHN RIVER	SKAM	SKAMANIA
SS	STEELHEAD	SP	SPRING(S)
STR	STRAIN	TF	TROUT FARM
TR	TRIPLOID	U	UNIVERSITY
UNID	UNIDENTIFIED	UNK	UNKNOWN
UY PARR	UNDERYEARLING PARR	W	WILD
WS	WATERSHED	YEAR	YEARLING

ABBREVIATIONS USED IN TABLES

Organizations

ASF	ATLANTIC SALMON FEDERATION
ASI	ATLANTIC SALMON (MAINE) INC
ASL	ATLANTIC SMOLTS LIMITED
ASRSC	ATLANTIC SEA-RUN SALMON COMMISSION
AVC	ATLANTIC VETERINARY COLLEGE
CDEP	CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEC	DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DFO	DEPARTMENT OF FISHERIES AND OCEANS (CANADA)
EPS	ENVIRONMENTAL PROTECTION SERVICE (CANADA)
FMS	FUNDY MARINE SURVEYORS
IAS	INTEGRATED AQUATIC SYSTEMS
HML	HUNTSMAN MARINE LABORATORY
MDFW	MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE
MDIFW	MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE
MDMF	MASSACHUSETTS DIVISION OF MARINE FISHERIES
MINL	MARINE INSTITUTE OF NEWFOUNDLAND AND LABRADOR
MMOP	MERI MER OCEAN PRODUCTS
MPL	MARICULTURE PRODUCTS LIMITED
MSRL	MARINE SCIENCES RESEARCH LABORATORY
NBDNRE	NEW BRUNSWICK DEPARTMENT OF NATURAL RESOURCES AND ENERGY
NBFWB	NEW BRUNSWICK FISH AND WILDLIFE BRANCH
NEFFI	NEW ENGLAND FISHING ENTERPRISES INC
NHFG	NEW HAMPSHIRE FISH AND GAME DEPARTMENT
NMFS	NATIONAL MARINE FISHERY SERVICE
NSDF	NOVA SCOTIA DEPARTMENT OF FISHERIES
NWAFC	NORTHWEST ATLANTIC FISHERIES CENTRE
NYDEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
OMNR	ONTARIO MINISTRY OF NATURAL RESOURCES
OPI	OCEAN PRODUCTS INCORPORATED
OSL	OCEAN SCIENCES LABORATORY, MEMORIAL UNIVERSITY
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989 CONNECTICUT

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	YEAR	NUMBER	TRANSFER STAGE	SPONSOR/FACILITY (PURPOSE)	YEAR	NUMBER	STAGE	FINAL DISPOSITION LOCATION (PURPOSE)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
7001	MT, INNES HATCHERY (ERWIN)	1987	15000	EGGS	CT, CDEP, BURLINGTON HATCHERY				HOUSATONIC RIVER
8001	TN, ERWIN HATCHERY (ERWIN)	1988	15000	EGGS	CT, CDEP, BURLINGTON HATCHERY				HOUSATONIC RIVER
9001	MT, INNES HATCHERY (ERWIN)	1989	15000	EGGS	CT, CDEP, BURLINGTON HATCHERY				HOUSATONIC RIVER
0001	MT, INNES HATCHERY (ERWIN)	P1990	15000	EGGS	CT, CDEP, BURLINGTON HATCHERY				
1001	MT, INNES HATCHERY (ERWIN)	P1991	15000	EGGS	CT, CDEP, BURLINGTON HATCHERY				
SALMO TRUTTA (BROWN TROUT)									
9002	NY, CATSKILL HATCHERY (SEEFORELLEN)	1990	20000	EGGS	CT, CDEP, BURLINGTON HATCHERY				

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	TRANSFER NUMBER	TRANSFER STAGE	TRANSFER SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	FINAL DISPOSITION NUMBER	FINAL DISPOSITION STAGE	FINAL DISPOSITION LOCATION (PURPOSE)
SALMO SALAR (ATLANTIC SALMON) CONT.									
8006	NB, DIGDEQUASH H (AQC/ST JOHN)	1988	99300	SMOLTS	ME, SEA FARMS				LUBEC SEA CAGES (AQC)
8007	NB, DIGDEQUASH H (AQC/ST JOHN)	1988	350000	UY PARR	ME, SALEN INC				UPPER SJR (ENHANCEMENT)
8008	NB, FLORENCEVILLE H (SJR, MINTO & ASF/)	1988	20000	UY PARR	ME, SALEN INC				UPPER SJR (ENHANCEMENT)
8009	NB, FLORENCEVILLE H (SJR & MINTO/)	1988	27000	FRY	ME, SALEN INC				UPPER SJR (ENHANCEMENT)
8010	NB, MACTAQUAC FCS (ST JOHN RIVER/)	1988	100	ADULTS	ME, ASRSC				AROOSTOOK R (RESTORATION)
8011	NB, MACTAQUAC FCS (ST JOHN RIVER/)	1988	100000	EGGS	ME, ASRSC, GREEN LK H (HATCHING)	1988		FRY	AROOSTOOK R (RESTORATION)
9001	NB, FLORENCEVILLE H (DOMESTIC/SJR)	1989	30000	PARR	ME, SALEN INC				SJR (ENHANCEMENT)
9002	NB, FLORENCEVILLE H (DOMESTIC/SJR)	1989	80000	FRY	ME, SALEN INC				SJR (ENHANCEMENT)
9005	NB, ST JOHN FCS (ST JOHN/)	1989	10000	SMOLTS	ME, DFO				AROOSTOOK R (SURVIVAL TEST)
9007	NB, SEA FARMS CANADA (ATLANTIC/SJR)	1989	627000	EGGS	ME, OPI, GARDNER LAKE				(NOT SPECIFIED)
9008	NB, GRANGER COVE SALMON (ATLANTIC/SJR)	1989	225000	EGGS	ME, OPI, GARDNER LAKE				(NOT SPECIFIED)
9009	NB, GRANGER COVE SALMON (ATLANTIC/SJR)	1989	250000	EGGS	ME, ASI, OQUOSSOC HATCHERY				(NOT SPECIFIED)
9010	NB, KELLY COVE SALMON (ATLANTIC/SJR)	1989	550000	EGGS	ME, MPL, BINGHAM HATCHERY				(NOT SPECIFIED)
9011	NB, AQUA VENTURES (ATLANTIC/SJR)	1989	550000	EGGS	ME, MPL, BINGHAM HATCHERY				(NOT SPECIFIED)
9012	NB, KELLY COVE SALMON (ATLANTIC/SJR)	1989	187500	EGGS	ME, NEFFE, KENNEBEC AQUACULTURE				(NOT SPECIFIED)
9013	NB, AQUA VENTURES (ATLANTIC/SJR)	1989	187500	EGGS	ME, NEFFE, KENNEBEC AQUACULTURE				(NOT SPECIFIED)
9014	NB, AQUA VENTURES (ATLANTIC/SJR)	1989	250000	EGGS	ME, NEFFE, KENNEBEC AQUACULTURE				(NOT SPECIFIED)
9015	NB, KELLY COVE SALMON (ATLANTIC/SJR)	1989	250000	EGGS	ME, NEFFE, KENNEBEC AQUACULTURE				(NOT SPECIFIED)
9016	NB, AQUA VENTURES (ATLANTIC/SJR)	1989	125000	EGGS	ME, ASI, OQUOSSOC HATCHERY				(NOT SPECIFIED)
9017	NB, KELLY COVE SALMON (ATLANTIC/SJ)	1989	125000	EGGS	ME, ASI, OQUOSSOC HATCHERY				(NOT SPECIFIED)
9018	NB, CONNORS BROS (ATLANTIC/SJ)	1989	200000	EGGS	ME, PICARD FARMS, FRENCHVILLE				(NOT SPECIFIED)
SALVELINUS ALPINUS (ARCTIC CHAR)									
9006	NB, HML (HML/FRASER R, LABRADOR)	1989	20000	EGGS	MPL, BINGHAM HATCHERY	P1990			(NOT SPECIFIED)

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	TRANSFER NUMBER	TRANSFER STAGE	TRANSFER SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	FINAL DISPOSITION NUMBER	FINAL DISPOSITION STAGE	FINAL DISPOSITION LOCATION (PURPOSE)
ONCORHYNCHUS KETA (CHUM SALMON)									
6001	WA, MINTER CREEK H (MINTER CR W/)	1986	500000	EGGS	ME, SEA RUN INC, DEAD RIVER H				CASCO BAY (SEA RANCHING)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
9003	FIN, OY BALTIC (BALTIC/DONALDSON DOM)	1989	10000	EGGS	ME, PINE TREE TROUT				(STOCK ACCIDENTALLY KILLED)
9004	FIN, OY BALTIC (BALTIC/DONALDSON DOM)	1989	110000	EGGS	ME, MPL, BINGHAM HATCHERY	1990			
SALMO SALAR (ATLANTIC SALMON)									
6005	NB, SEA FARMS H (SJR/)	1986	25000	SMOLTS	ME, OCEAN PRODUCTS INC				EASTPORT CAGES (AQC)
6004	SCO, ALLT MOR H (ARAY RIVER W/)	1986	50000	EGGS	ME, SEA RUN INC, DEAD RIVER H	P			
6003	NB, MACTAQUAC FCS (SJR/)	1986	106000	EGGS	ME, ASRSC, GREEN LAKE HATCHERY	P			AROOSTOOK R (RESTORATION)
6002	NB, MACTAQUAC FCS ? (SJR/)	1986	200	ADULTS	ME, ASRSC				AROOSTOOK R (RESTORATION)
7002	NB, FLORENCEVILLE H (SJR/MINTO)	1987	40000	UY PARR	ME, SALEN INC				UPPER SJR (ENHANCEMENT)
7004	NB, MACTAQUAC FCS (SJR/)	1987	55	GRILSE	ME, ASRSC				AROOSTOOK R (RESTORATION)
7007	SCO, WESTER ROSS H (DOMESTIC/)	1987	500000	EGGS	ME, ASI, OQUOSSOC H (REARING)	1989	25000	SMOLTS	CROSS IS (AQUACULTURE)
7006	NB, SEA FARMS (AQC BROODSTOCK)	1987	25000	SMOLTS	ME, OCEAN PRODUCTS INCORPORATED				EASTPORT CAGES (AQC)
7001	FIN, OY BALTIC (DOMESTIC SEA CAGES)	1987	500000	EGGS	ME, OPI, DEBLOIS HATCHERY	1988	27000	SMOLTS	SEE NEXT LINE
7001					ME, OPI GARDINER LAKE H	1989	22000	SMOLTS	BROAD COVE (AQUACULTURE)
7005	NB, SEA FARMS (AQC BROODSTOCK)	1987	18000	SMOLTS	ME, FRANK RIER				LUBEC CAGES (AQC)
7008	NB, JAIL IS SALMON (FUNDY/ST JOHN)	1987	1000000	EGGS	NB, SEA FARMS, OROMOCTO H	1989	30000	SMOLTS	JOHNSON BAY (AQUACULTURE)
7003	NB, FLORENCEVILLE H (SJR/)	1987	150000	FRY	ME, ASRSC				UPPER SJR (ENHANCEMENT)
8001	ICE, ELDI FISH FARMS (AQC BROODSTOCK)	1988	156000	EGGS	ME, MPL, BINGHAM HATCHERY	P1989			(AQUACULTURE)
8012	ICE, ELDI FISH FARMS	1988	500000	EGGS	ME, MPL, BINGHAM HATCHERY	1989	3000	SMOLTS	ALLEN IS (AQUACULTURE)
8012						1989	100000	SMOLTS	SWANS IS (AQUACULTURE)
8012						1989	80000	SMOLTS	LUBEC (AQUACULTURE)
8012						1989	20000	SMOLTS	TREAT IS (AQUACULTURE)
8013	ICE, ISNO SEA CAGES (AQC BROODSTOCK)	1988	280000	EGGS	ME, MPL, BINGHAM HATCHERY	1989	15000	SMOLTS	MATHEWS IS (AQUACULTURE)
8013						1989	60000	SMOLTS	SWANS IS (AQUACULTURE)
8013						1989	80000	SMOLTS	LUBEC (AQUACULTURE)
8013						1989	20000	SMOLTS	TREAT IS (AQUACULTURE)
8014	FIN, OY BALTIC (/MOORUM)	1988	1000000	EGGS	ME, MPL, BINGHAM HATCHERY	1989	100000	SMOLTS	SWAN IS (AQUACULTURE)
8014						1989	80000	SMOLTS	COOPER IS (AQUACULTURE)
8014						1989	30000	SMOLTS	TREAT IS (AQUACULTURE)
8004	SCO, LANDCATCH (AQC/2 NORWAY STRAINS)	1988	1000000	EGGS	ME, ASI, OQUOSSOC HATCHERY	P1989			(AQUACULTURE)
8004	SCO, LANDCATCH (AQC/2 NORWAY STRAINS)	1988	1000000	EGGS	ME, ASI, OQUOSSOC HATCHERY	P1989			(AQUACULTURE)
8004	SCO, LANDCATCH (DOMESTIC)	1988	1500000	EGGS	ME, ASI, OQUOSSOC HATCHERY	1989	20000	SMOLTS	GR WASS IS (AQUACULTURE)
8004						1989	80000	SMOLTS	TREAT IS (AQUACULTURE)
8004						1989	80000	SMOLTS	ROGERS IS (AQUACULTURE)
8004						1989	5000	SMOLTS	MATHEWS IS (AQUACULTURE)
8004						1989	35000	SMOLTS	TREAT IS (AQUACULTURE)
8004						1989	225000	SMOLTS	CROSS IS (AQUACULTURE)
8004									
8017	NB, JAIL IS SALMON (FUNDY/ST JOHN)	1988	1600000	EGGS	NB, SEA FARMS, DIG & SPRING H	1988	200000	FRY	SEE NEXT LINE
8017					NH, BRISTOL HATCHERY	1989	90000	SMOLTS	CUTLER HARB (AQUACULTURE)
8017						1989	60000	SMOLTS	GR WASS IS (AQUACULTURE)
8015		1988	1500000	EGGS	NB, SEA FARMS, DIG & SPRING H	1988	200000	FRY	(SEE NEXT LINE)
8015					NH, BRISTOL HATCHERY	1989	10000	SMOLTS	GROVE PT (AQUACULTURE)
8016		1988	1000000	EGGS	NB, SEA FARMS, DIGDEQUASH H	1989	100000	SMOLTS	LUBEC (AQUACULTURE)
8016						1989	20000	SMOLTS	ROGERS IS (AQUACULTURE)
8016						1989	20000	SMOLTS	GROVE PT (AQUACULTURE)
8005	NB, DIGDEQUASH H (AQC/ST JOHN)	1988	30000	SMOLTS	NB, J STEVENS, LK UTOPIA H				LUBEC SEA CAGES (AQC)

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

NEW BRUNSWICK

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
7007	ONT, RAINBOW SPRINGS HATCHERY	1987	2000	EGGS	NB, ST ANDREWS BIOLOGICAL STATION				
7015	QUE, PISCICULTURE ALLEGHANYS	1987	3000	FING	NB, D WOLVERTON				CENTREVILLE (AQUACULTURE)
7016	ONT, RAINBOW SPRINGS HATCHERY	1987	4000	FING	NB, A PHILLIPS				MONCTON (AQUACULTURE)
7010	PEI, INTEGRATED AQUATICS	1987	4000	FING	NB, DON CHAPMAN				CAMPOBELLO (AQUACULTURE)
7008	WA, BEITEYS RESORT	1987	75000	EGGS	NB, PURTILL HATCHERY				SUSSEX (AQUACULTURE)
7002	ONT, AQUAFARMS CANADA LTD	1987	15000	FING	NB, FUNDY MARINE SURVEYORS				ST JOHN (AQUACULTURE)
7014	QUE, PISCICULTURE ALLEGHANYS	1987	1300	FING	NB, G CORMIER				GRAND FALLS (AQUACULTURE)
7013	PEI, INTEGRATED AQUATICS	1987	3600	FING	NB, MERI-MER OCEAN PRODUCTS				WELSHPOOL (AQUACULTURE)
7012	QUE, PISCICULTURE ALLEGHANYS	1987	6000	FING	NB, ATLANTIS SEA FARMS				CLIFTON ROYAL (AQUACULTURE)
7011	QUE, PISCICULTURE ALLEGHANYS	1987	200000	EGGS	NB, ATLANTIS SEA FARMS				CLIFTON ROYAL (AQUACULTURE)
7003	ONT, RAINBOW SPRINGS HATCHERY	1987	50000	EGGS	NB, PURTILL HATCHERY				SUSSEX (AQUACULTURE)
7017	ONT, AQUAFARMS CANADA LTD	1987	100000	EGGS	NB, CROFT				HATFIELD PT (AQUACULTURE)
7005	ONT, RAINBOW SPRINGS HATCHERY	1987	40000	EGGS	NB, OAK BAY HATCHERY				ST STEPHEN (AQUACULTURE)
7009	PEI, INTEGRATED AQUATICS	1987	3000	FING	NB, LLOYD COOK				ST GEORGE (AQUACULTURE)
7001	ONT, RAINBOW SPRINGS HATCHERY	1987	177000	EGGS	NB, ATLANTIC SEA FARM				CLIFTON ROYAL (AQC)
7018	ONT, AQUAFARMS CANADA	1987	20000	EGGS	NB, MEADOW LAKE FARMS				ST JOHN (AQUACULTURE)
7004	ONT, RAINBOW SPRINGS HATCHERY	1987	50000	EGGS	NB, ATLANTIC SMOLTS LTD				MINTO (AQUACULTURE)
7006	ONT, RAINBOW SPRINGS HATCHERY	1987	20000	EGGS	NB, SISCOR CORPORATION				MONCTON (AQUACULTURE)
8024	ONT, RAINBOW SPRINGS HATCHERY	1988	10000	FING	NB, WILLIAM KNOW (REARING)				ST JOHN (AQUACULTURE)
8023	QUE, PISCICULTURE ALLEGHANYS	1988	800	FING	NB, GILLES CORMIER (REARING)				GRAND FALLS (AQUACULTURE)
8022	PEI, INTEGRATED AQUATICS	1988	4300	FING	NB, L COOK, ST GEORGE (REARING)				BOF CAGES (AQUACULTURE)
8021	QUE, PISCICULTURE ALLEGHANYS	1988	100000	EGGS	NB, GREEN ACRES TF (REARING)				MONCTON (AQUACULTURE)
8020	WA, BEITEYS RESORT	1988	125000	EGGS	NB, EDWARD EUSTACE (REARING)				SUSSEX (AQUACULTURE)
9004	PEI, BROOK VALLEY MARINE	1989	4350	EGGS	NB, MASCARINE MARICULTURE				MASCARINE (AQC)?
9005	ONT, RAINBOW SPRINGS HATCHERY	1989	100000	EGGS	NB, MEDARD CORMIER, MONCTON				
9006	PEI, GLYNDE RIVER AQUACULTURE	1989	20000	EGGS	NB, B GATES, BELLEISLE CREEK				
9013	ONT, AQUAFARMS CANADA LTD	1989	75000	EGGS	NB, ALVIN CROFT, HATFIELD POINT				
SALMO SALAR (LANDLOCKED ATLANTIC SALMON)									
8019	ME, GRAND LK STREAM H (WEST GRAND LK/)	1988	35000	EGGS	NB, DFO, ST JOHN FCS (REARING)	P			(ENHANCEMENT)
9001	ME, GRAND LK STREAM HATCHERY	1989	35000	EGGS	NB, DFO, ST JOHN FCS				
SALMO TRUTTA (BROWN TROUT)									
7022	NB, FLOWERS COVE H (LOCH LOMOND/)	1987	10000	JUV	NB, NBDNRE				EAST MUSQUASH R
8005	NB, FLOWERS COVE H (LOCH LOMOND/)	P1988	10000	JUV	NB, NBDNRE				EAST MUSQUASH R
SALVELINUS ALPINUS (ARCTIC CHAR)									
8006	MAN, ROCKWOOD H (FRASER R, LABRADOR/)	1988	3000	EGGS	NB, BOUCTOUCHE INDIAN BAND				BOUCTOUCHE (AQUACULTURE)
	NB, FLOWERS COVE H (WALTON LAKE/)	P1989	1000	JUV					2ND KEDRON LK
9002	MAN, ROCKWOOD HATCHERY	1989	5000	EGGS	NB, GREEN ACRES TF				BOUCTOUCHE (AQC) ?
9003	MAN, ROCKWOOD HATCHERY	1989	5000	EGGS	NB, BOUCTOUCHE INDIAN BAND				
9012	MAN, ROCKWOOD HATCHERY	1989	3000	EGGS	NB, SEA FARMS CANADA, SUSSEX				
SALVELINUS FONTINALIS (BROOK TROUT)									
7020	QUE, PISCICULTURE ALLEGHANYS	1987	100000	EGGS	NB, ATLANTIS SEA FARMS				CLIFTON ROYAL (AQUACULTURE)
7019	QUE, PISCICULTURE ALLEGHANYS	1987	180000	EGGS	NB, D DAIGLE, RICHIBUCTO				RICHIBUCTO (AQUACULTURE)
7021	QUE, PISCICULTURE ALLEGHANYS	1987	130000	FING	NB, PIERRE MORIN				GRAND FALLS (AQUACULTURE)
8018	QUE, PISCICULTURE ALLEGHANYS	1988	30000	FING	NB, PIERRE MORIN (REARING)				GRAND FALLS (AQUACULTURE)

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989 MASSACHUSETTS

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	TRANSFER NUMBER	TRANSFER STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	FINAL DISPOSITION NUMBER	FINAL DISPOSITION STAGE	FINAL DISPOSITION LOCATION (PURPOSE)
ONCORHYNCHUS KISUTCH (COHO SALMON)									
6003	OR, ORE AQUA INC (UNKNOWN/)	1986	25000	EGGS	MA, SP INC, SALEM LABORATORY				SALEM LAB TANKS (AQC)
6001	MA, SULLIVAN & SANDWICH H (NORTH R/WA)					1986	24942	SMOLT	NORTH RIVER (RESEARCH)
7001	OR, ORE AQUA INC (UNKNOWN/)	1987	35000	EGGS	MA, R T CAPELESS				HINSDALE TANKS (AQU)
8002	MI, PLATTE RIVER HATCHERY				MA, SULLIVAN HATCHERY	1988	30000	JUV	NORTH RIVER (RESEARCH)
8001	MA, (NORTH RIVER/)				MA, SULLIVAN HATCHERY	1988	21000	JUV	NORTH RIVER (RESEARCH)
9001	MI, PLATTE RIVER HATCHERY	P			MA, SULLIVAN HATCHERY	1989	50000		NORTH RIVER (RESEARCH)
9002	NY, SALMON RIVER HATCHERY	P			MA, SULLIVAN HATCHERY	1989	50000		NORTH RIVER (RESEARCH)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
6004	WA, TROUT LODGE (UNKNOWN)	1986	50000	EGGS	MA, MOHAWK TROUT HATCHERY				SUTHERLAND PONDS (AQC)
9005	WA, TROUT LODGE (DOMESTIC/)	1989	550000	EGGS	MA, MCLAUGHLIN HATCHERY	1990	100000	FRY	SEE NEXT LINE
9005					SANDWICH HATCHERY	P1991		1+	(PUBLIC FISHING)
9005					MA, MCLAUGHLIN HATCHERY	1990	75000	FRY	SEE NEXT LINE
9005					SUNDERLAND HATCHERY	P1991		1+	(PUBLIC FISHING)
9005					MA, MCLAUGHLIN HATCHERY	1990	75000	FRY	SEE NEXT LINE
9005					MONTAGUE HATCHERY	P1991		1+	(PUBLIC FISHING)
9006	ID, BLACK CANYON TF (DOMESTIC/)	1989	30000	EGGS	MA, MCLAUGHLIN HATCHERY	P1991		1+	(PUBLIC FISHING)
0001	ONT, AQUAFARMS CANADA (DOMESTIC/)	1990	20000	EGGS	MA, D J ADAMS HATCHERY				(PRIVATE AQUACULTURE)
ONCORHYNCHUS MYKISS KAMLOOPS (KAMLOOPS TROUT)									
6002	WA, TROUT LODGE (UNKNOWN/)	1986	10000	EGGS	MA, CANDEES TROUT HATCHERY				EGERMONT PONDS (AQC)
SALMO SALAR (ATLANTIC SALMON)									
8003	ME, (UNION RIVER/)				MA, MDFW, REED HATCHERY	1988	6033	FRY	WESTFIELD RIVER
8003						1988	27467	FRY	MANHAN RIVER
8003						1988	14969	FRY	BEAR RIVER
8003						1988	23430	FRY	COLD RIVER
8003						1988	12000	FRY	SOUTH RIVER
8004	ME, (UNION RIVER/)				MA, MDFW, REED HATCHERY	1988	22600	SMOLTS	DEERFIELD RIVER
8004						1988	22800	SMOLTS	MILLERS RIVER
8005	ME, (UNION RIVER/)				MA, NDFW, REED HATCHERY	1988	2700	PARR	MILLERS RIVER
8005						1988	2300	PARR	DEERFIELD RIVER
9003	CT, (CONNECTICUT RIVER/)				MA, MDFW, REED HATCHERY	1989	120000	FRY	DEERFIELD RIVER
9004	CT, (CONNECTICUT RIVER/)				MA, MDFW, REED HATCHERY	1989	20000	SMOLTS	DEERFIELD RIVER
9004						1989	20000	SMOLTS	MILLERS RIVER

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

NEWFOUNDLAND

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
6001	ONT, RAINBOW SPRINGS HATCHERY	1986	5000	5CM					
	ONT, RINGWOOD HATCHERY ?	1986	6700	JUV					HOPEALL CAGES (AQC)
7002	ONT, RAINBOW SPRINGS H (UNKNOWN/)	1987	4000	JUV	NFLD, EPS, NWAFC TANKS (BIOASSAY)	P			HOPEALL CAGES ? (AQC)
7003	ONT, RAINBOW SPRINGS H (UNKNOWN/)	1987	900	JUV	NFLD, MSRL TANKS (RESEARCH)	P			TO BE DESTROYED
7001	ONT, AQUAFARMS CANADA (UNKNOWN/)	1987	300	JUV	NFLD, MSRL TANKS (RESEARCH)	P			TO BE DESTROYED
7004	ONT, RAINBOW SPRINGS H (UNKNOWN/)	1987	10000	TR EGGS	NFLD, BAY D'ESPOIR HATCHERY	P			TO BE INCINERATED
7007	ONT, RAINBOW SPRINGS H (UNKNOWN/)	1987	300	JUV	NFLD, DFO, NWAFC TANKS (RESEARCH)				BAY D'ESPOIR (AQUACULTURE)
8013	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	150	15CM	NFLD, MSRL, MEMORIAL U (RESEARCH)				FISH DESTROYED
8012	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	500	15CM	NFLD, NWAFC (RESEARCH)				ST JOHNS, STOCK DESTROYED
8010	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	500	10CM	NFLD, DFO, NWAFC (RESEARCH)				ST JOHNS, STOCK DESTROYED
8009	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	500	7CM	NFLD, DFO, NWAFC (RESEARCH)				ST JOHNS, STOCK DESTROYED
8015	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	2000	FRY	NFLD, EPS, NWAFC (BIOMONITORING)				ST JOHNS, STOCK DESTROYED
8016	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	2000	FRY	NFLD, EPS, NWAFC (BIOMONITORING)				
8008	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	2000	FRY	NFLD, EPS, NWAFC (BIOMONITORING)				ST JOHNS, STOCK DESTROYED
8017	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	30000	TR EGGS	NFLD, BAY D'ESPOIR HATCHERY				ST JOHNS, STOCK DESTROYED
8014	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	125000	TR EGGS	NFLD, BAY D'ESPOIR HATCHERY	P1989			ST ALBANS, STOCK DESTROYED
8011	ONT, RAINBOW SPRINGS H (HATCHERY/)	1988	10000	EGGS	NFLD, MARINE INSTITUTE				ROTI BAY CAGES (AQC)
8007	ONT,	1988	600	FING	NFLD, BAY D'ESPOIR HATCHERY				ST JOHNS, STOCK DESTROYED
8006	ONT,	1988	100000	EGGS	NFLD, BAY D'ESPOIR HATCHERY				
9011	ONT, RAINBOW SPRINGS H (EX HATCHERY/)	1989	50	30-50G	NFLD, MARINE INSTITUTE (TEACHING)	P			
9009	ONT, RAINBOW SPRINGS H (EX HATCHERY/)	1989	2000	0.5G	NFLD, DOE, NWAFC (BIOMONITORING)	P			TO BE DESTROYED
9008	ONT, RAINBOW SPRINGS H (EX HATCHERY/)	1989	2000	0.5G	NFLD, NWAFC (BIOMONITORING)	P			TO BE DESTROYED
9007	ONT, RAINBOW SPRINGS H (EX HATCHERY/)	1989	75000	TR EGGS	NFLD, BAY D'ESPOIR HATCHERY	P1990			TO BE DESTROYED
9006	ONT, RAINBOW SPRINGS H (EX HATCHERY/)	1989	600	13CM	NFLD, BAY D'ESPOIR H (RESEARCH)	P			ROTI BAY CAGES (AQC)
9010	ONT, RAINBOW SPRINGS H (EX HATCHERY/)	1990	5000	E EGGS	NFLD, MINL TANKS (TEACHING)	P			TO BE DESTROYED
									ST JOHNS, TO BE DESTROYED
SALMO SALAR (ATLANTIC SALMON)									
8001	NB, BAY OF FUNDY SEA CAGES	1988	130000	EGGS	NFLD, BAY D'ESPOIR HATCHERY				
9012	NB, KELLY COVE SEA CAGES (FUNDY/SJR)	1989	100000	EGGS	NB, CHAMCOOK H (QUARANTINE)	1989	100000	EGGS	SEE NEXT LINE
9012					NFLD, BAY D'ESPOIR H (QUARANTINE)				
SALVELINUS ALPINUS (ARCTIC CHAR)									
	LAB, (FRASER RIVER/)	1986	54500	EGGS	NFLD, MSRL				
7005	LAB, (FRASER RIVER/)	1987	10000	EGGS	NFLD, MSRL (INCUBATION)				
7006	LAB, (FRASER RIVER/)	1987	60000	EGGS	NFLD, BAY D'ESPOIR H (QUARANTINE)				EGGS DESTROYED
8005	MAN, DFO, WINNIPEG	1988	30000	EGGS	NFLD, AQUA BLUE FARMS, PORT REXTON				EGGS DESTROYED
8004	NB, HUNTSMAN MARINE LABORATORY	1988	30000	EGGS	NFLD, BAY D'ESPOIR HATCHERY				
8003	MAN, DFO, WINNIPEG	1988	10000	EGGS	NFLD, BAY D'ESPOIR HATCHERY				
8002	LAB, (IKINET BROOK/)	1988	5000	EGGS	NFLD, BAY D'ESPOIR HATCHERY				
9001	PEI, INTEGRATED AQUATICS (FRASER R/)	1989	150	7-10CM	NFLD, DFO, NWAFC (RESEARCH)	P			
9002	MAN, ROCKWOOD HATCHERY (FRASER R/)	1989	5000	EGGS	NFLD, BAY D'ESPOIR HATCHERY	P1990			STOCK TO BE DESTROYED
9003	NB, HUNTSMAN MARINE LAB (FRASER R/)	1989	30000	E EGGS	NFLD, BAY D'ESPOIR H (QUARANTINE)	P1990			ROTI BAY CAGES (AQC)
9004	MAN, ROCKWOOD HATCHERY (FRASER R/)	1989	3000	EGGS	NFLD, MARINE INSTITUTE (TEACHING)	P			ROTI BAY CAGES (AQC)
9005	MAN, ROCKWOOD HATCHERY (FRASER R/)	1989	5000	EGGS	NFLD, NORDCO AQUARIUM (EXP)	1989			STOCK TO BE DESTROYED
									ST JOHNS, STOCK DIED

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

NEW BRUNSWICK

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
SALVELINUS FONTINALIS (BROOK TROUT) CONT.									
8016	QUE, PISCICULTURE ALLEGHANYS	1988	4000	FING	NB, GILLES CORMIER (REARING)				GRAND FALLS (AQUACULTURE)
8015	ME, PHILLIPS HATCHERY	1988	150000	EGGS	NB, FLOWERS COVE H (REARING)				
8014	QUE, PISCICULTURE ALLEGHANYS	1988	100000	EGGS	NB, RONALD NOWLAN (REARING)				POKEMOUCHE (AQUACULTURE)
8013	QUE, PISCICULTURE ALLEGHANYS	1988	20000	EGGS	NB, JAMES McCRAE (REARING)				SAINT JOHN (AQUACULTURE)
8012	QUE, PISCICULTURE ALLEGHANYS	1988	75000	EGGS	NB, ALVIN CROFT (REARING)				HATFIELD PT (AQUACULTURE)
8011	QUE, PISCICULTURE ALLEGHANYS	1988	300000	EGGS	NB, D DAIGLE (REARING)				RICHIBUCTO (AQUACULTURE)
0810	QUE, PISCICULTURE ALLEGHANYS	1988	75000	EGGS	NB, NOEL BOSSE (REARING)				EDMUNDSTON (AQUACULTURE)
8009	QUE, PISCICULTURE ALLEGHANYS	1988	200000	EGGS	NB, REGINALD BOSS (REARING)				EDMUNDSTON (AQUACULTURE)
8008	QUE, PISCICULTURE ALLEGHANYS	1988	200000	EGGS	NB, GREEN ACRES TF (REARING)				MONCTON (AQUACULTURE)
8007	QUE, PISCICULTURE ALLEGHANYS	1988	50000	EGGS	NB, WILLIAM KNOW (REARING)				ST JOHN (AQUACULTURE)
9007	ONT, WILDCAT TROUT FARM	1989	120000	EGGS	NB, D DAIGLE, RICHIBUCTO				
9008	PEI, BROOK VALLEY MARINE	1989	120	FISH	NB, ROBERT METHE, SALISBURY				
9009	PEI, BROOK VALLEY MARINE	1989	25000	EGGS	NB, BILL KNOR, GAGETOWN				
9010	PEI, BROOK VALLEY MARINE	1989	5500	FISH	NB, BILL KNOR, GAGETOWN				
9011	PEI, BROOK VALLEY MARINE	1989	21000	EGGS	NB, L McCRAE HATFIELD POINT				
SALVELINUS FONTINALIS X SALVELINUS ALPINUS (CHARBROOK)									
8004	NB, FLOWERS COVE H (WALTON X PHILLIPS)	P1988	10000	JUV	NB, NBDNRE				MINE PONDS
SALVELINUS NAMAYCUSH X SALVELINUS FONTINALIS (SPLAKE)									
6001	NB, FLOWERS COVE H (CLEAR X PHILLIPS)	1986	100	YEAR	NB, NBDNRE				NORTH LAKE (EXP STOCKING)
6001		1986	550	YEAR					PEABODY LK (EXP STOCKING)
6001		1986	100	YEAR					BLIND LK (EXP STOCKING)
7023	NB, FLOWERS COVE H (CLEAR X PHILLIPS)	1987	20000	JUV	NB, NBDNRE				MULLIN STREAM L
7023		1987	500	JUV					BIG MEADOW POND
7023		1987	2000	JUV					NL RIVER LAKE
7023		1987	150	JUV					GRAND MANAN
7023		1987	175	JUV					HARRIS LAKE
7023		1987	700	JUV					GLENN SEVERN
8001	NB, FLOWERS COVE H (CLEAR X PHILLIPS)	P1988	5000	JUV	NB, NBDNRE				GRAND LAKE
8001		P1988	2000	JUV					MULLIN STREAM
8001		P1988	2000	JUV					NL RIVER LAKE
	NB, FLOWERS COVE H (CLEAR X PHILLIPS)	P1989	5000	JUV					LAKE UTOPIA
	NB, FLOWERS COVE H (CLEAR X PHILLIPS)	P1989	150	JUV					GOLDSMITHS LAKE
OSMERUS MORDAX (RAINBOW SMELT)									
6002	NB, (SUCKER BROOK, SKIFF LAKE/)	1986	50000	E EGGS	NB, NBDNRE				UNIQUE L (LL SALMON FORAGE)

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

NEW YORK

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
ONCORHYNCHUS KISUTCH (COHO SALMON)									
6004	NY, SALMON R H (LK ONTARIO/SALMON R)	1986	547000	JUV	NY, NYDEC				LK ONTARIO (ENHANCEMENT)
6008	NY, SALMON R H (LK ONTARIO/SALMON R)	1986	102000	YEAR	NY, NYDEC				LK ERIE (SPORT FISHING)
6011	NY, SALMON R H (LK ONTARIO/SALMON R)	1986	194000	YEAR	NY, NYDEC				LK ONTARIO (SPORT FISHING)
6011		1986	268000	FING					LK ONTARIO (SPORT FISHING)
7011	NY, SALMON R H (LK ONTARIO/SALMON R)	P1987	350000	YEAR	NY, NYDEC				LK ONTARIO (SPORT FISHING)
7009	NY, SALMON R H (LK ONTARIO/SALMON R)	P1987	100000	1+	NY, NYDEC				LK ONTARIO (SPORT FISHING)
7034	NY, 2 HATCHERIES (SALMON R/)	1987	80000	YEAR	NY, NYDEC				LK ONTARIO (SPORT FISHING)
8015	NY, 2 HATCHERIES (SALMON R/)	1988	299850	YEAR	NY, NYDEC				LK ONTARIO (SPORT FISHING)
8016	NY, 2 HATCHERIES (SALMON R/)	1988	256500	FING	NY, NYDEC				LK ONTARIO (SPORT FISHING)
8028	NY, SALMON R H (LK ONTARIO/SALMON R)	1988	31600	16MO					CHAUTAUQUA CR, LK ERIE
8028		1988	32600	16MO					18 MILE CREEK, LK ERIE
8028		1988	14500	16MO					CANADAWAY CREEK, LK ERIE
8028		1988	90250	16MO					CATTARAUGUS CR, LK ERIE
8028		1988	40000	6MO					CATTARAUGUS CR, LK ERIE
8027	NY, CALEDONIA HATCHERY (SALMON R/)	1988	40000	6MO					18 MILE CREEK, LK ERIE
9003	NY, SALMON R H (LK ONTARIO/SALMON R)	1988	37500	11MO	NY, NYDEC				CATTARAUGUS CR, LK ERIE
9004	NY, SALMON R H (LK ONTARIO/SALMON R)	1989	180000	F FING	NY, NYDEC				3 LK ERIE TRIBS (STOCKING)
9013	NY, SALMON R H (LK ONTARIO/SALMON R)	1988	175000	F FING	NY, NYDEC, CALEDONIA H	1989	147865	YEAR	3 LK ERIE TRIBS (STOCKING)
9013		1989	143040	YEAR					LK ONTARIO (STOCKING)
9014	NY, CALEDONIA H (LK ONTARIO/SALMON R)	1989	53400	F FING					LK ONTARIO (STOCKING)
9014		1989	54065	YEAR	NY, NYDEC				LK ONTARIO (STOCKING)
		1989	160000	F FING					LK ONTARIO (STOCKING)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
6015	NY, CALEDONIA H (DOMESTIC/)	1986	103000	JUV	NY, NYDEC				LK ONTARIO (STOCKING)
6006	NY, SALMON RIVER H (SALMON R/WA SS)	1986	100000	YEAR					LK ERIE (SPORT FISHING)
6003	NY, SALMON RIVER H (SALMON R/WA SS)	1986	335000	1+					LK ONTARIO (SPORT FISHING)
6007	MI, IN (LK MICHIGAN/SKAMANIA SS)				NY, NYDEC, SALMON RIVER HATCHERY	1986	17950	YEAR	LK ERIE (SPORT FISHING)
7016	NY, SALMON RIVER H (/SS)	P1987	412000	YEAR					
7003	NY, SALMON RIVER H (LK ONTARIO/WA SS)	1987	130000	JUV					4 ERIE TRIBUTARIES
7002	IN, (LK MICHIGAN/SKAMANIA SS)				NY, NYDEC, SALMON RIVER HATCHERY	1987	20000	YEAR	CHAUTAUQUA CREEK
7027	NY, SALMON RIVER H (DOMESTIC/WFC)	1987	23000	FING					NOT IDENTIFIED
7028	NY, SALMON R H (DOMESTIC/WYTHEVILLE)	1987	172000	FING					NOT IDENTIFIED
7029	NY, SALMON RIVER H (DOMESTIC/)	1987	90600	YEAR					NOT IDENTIFIED
7024	NY, SALMON R H (/WA OR SKAMANIA SS)	1987	60000	FING					LK ONTARIO TRIBUTARIES
7025	NY, 3 HATCHERIES (/FINGER LAKES SS)	1987	69350	FING					LK ONTARIO TRIBUTARIES
7026	NY, 3 HATCHERIES (/WA OR SKAMANIA SS)	1987	443340	YEAR					LK ONTARIO TRIBUTARIES
	NY, RANDOLPH H (DOMESTIC/NASHUA)				NY, CALEDONIA HATCHERY	1988	5000	10MO	BUFFALO CREEK, LK ERIE
8027	NY, CALEDONIA H (DOMESTIC/NASHUA)	1988	7500	10MO					18 MILE CREEK
8027		1988	5000	10MO					CANADAWAY CREEK
8027		1988	5000	10MO					CATTARAUGUS CREEK
8027		1988	17800	14MO					EAGLE BAY, LK ERIE
8027		1988	11600	15MO					STURGEON POINT, LK ERIE
8026	NY, RANDOLPH H (DOMESTIC/NASHUA)	1988	5000	14MO					BUFFALO HARBOUR
8007	NY, CALEDONIA H (CALEDONIA/DOMESTIC)	1988	150500	FING					LK ONTARIO (ENHANCEMENT)
8008	NY, CALEDONIA H (CALEDONIA/DOMESTIC)	1988	77370	YEAR					LK ONTARIO (ENHANCEMENT)
8024	NY, SALMON RIVER H (SALMON R/WA SS)	1988	50000	6MO					SPOONER BROOK, LK ERIE
8024		1988	50000	6MO					CLEAR CREEK
8024		1988	18000	16MO					CHAUTAUQUA CREEK
8024		1988	37000	16M0					CATTARAUGUS CREEK
8024		1988	23700	16MO					18 MILE CREEK

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

NEW HAMPSHIRE

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
ONCORHYNCHUS KISUTCH (COHO SALMON)									
	NH,	1986	30000	FRY					GREAT BAY TRIBUTARIES
6003	NH, MILFORD HATCHERY (LAMPREY RIVER/)	1986	61745	PARR					LAMPREY R (SPORT FISHERY)
6002	NH, MILFORD HATCHERY (LAMPREY RIVER/)	1986	130000	SMOLTS					LAMPREY R (SPORT FISHERY)
	NH,	1986	129665	SMOLTS					GREAT BAY ESTUARY
7003	NH, MILFORD HATCHERY (LAMPREY RIVER/)				NH, TWIN MOUNTAIN HATCHERY ?	1987	151000	SMOLTS	LAMPREY RIVER (RESEARCH)
8004	NY, SALMON RIVER H (SALMON RIVER/)				NH, TWIN MOUNTAIN HATCHERY	1988	99411	SMOLTS	LAMPREY R (RECREATION)
9005	MI, PLATTE RIVER H (PLATTE/)	1987	300000	E EGGS	NH, NHFG, TWIN MOUNTAIN HATCHERY	1989	200295	SMOLTS	LAMPREY R (RECREATION)
0001	MI, PLATTE RIVER H (OREGON/)	P1990	400000	SMOLTS					LAMPREY R (RECREATION)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
	NY, (LAKE ONTARIO/)	1986	47215	SMOLTS					GREAT BAY ESTUARY
6004	NY, SALMON RIVER H (SALMON RIVER/)	1986	47000						LAMPREY R (RECREATION)
7004	NY, SALMON RIVER H (SALMON RIVER/)	1987	37000						LAMPREY R (RECREATION)
ONCORHYNCHUS TSHAWYTSCHA (CHINOOK SALMON)									
8005	NY, SALMON RIVER H (SALMON RIVER/)				NH, TWIN MOUNTAIN HATCHERY	1988	110918	AGE 1	LAMPREY R (RECREATION)
8003	NY, SALMON RIVER H (SALMON RIVER/)				NH, TWIN MOUNTAIN HATCHERY	1988	431460	FRY	LAMPREY R (RECREATION)
9004	NY, SALMON RIVER H (SALMON R/)	1988	1100000	EGGS	NH, NHFG, MILFORD HATCHERY	1989	631000	SMOLTS	LAMPREY R (RECREATION)
SALMO TRUTTA (BROWN TROUT)									
6001	NH, MILFORD HATCHERY (DOMESTIC/)	1986	9850	SMOLTS	NH, NHFG				8 RIVERS (RESEARCH)
7001	NH, MILFORD HATCHERY (DOMESTIC/)	P1987	9850	SMOLTS	NH, NHFG				8 RIVERS (RESEARCH)

NEW JERSEY

ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
7001	NY, ALTMAR HATCHERY (SALMON R/)	1987	53000	E EGGS	NJ, HAYFORD HATCHERY	1988?			LARGE LOSS, PREDATION
7001						1988	1128	SMOLTS	RARITAN RIVER (RESEARCH)
ONCORHYNCHUS TSHAWYTSCHA (CHINOOK SALMON)									
6001	NY, ALTMAR HATCHERY (SALMON R/)	1986	70000	EGGS	NJ, NJDEP, HAYFORD H (EXP REARING)	1987	59705		RARITAN RIVER
7002	NY, ALTMAR HATCHERY (SALMON R/)	1987	95000	E EGGS	NJ. NJDEP, HAYFORD H (EXP REARING)	1988	91170	SMOLTS	RARITAN RIVER

SALMO TRUTTA (BROWN TROUT) CONT.

8019		1988	5000	10MO				CANADAWAY CR, LK ERIE
8019		1988	5000	10MO				CATTARAUGUS CR, LK ERIE
8018	NY, CATSKILL H (/ROME)				NY, CALEDONIA H (REARING)	1988	19000	17MO	SILVER CREEK, LK ERIE
8016	NY, RANDOLPH H (/ROME LAB)	1988	5000	17MO					DUNKIRK HARBOUR, LK ERIE
8017	NY, BATH H				NY, CALEDONIA H (REARING)	1988	14000	17MO	DUNKIRK HARBOUR, LK ERIE
8009	NY, VARIOUS H (/SEEFORELLEN)	1988	20000	FING					LK ONTARIO (ENHANCEMENT)
8010	NY, VARIOUS H (DOMESTIC OR SKAMANIA/)	1988	26370	FING					LK ONTARIO (ENHANCEMENT)
8011	NY, VARIOUS H (DOMESTIC OR SKAMANIA/)	1988	404310	YEAR					LK ONTARIO (ENHANCEMENT)
9002	NY, CATSKILL H (CATSKILL/SEEFORELLEN)	1989	45000	YEAR	NY, NYDEC				SEVERAL LAKES (STOCKING)
9002		1989	15130	YEAR					DUNKIRK HARBOUR (STOCKING)
9002		1989	40000	YEAR					LK ONTARIO (STOCKING)
9012	NY, CALEDONIA H (CALEDONIA/ROME LAB)	1989	282630	YEAR	NY, NYDEC				LK ONTARIO (STOCKING)
9012		1989	37950	F FING					LK ONTARIO (STOCKING)
9020	NY, SALMON RIVER H (/ROME LAB)	1989	84680	YEAR	NY, NYDEC				LK ONTARIO (STOCKING)

SALVELINUS NAMAYCUSH (LAKE TROUT)

6013	PA, ALLEGHENY H (LK ONTARIO/)	1986	1382000	YEAR				
7031	PA, ALLEGHENY H (LK ONTARIO/)	1987	366300	FING				LK ONTARIO (REHABILITATION)
7032	PA, ALLEGHENY H (LK ONTARIO/)	1987	818100	YEAR				LK ONTARIO (REHABILITATION)
8012	PA, ALLEGHENY H (LK ONTARIO/)	1988	247100	FING				LK ONTARIO (REHABILITATION)
8013	PA, ALLEGHENY H (LK ONTARIO/)	1988	767500	YEAR				LK ONTARIO (RESTORATION)
9006	PA, ALLEGHENY H (SENECA LAKE/)	1989	352300	YEAR	NY, NYDEC			LK ONTARIO (RESTORATION)
9007	PA, ALLEGHENY H (/SUPERIOR)	1989	240000	YEAR	NY, NYDEC			LK ONTARIO (REHABILITATION)
9007		1989	19500	F FING				LK ONTARIO (REHABILITATION)
9008	PA, ALLEGHENY H (LK ONTARIO/)	1989	158000	YEAR	NY, NYDEC			LK ONTARIO (REHABILITATION)
9008		1989	212500	F FING				LK ONTARIO (REHABILITATION)
9009	NY, CALEDONIA H (SENECA LAKE/SENECA)	1989	28000	YEAR	NY, NYDEC			LK ONTARIO (REHABILITATION)
								LK ONTARIO (REHABILITATION)

ONCORHYNCHUS MYKISS (RAINBOW TROUT) CONT.

8025	IN, (/SKAMANIA SS)				NY, CALEDONIA HATCHERY	1988	10100	16MO	CATTARAUGUS CREEK
8025		1988	18000	16MO					CHAUTAUQUA CREEK
8005	NY, VARIOUS H (FINGER KK X DOMESTIC SS)	1988	6780	YEAR					LK ONTARIO TRIBUTARIES
8004	NY, VARIOUS HATCHERIES (/SKAMANIA SS)	1988	107000	YEAR					LK ONTARIO TRIBUTARIES
8003	NY, VARIOUS HATCHERIES (/WA SS)	1988	293700	YEAR					LK ONTARIO TRIBUTARIES
8006	NY, VARIOUS HATCHERIES	1988	308050	FING					LK ONTARIO TRIBUTARIES
9005	NY, SALMON R H (SALMON R/SS)	1989	13100	F FING	NY, NYDEC				CATTARAUGUS CR (STOCKING)
9005		1989	102900	YEAR					4 LK ERIE TRIBS (STOCKING)
9017	NY, CALEDONIA H (SALMON R/WA SS)	1989	212440	YEAR	NY, NYDEC				LAKE ONTARIO (STOCKING)
9018	NY, SALMON R H (SALMON R/WA SS)	1989	171970	YEAR	NY, NYDEC				LAKE ONTARIO (STOCKING)
9018		1989	75000	F FING					LAKE ONTARIO (STOCKING)
9019	NY, CALEDONIA HATCHERY (DOM/NASHUA)	1989	93790	YEAR	NY, NYDEC				LAKE ONTARIO (STOCKING)
9019		1989	25000	F FING					LAKE ONTARIO (STOCKING)

ONCORHYNCHUS NERKA KOKANEE (KOKANEE SALMON)

6002	CT, EAST TWIN LAKE				NY, NYDEC, ROME HATCHERY	P1986	165090	0+	6-10 LAKES (ENHANCEMENT)
7001	CT, EAST TWIN LAKE	1987	197000	EGGS	NY, NYDEC, CATSKILL HATCHERY	P1987			6-10 LAKES (ENHANCEMENT)
7010	CT, EAST TWIN LAKE				NY, NYDEC, ROME H (REARING)	P1987	90300	FRY	8 INLAND LK (ENHANCEMENT)
9001	CT, EAST TWIN LK H (EAST TWIN LK/)	1988	93000	EGGS	NY, NYDEC CATSKILL HATCHERY	1988	93000	EGGS	SEE NEXT LINE
9001					NY, ROME HATCHERY	1989	55000	FING	INLAND LKS (STOCKING)

ONCORHYNCHUS TSHAWYTSCHA (CHINOOK SALMON)

6009	MI, (LAKE MICHIGAN)				NY, NYDEC, SALMON RIVER H	1986	529400	SP FING	LK ERIE (SPORT FISHING)
6012	NY, 2 HATCHERIES (SALMON RIVER/)	1986	2849000	SP FING					LK ONTARIO (SPORT FISHING)
7033	NY, 2 HATCHERIES (SALMON RIVER/)	1987	3111330		NY, NYDEC				LK ONTARIO (SPORT FISHING)
8014	NY, 2 HATCHERIES (SALMON RIVER/)	1988	2848000	SP FING	NY, NYDEC				LK ONTARIO (SPORT FISHING)
8029	NY, SALMON R H (LK ONTARIO/SALMON R)	1988	500000	6MO					CATTARAUGUS CR, LK ERIE
8029		1988	20000	6MO					18 MILE CREEK, LK ERIE
9015	NY, SALMON R H (LK ONTARIO/SALMON R)	1989	620000	SP FING	NY, NYDEC				3 LK ERIE TRIBUTARIES
9015		1989	2212200	SP FING					LK ONTARIO (STOCKING)
9016	NY, CALEDONIA H (LK ONTARIO/SALMON R)	1989	540000	SP FING	NY, NYDEC				LK ONTARIO (STOCKING)

SALMO SALAR (ATLANTIC SALMON)

6017	NY, 2 H (PENOBSCOT & LITTLE CLEAR/)	1986	55000	YEAR					LK ONTARIO (RESTORATION)
7023	NY, CORTLAND HATCHERY (/PENOBSCOT)	1987	9130	YEAR					LK ONTARIO (RESTORATION)
7017	NY, ADIRONDACK H (/LITTLE CLEAR)	1987	49000	YEAR					LK ONTARIO (RESTORATION)
8001	NY, CORTLAND HATCHERY (/PENOBSCOT)	1988	5530	FING					LK ONTARIO TRIBUTARIES
8002	NY, ADIRONDACK H (/LITTLE CLEAR)				NY, VARIOUS HATCHERIES	1988	31900	YEAR	LK ONTARIO TRIBUTARIES
9010	VT, PITTSFORD H (/GRAND LK STREAM)	1989	44020	YEAR	NY, NYDEC				LK ONTARIO (STOCKING)
9011	NY, TUNISON H (/PENOBSCOT)	1989	290	21MO	NY, NYDEC				LK ONTARIO (STOCKING)
9011		1989	4710	YEAR	NY, NYDEC				LK ONTARIO (STOCKING)
9011		1989	14670	F FING					LK ONTARIO (STOCKING)

SALMO TRUTTA (BROWN TROUT)

6014	NY, 3 HATCHERIES (DOMESTIC/)	1986	442000	YEAR					LK ONTARIO (SPORT FISHING)
6010	WEST GERMANY (SEA RUN/)	1986	20000	EGGS	NY, COLD SPRINGS HATCHERY	P			LONG ISLAND
6001	WEST GERMANY (SEEFORELLEN/)				NY, NYDEC, CATSKILL HATCHERY	P1986	12000	1+	SEVERAL LK (ENHANCEMENT)
7022	NY, SEVERAL HATCHERIES (DOMESTIC/)	1987	25000	YEAR	NY, NYDEC				DUNKIRK HARBOUR, LK ERIE
7022		1987	25000	YEAR					CATTARAUGUS CR, LK ERIE
7030	NY, 2 HATCHERIES (DOMESTIC/)	1987	417760	YEAR					LK ONTARIO (ENHANCEMENT)
8023	NY, CATSKILL H (/SEEFORELLEN, W GERMAN)				NY, CALEDONIA H (REARING)	1988	20020	3MO	CANADAWAY CR, LK ERIE
8022	NY, RANDOLPH H (DOMESTIC/RANDOLPH)	1988	5000	10MO					BUFFALO CR, LK ERIE
8019	NY, RANDOLPH H (DOMESTIC/RANDOLPH)	1988	7400	10MO					18 MILE CREEK, LK ERIE

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

ONTARIO

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	TRANSFER NUMBER	TRANSFER STAGE	TRANSFER SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	FINAL DISPOSITION NUMBER	FINAL DISPOSITION STAGE	FINAL DISPOSITION LOCATION (PURPOSE)
ONCORHYNCHUS KISUTCH (COHO SALMON)									
6001	ONT, RINGWOOD H (CREDIT R/CAPILANO)	1986	273000	JUV	ONT, OMNR				LK ONTARIO (RESTORATION)
7001	ONT, RINGWOOD H (CREDIT R/QUALICUM)	P1987	260000	JUV	ONT, OMNR				LK ONTARIO (RESTORATION)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
7004	IN, TWIN BRANCH H (WA, SKAMANIA R/SS)	1987	50000	EGGS	ONT, OMNR	P			
8004	IN, TWIN BRANCH H (ST JOSEPH RIVER/)	1988	80000	EGGS	IN, MIXSAWBAH H (EYEING)	1988	80000	E EGGS	SEE NEXT LINE
8004					ONT, NORMANDALE HATCHERY	P			LK HURON (RESTORATION)
8010	IN, TWIN BRANCH H (TRAIL CR/SKAM SS)	1988	56000	E EGGS	ONT, OMNR, NORMANDALE H (QUAR)	P1989			LK HURON (RESTORATION)
8006	MAN, ROCKWOOD HATCHERY (/TIGWERKER)	1988	25000	EGGS	ONT, PINE VALLEY HATCHERY (QUAR)	P			(AQC BROODSTOCK DEV)
9005	IN, TWIN BRANCH H (LK MICHIGAN/SKAM SS)	1989	80000	G EGGS	ONT, OMNR, NORMANDALE H (QUAR)	1989	35000	FRY	SEE NEXT LINE
9005					NORMANDALE HATCHERY	P1990	20000	YEAR	LK HURON WATERSHED
0002	IN, TWIN BRANCH H (LK MICHIGAN/SKAM)				ONT, OMNR, NORMANDALE H (QUAR)	P1990	60000		SEE NEXT LINE
0002					NORMANDALE HATCHERY	P1991	50000		LK HURON WATERSHED
0005	NOT YET IDENTIFIED (/DOMESTIC)	P1990			ONT, ALMA HATCHERY (QUARANTINE)	P	40000	FRY	SEE NEXT LINE
0005					ALMA HATCHERY (REARING)	P	40000	FRY	(AQC BROODSTOCK)
1002	IN, TWIN BRANCH H (LK HURON/ SKAMANIA)	P1991			ONT, OMNR, NORMANDALE H (QUAR)	P1991	75000	FRY	SEE NEXT LINE
1002					NORMANDALE HATCHERY	P1992	50000	YEAR	LK HURON (PUB STOCKING)
ONCORHYNCHUS TSHAWYTSCHA (CHINOOK SALMON)									
6004	ONT, RINGWOOD HATCHERY (CREDIT RIVER/)	1986	598000	FING	ONT, OMNR				LAKE ONTARIO
7005	ONT, RINGWOOD HATCHERY (CREDIT RIVER/)	P1987	500000	FING	ONT, OMNR				LK ONTARIO (RESTORATION)
SALMO SALAR (ATLANTIC SALMON)									
	SCO, ALLT MOR HATCHERY	1986	3000	EGGS					
7008	ME, GREEN LK H (UNION RIVER/)	1987	50000	E EGGS	ONT, OMNR, NORMANDALE H (QUAR)				LK ONTARIO (RESTORATION)
7010	NS, COLDBROOK FCS (LAHAVE RIVER/)	1987	48450	EGGS	ONT, OMNR, NORMANDALE H (QUAR)				LK ONTARIO (RESTORATION)
7003	ME, GREEN LK H (PENOBSCOT RIVER/)	1987	50000	EGGS	ONT, OMNR, NORMANDALE H (REARING)	P		SMOLTS	LK ONTARIO (RESTORATION)
7002	SCO, ALLT MOR HATCHERY (LOCAL RIVER)	1987	30000	E EGGS	ONT, OMNR, NORMANDALE H (REARING)				(AQUACULTURE-MARKET)
7011	NB, MACTAQUAC FCS (ST JOHN RIVER/)	1987	15150	E EGGS	ONT, OMNR, NORMANDALE HATCHERY	P			LK ONTARIO (RESTORATION)
7011		1987	15150	E EGGS	ONT, OMNR, NORMANDALE HATCHERY	P			(AQUACULTURE)
8001	NFLD, (EXPLOITS RIVER/)	P1988		E EGGS		P			LK ONTARIO (RESTORATION)
8003	NB, MACTAQUAC FCS (ST JOHN RIVER/)	P1988		E EGGS		P			LK ONTARIO (RESTORATION)
8011	NS, COLDBROOK FCS (LAHAVE RIVER/)	1988	60000	E EGGS	ONT, OMNR, NORMANDALE H	P1989			LK ONTARIO (RESTORATION)
9001	NS, COLDBROOK FCS (LAHAVE RIVER/)	1989		EGGS	ONT, NORMANDALE H (QUARANTINE)	P1990	30000	FRY	SEE NEXT LINE
9001					NORMANDALE HATCHERY	P1991	30000	YEAR	LK ONTARIO (STOCKING)
0003	NS, COLDBROOK FCS (LAHAVE RIVER/)	P1990		EGGS	ONT, NORMANDALE H (QUARANTINE)	P1991	50000	FRY	SEE NEXT LINE
0003					NORMANDALE HATCHERY	P1992	50000	YEAR	LK ONTARIO (STOCKING)
1004	NS, COLDBROOK FCS (LAHAVE RIVER/)	P1991		EGGS	ONT, NORMANDALE H (QUARANTINE)	P1992	60000	FRY	SEE NEXT LINE
1004					NORMANDALE HATCHERY	P1993	60000	YEAR	LK ONTARIO (STOCKING)
SALMO SALAR (LANDLOCKED ATLANTIC SALMON)									
6002	NY, ADIRONDACK H (/LITTLE CLEAR POND)	1986	3000	E EGGS	ONT, OMNR, NORMANDALE H (QUAR)	P		SMOLTS	LAKE ONTARIO
8005	ME, GRAND LK STREAM H (WEST GRAND LK/)	1988	75000	E EGGS	ONT, OMNR, NORMANDALE H (QUAR)	P1989			LK ONTARIO (RESTORATION)
9002	GRAND LAKE STREAM H (WEST GRAND LAKE/)	1989	110000	G EGGS	ONT, NORMANDALE H (QUARANTINE)	1989	80000	EGGS	ACCIDENTALLY DESTROYED
9002					ONT, NORMANDALE H (QUARANTINE)	P1990	30000	FRY	SEE NEXT LINE
0007	GRAND LAKE STREAM H (WEST GRAND LAKE/)	1990			NORMANDALE HATCHERY	P1991	25000	YEAR	LK ONTARIO (STOCKING)
0007				G EGGS	ONT, NORMANDALE & ALMA (QUAR)	P1990	60000	FRY	SEE NEXT LINE
					NORMANDALE & ALMA HATCHERIES	P1990		FRY	(AQUACULTURE & STOCKING)

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

NOVA SCOTIA

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
6001	WV, WHITE SULPHUR SPRINGS H	1986	100000	EGGS	NS, DFO, MERLIN FISH FARMS				WESTCHESTER (FISH FARM)
6001		1986	50000	EGGS	NS, DFO, COLDBROOK FCS				
6001		1986	100000	EGGS	NS, DFO, NSDF, ST PETERS HATCHERY				
7003	WA, BEITEYS RESORT	1987	550000	EGGS	NS, NSDF, ST PETERS HATCHERY	P			
7005	ONT, SPRING VALLEY HATCHERY	1987	150000	EGGS	NS, NSDF, ST PETERS HATCHERY	P			
7004	ONT, AQUAFARMS CANADA	1987	50000	EGGS	NS, MERLIN FISH FARMS				WESTCHESTER (FISH FARM)
7001	WV, WHITE SULPHUR SP H (WYTHEVILLE/)	1987	250224	EGGS	NS, DFO, NSDF, FRASERS MILLS H	P			(LOCAL STOCKING)
7002	WA, BEITEYS RESORT	1987	100000	EGGS	NS, MERLIN FISH FARMS				WESTCHESTER (FISH FARM)
7006	PEI, INTEGRATED AQUATICS	1987	45000	FING	NS, OSTREA SEA FARMS				SHAD BAY (AQUACULTURE)
8013	ONT, RAINBOW SPRINGS H	1988	2000	FING	NS, EPS, DARTMOUTH (RESEARCH)				
8012	ONT, RAINBOW SPRINGS H	1988	35000	FRY	NS, NOVA AQUA SMOLT				GLACE BAY (AQUACULTURE)
8011	WA, BEITEYS RESORT	1988	200000	FRY	NS, NOVA AQUA SMOLT				GLACE BAY (AQUACULTURE)
8010	ONT, SPRING VALLEY HATCHERY	1988	250000	EGGS	NS, NSDF, FRASERS MILLS H	P			(LOCAL STOCKING)
8009	ONT, AQUAFARMS CANADA	1988	30000	EGGS	NS, NSDF, FRASERS MILLS H (REARING)	P			(LOCAL STOCKING)
8008	ONT, AQUAFARMS CANADA	1988	100000	EGGS	NS, NSDF, ST PETERS HATCHERY	P			(ENHANCEMENT)
8007	WV, WHITE SULPHUR SPRINGS H	1988	250000	EGGS	NS, NSDF, FRASERS MILLS H (REARING)	P			(ENHANCEMENT)
8006	ONT, RAINBOW SPRINGS H	1988	200000	TR EGGS	NS, NOVA AQUA SMOLT (REARING)				GLACE BAY (AQUACULTURE)
9004	ONT, VAN AQUA INC, BRANTFORD	1989	6000	FING	NS, NOVA AQUA SEA LTD				GLACE BAY
9005	WA, BEITEYS RESORT	1989	150000	EGGS	NS, MERLIN FISH FARMS				WENTWORTH (FISH FARMS)
9007	ONT, RAINBOW SPRINGS H	1989	100000	EGGS	NS, NOVA AQUA SMOLT				GLACE BAY (AQUACULTURE)
9008	PEI, INTEGRATED AQUATICS	1989	125000	FING	NS, NOVA AQUA SMOLT				GLACE BAY (AQUACULTURE)
9009	PEI, BROOK VALLEY MARINE	1989	25000	FING	NS, NOVA AQUA SMOLT				GLACE BAY (AQUACULTURE)
9010	ONT, SPRING VALLEY H, PETERSBURG	1989	100000	EGGS	NS, LITTLE HARB TROUT FARM				TRENTON (TROUT FARM)
9011	WV, WHITE SULPHUR SPRINGS H	1989	250000	EGGS	NS, NSDF, FRASERS MILLS H				
SALMO SALAR (ATLANTIC SALMON)									
8004	NB, HUNTSMAN MARINE LAB (/SJR C)	1988	50000	FRY	NS, NOVA AQUA SMOLT				(AQUACULTURE)
8003	NB, MACTAQUAC FCS (/ST JOHN R)	1988	50000	EGGS	NS, DFO, COLDBROOK FCS (REARING)	P			(AQUACULTURE) BROODSTOCK
9012	NB, MACTAQUAC FCS	1989	50000	EGGS	NS, DFO, COLDBROOK FCS (REARING)	P			(AQUACULTURE) BROODSTOCK
9013	, AQUAVENTURES	1989	100000	EGGS	NS, NOVA AQUA SMOLT (EXPERIMENTAL)				GLACE BAY
9006	NB, CHAMCOOK	1989	50000	FING	NS, NOVA AQUA SMOLT				GLACE BAY (AQUACULTURE)
SALMO SALAR (LANDLOCKED ATLANTIC SALMON)									
8005	ME, GRAND LAKE STREAM HATCHERY	1988	25000	EGGS	NS, M MULLEN, WEYMOUTH (REARING)				BEAR RIVER (AQUACULTURE)
9002	ME, GRAND LAKE STREAM HATCHERY	1989	50000	EGGS	NS, FRASERS MILLS HATCHERY				
SALVELINUS ALPINUS (ARCTIC CHAR)									
8001	MAN, ROCKWOOD HATCHERY	1988	1600	EGGS	NS, NOVA AQUA SMOLT	P			GLACE BAY (AQUACULTURE)
9001	MAN, ROCKWOOD HATCHERY	1989	3000	EGGS	NS, SAL PROP ASSOC				ST PETERS
9003	MAN, ROCKWOOD HATCHERY	1989	5000	EGGS	NS, MICMAC SMOLTS				WEYMOUTH
9014	NB, PURTILL, SUSSEX	1989	10000	EGGS	NS, BRAS D'OR SALMON (TEST)				LITTLE NARROWS
9015	NB, PURTILL, SUSSEX	1989	10000	EGGS	NS, SPA CO-OP (EXPERIMENTAL)				ST PETERS
SALVELINUS FONTINALIS (BROOK TROUT)									
8002	ME, PHILLIPS HATCHERY	1988	100000	EGGS	NS, NSDF, FRASERS MILLS H (REARING)	P			VARIOUS WATERS (STOCKING)

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

PRINCE EDWARD ISLAND

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
ONCORHYNCHUS KISUTCH (COHO SALMON)									
9017	BC, PRIVATE AQUACULTURE FACILITY	1989	10000	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			TO BE DESTROYED
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
	ONT, RAINBOW SPRINGS HATCHERY	1986	50000	EGGS	PEI, GLYNDE RIVER AQUACULTURE				
7004	ONT, RAINBOW SPRINGS HATCHERY	1987	50000	FING	PEI, SILVER SEA AQUACULTURE				(AQUACULTURE)
7007	ONT, AQUAFARMS CANADA	1987	25000	FING	PEI, BROOK VALLEY MARINE				LITTLE YORK (AQUACULTURE)
7003	ONT, RAINBOW SPRINGS HATCHERY	1987	100000	EGGS	PEI, GLYNDE RIVER AQUACULTURE				FORTUNE (AQUACULTURE)
7002	ONT, RAINBOW SPRINGS HATCHERY	1987	100000	EGGS	PEI, INTEGRATED AQUATICS				BREADALBANE (AQUACULTURE)
7011	ONT, RAINBOW SPRINGS HATCHERY	1987	75000	EGGS	PEI, GLYNDE RIVER AQUACULTURE				NO WILTSHIRE (AQUACULTURE)
7010	ONT, VAN AQUA INC	1987	250000	EGGS	PEI, BROOK VALLEY MARINE				BREADALBANE (AQUACULTURE)
7009	QUE, PISCICULTURE ALLEGHANYS	1987	15000	FING	PEI, EDWARD MURPHY				FORTUNE (AQUACULTURE)
7008	WA, BEITEYS RESORT	1987	200000	FING	PEI, INTEGRATED AQUATICS				KENSINGTON (AQUACULTURE)
7001	ONT, RAINBOW SPRINGS HATCHERY	1987	50000	EGGS	PEI, GLYNDE RIVER AQUACULTURE				NO WILTSHIRE (AQUACULTURE)
7005	ONT, RAINBOW SPRINGS HATCHERY	1987	50000	FING	PEI, BROOK VALLEY MARINE				BREADALBANE (AQUACULTURE)
7012	ONT, AQUAFARMS CANADA	1988	30000	EGGS	PEI, BROOK VALLEY MARINE	P			FORTUNE (AQUACULTURE)
8001	QUE, PISCICULTURE ALLEGHANYS	1988	50000	FING	PEI, EDWARD MURPHY (REARING)				FORTUNE (AQUACULTURE)
8002	WA, BEITEYS RESORT	1988	200000	EGGS	PEI, BROOK VALLEY MARINE				HUNTER R (AQUACULTURE)
8003	WA, BEITEYS RESORT	1988	250000	EGGS	PEI, IAS (REARING)				FORTUNE (AQUACULTURE)
8004	ONT, RAINBOW SPRINGS HATCHERY	1988	125000	EGGS	PEI, GLYNDE RIVER AQUACULTURE				NO WILTSHIRE (AQUACULTURE)
8005	ONT, RAINBOW SPRINGS HATCHERY	1988	25000	TR EGGS	PEI, GLYNDE RIVER AQUACULTURE				GLYNDE R (AQUACULTURE)
9001	ONT, RAINBOW SPRINGS HATCHERY	1989	25000	FING	PEI, DOVER FISH HATCHERY				GLYNDE R (AQUACULTURE)
9002	ONT, RAINBOW SPRINGS HATCHERY	1989	43500	E EGGS	PEI, DOVER FISH HATCHERY				DOVER (AQUACULTURE)
9003	ONT, RAINBOW SPRINGS HATCHERY	1989	68500	E EGGS	PEI, BROOK VALLEY MARINE				DOVER (AQUACULTURE)
9004	ONT, RAINBOW SPRINGS HATCHERY	1989	20000	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			SOURIS (AQUACULTURE)
9005	WA, BEITEYS RESORT	1989	24384	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			TO BE DESTROYED
9009	ONT, RAINBOW SPRINGS HATCHERY	1989	75000	E EGGS	BROOK VALLEY MARINE				TO BE DESTROYED
9010	ONT, RAINBOW SPRINGS HATCHERY	1989	10000	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			SOURIS (AQUACULTURE)
									TO BE DESTROYED
SALVELINUS ALPINUS (ARCTIC CHAR									
7013	MAN, ROCKWOOD HATCHERY	1987	5000	EGGS	PEI, ATL VETERINARY COLLEGE				
8006	NB, HUNTSMAN MARINE LAB	1988	500	FING	PEI, INTEGRATED AQUATICS (REARING)				
9006	NB, HML (FRASER R, LABRADOR/)	1989	50000	E EGGS	PEI, IAS, BROOKVALE (QUARANTINE)	1989	45600	FING	NO WILTSHIRE (AQUACULTURE)
9008	MAN, ROCKWOOD H (/FRASER R, LABRADOR)	1990	3000	E EGGS	PEI, DOVER FISH HATCHERY				BROOKVILLE (AQUACULTURE)
									DOVER (BROODSTOCK DEV)
SALVELINUS FONTINALIS (BROOK TROUT)									
7006	ONT, WILDCAT TROUT FARM	1987	20000	JUV	PEI, GLYNDE RIVER AQUACULTURE				BREADALBANE (AQUACULTURE)
SALMO SALAR (ATLANTIC SALMON)									
8007	NB, HML (/ST JOHN CULTURED)	1988	45000	FRY	PEI, ATL VET COLLEGE (REARING)				
9007	NB, BOF CAGE SITE (/ST JOHN R)	1989	50000	E EGGS	PEI, IAS, BROOKVALE (QUARANTINE)	1989	18300	FING	(AQUACULTURE)
9011	NB, SEA FARMS CANADA	1989	2000	FRY	PEI, ATL VET COLLEGE (RESEARCH)	P			BROOKVILLE (AQUACULTURE)
9012	NB, HUNTSMAN MARINE LAB	1989	1500	PYP	PEI, ATL VET COLLEGE (RESEARCH)	P			TO BE DESTROYED
9013	NB, SEA FARMS CANADA	1989	10000	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			TO BE DESTROYED
9014	NS, MERSEY FCS	1989	7500	FING	PEI, AQUA HEALTH (VACCINE DEV)	P			TO BE DESTROYED
9015	SCO, PRIVATE FACILITY	1989	10000	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			TO BE DESTROYED
9016	NOR, PRIVATE AQUACULTURE FACILITY	1989	10000	E EGGS	PEI, AQUA HEALTH (VACCINE DEV)	P			TO BE DESTROYED
									TO BE DESTROYED

SALMO SALAR (LANDLOCKED ATLANTIC SALMON) CONT.

0007					NORMANDALE & ALMA HATCHERY	P1991		YEAR	(AQUACULTURE & STOCKING)
0006	GRAND LAKE STREAM H (WEST GRAND LAKE/)	1990		EGGS	ONT, NORMANDALE & ALMA (QUAR)	P1990	65000	FRY	SEE NEXT 2 LINES
0006					NORMANDALE & ALMA HATCHERIES	P1991		FRY	(AQUACULTURE & STOCKING)
0006					NORMANDALE & ALMA HATCHERIES	P1992		YEAR	(AQUACULTURE & STOCKING)
1003	GRAND LAKE STREAM H (WEST GRAND LAKE/)	P1991		EGGS	ONT, NORMANDALE & ALMA (QUAR)	P1991	100000	FRY	SEE NEXT 2 LINES
1003					NORMANDALE & ALMA HATCHERIES	P1991		FRY	(AQUACULTURE & STOCKING)
1003					NORMANDALE & ALMA HATCHERIES	P1993		YEAR	(AQUACULTURE & STOCKING)

SALVELINUS ALPINUS (ARCTIC CHAR)

7007	NB, HUNTSMAN MARINE LAB	1987	30	FING	ONT, SIR WILFRED U (RESEARCH)	P			TO BE DESTROYED
7009	ICE, UNIVERSITY OF ICELAND	1987	3000	EGGS	ONT, U OF GUELPH (RESEARCH)	P			TO BE DESTROYED
7006	NB, HUNTSMAN MARINE LAB	1987	200	FING	ONT, U OF GUELPH (RESEARCH)				
8009	ICE, U OF ICELAND (THINGVALLAVATN LK/)	1988	2000	EGGS	ONT, U OF GUELPH (RESEARCH)	P			INCINERATED
8007	MAN, ROCKWOOD H (FRASER R, LAB/)	1988	500	E EGGS	ONT, PINE VALLEY HATCHERY (QUAR)				(AQC BROODSTOCK DEV)
9006	MAN, ROCKWOOD H (FRASER R, LAB/)	P1989	500	E EGGS	ONT, ONTARIO VET COLLEGE	P			NO BAY (AQC BROODSTOCK DEV)
9003	MAN, ROCKWOOD H (FRASER R, LAB/)	1989		EGGS	ONT, COLDWATER & ALMA H	P1990	6500	FRY	(AQC BROODSTOCK)
9004	MAN, ROCKWOOD HATCHERY (NAUYUK LAKE/)	1989		EGGS	ONT, COLDWATER & ALMA H (QUAR)	P1990	13500	FRY	SEE NEXT LINE
9004					COLDWATER & ALMA H (QUAR)	P1990	13500	FRY	(AQC BROODSTOCK)
0001	MAN, ROCKWOOD HATCHERY (/LABRADOR)				ONT, COLDWATER & ALMA H (QUAR)	P1990	6000	FRY	SEE NEXT LINE
0001					COLDWATER & ALMA H (QUAR)	P1990	6000	FRY	(AQC BROODSTOCK)
0004	MAN, ROCKWOOD HATCHERY (/LABRADOR)	P1990			ONT, COLDWATER & ALMA H (QUAR)	P1990	20000	FRY	SEE NEXT LINE
0004					COLDWATER & ALMA H (QUAR)	P1990	20000	FRY	(AQC BROODSTOCK)
1001	MAN, ROCKWOOD HATCHERY (/LABRADOR)	P1991			ONT, COLDWATER & ALMA H (QUAR)	P1991	20000	FRY	SEE NEXT LINE
1001					COLDWATER & ALMA H (QUAR)	P1991	20000	FRY	(AQC BROODSTOCK)

SALVELINUS FONTINALIS X SALVELINUS ALPINUS (CHARBROOK)

8008	QUE, SILVER SPRINGS HATCHERY	1988	500	FISH	ONT, U OF OTTAWA (RESEARCH)	P			INCINERATED

SUMMARY OF SALMONID INTRODUCTIONS AND TRANSFERS, 1986-1989

QUEBEC

FILE	ORIGINAL SOURCE LOCATION (STOCK/STRAIN)	TRANSFER YEAR	NUMBER	STAGE	SPONSOR/FACILITY (PURPOSE)	FINAL DISPOSITION YEAR	NUMBER	STAGE	LOCATION (PURPOSE)
COREGONUS CLUPEAFORMIS (LAKE WHITEFISH)									
8004	ONT, WHITELAKE HATCHERY	1988	700	FING	LAVAL U (RESEARCH)	P			TO BE DESTROYED
COREGONUS LAVARETUS (LAKE WHITEFISH)									
7003	FIN, (VAASA/)	1987	150	G EGGS	LAVAL U (RESEARCH)	P			TO BE DESTROYED
ONCORHYNCHUS KISUTCH (COHO SALMON)									
7001	BC, ROSEWALD CREEK HATCHERY	1987	150	JUV	LAVAL U (RESEARCH)	P			TO BE DESTROYED
ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
7002	ONT, AQUAFARMS CANADA	1987	50000	EGGS	QUE, BILL NOWELL				(AQUACULTURE)
8001	PEI, GLYNDE RIVER AQUACULTURE	1988	80000	FING	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
8002	ONT, REDBOW FARMS	1988	80000	FING	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
8003	ONT, ABERFOYLE FISHERIES	1988	80000	FING	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
8005	ONT, SPRING VALLEY HATCHERY	1988	600000	EGGS	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
9007	ONT, AQUAFARMS CANADA (DOMESTIC)	1988	100000	EGGS	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
9003	ONT, SPRING VALLEY H (DOMESTIC)	1989	100000	FRY	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
9008	ONT, SPRING VALLEY H (DOMESTIC)	1989	1000000	EGGS	QUE, FERME ST MATHIEU				(AQUACULTURE-MARKET)
SALVELINUS ALPINUS (ARCTIC CHAR)									
9002	MAN, ROCKWOOD HATCHERY (WILD)	1989	20000	FRY	QUE, INRS, RIMOUSKI (RESEARCH)				
9005	MAN, ROCKWOOD HATCHERY (WILD)	1989	5000	EGGS	QUE, J P THONNEY HATCHERY				(AQUACULTURE)
9006	MAN, ROCKWOOD HATCHERY (WILD)	1989	5000	EGGS	QUE, RESERCE LA PETITE NATION				(AQUACULTURE)
SALVELINUS FONTINALIS (BROOK TROUT)									
9001	ONT, THISTLE SPRINGS FARM (DOMESTIC)	1989	2000	YEAR	QUE, CENTRE DE PECHE BLAINVILLE				(POND FISHING)
9004	ME, PHILLIPS HATCHERY (DOMESTIC)	1989	10000	FRY	QUE, (HOLDING PRIOR TO STOCKING ?)	1989	10000	FRY	SJR, MAINE (STOCKING)

RHODE ISLAND

ONCORHYNCHUS MYKISS (RAINBOW TROUT)									
6001	WA, TROUT LODGE (UNKNOWN/)	1986	150000	EGGS	RI,	P1988?		2+	STATEWIDE (STOCKING)
7001	WA, TROUT LODGE (UNKNOWN/)	1987	150000	EGGS	RI,	P1989?		2+	STATEWIDE (STOCKING)

VERMONT

TABLE A:

February 15, 1990

Canadian Atlantic Salmon Catches in Tonnes since 1960 and Numbers since 1982

(Information provided to the International Council for Exploration of the Sea (ICES))

Year	Grilse		Salmon		Total	
	Tonnes	Numbers	Tonnes	Numbers	Tonnes	Numbers
1960	-		-		1,636	
1961	-		-		1,583	
1962	-		-		1,719	
1963	-		-		1,861	
1964	-		-		2,069	
1965	-		-		2,116	
1966	-		-		2,369	
1967	-		-		2,863	
1968	-		-		2,111	
1969	-		-		2,202	
1970	761		1,562		2,323	
1971	510		1,482		1,992	
1972	558		1,201		1,759	
1973	783		1,651		2,434	
1974	950		1,589		2,539	
1975	912		1,573		2,485	
1976	785		1,721		2,506	
1977	662		1,883		2,545	
1978	320		1,225		1,545	
1979	582		705		1,287	
1980	917		1,763		2,680	
1981	818		1,619		2,437	
1982*	716	358,000	1,082	240,000	1,798	598,000
1983*	513	265,000	911	201,000	1,424	466,000
1984*	467	234,000	645	143,000	1,112	377,000
1985	593	333,084	540	122,621	1,133	455,705
1986	780	417,269	779	162,305	1,559	579,574
1987	833	435,799	951	203,731	1,784	639,530
1988	677	372,178	633	137,637	1,311	509,815
1989	550	304,654	616	141,183	1,166	445,837

The 1989 total catch of salmon (1,166 tonnes) is:

- 15.5% below the previous 5 year mean (1,379.8)
- 29.4% below the previous 10 year mean (1,652.5)
- 37.9% below the previous 15 year mean (1,876.3)
- 40.0% below the previous 20 year mean (1,942.8)

The 1989 total catch of MSW salmon only (616 tonnes) is:

- 13.2% below the previous 5 year mean (709.6)
- 36.0% below the previous 10 year mean (962.8)
- 47.6% below the previous 15 year mean (1,174.6)

The 1989 total catch of grilse only (550 tonnes) is:

- 17.9% below the previous 5 year mean (670.0)
- 20.2% below the previous 10 year mean (689.6)
- 21.6% below the previous 15 year mean (701.7)

NOTE: ALL CATCH FIGURES FOR 1989 ARE PRELIMINARY

* Numbers for 1982-84 are estimated (assuming 2.0kg for average 1SW salmon; 4.5kg for MSW salmon)

JUNE 1990
HELSINKI

ANNEX 7

NORTH AMERICAN COMMISSION

PAPER NAC(90)8

CANADIAN ATLANTIC SALMON CATCHES

February 15, 1990

TABLE C: A COMPARISON OF THE OVERALL 1984 THROUGH 1989 ATLANTIC SALMON FISHERIES* (IN TONNES)

AREA	GRILSE						MSW SALMON						TOTAL					
	1984	1985	1986	1987	1988	1989	1984	1985	1986	1987	1988	1989	1984	1985	1986	1987	1988	1989
QUEBEC																		
R	4.0	7.1	9.3	13.1	14.4	9.9	37.8	47.7	61.5	47.2	57.3	48.9	41.8	54.8	70.8	60.4	76.8	58.8
C	1.5	4.2	7.4	6.0	8.4	4.6	60.6	65.5	68.5	96.9	89.5	75.3	62.1	69.8	75.9	103.0	92.0	79.9
TOTAL	5.5	11.3	16.7	19.1	22.8	14.5	98.4	113.2	130.0	144.1	146.8	124.2	103.9	124.6	146.7	163.4	168.8	138.7
NFLD.																		
R	63.0	61.7	62.9	48.8	74.1	37.9	3.4	1.2	1.9	2.6	2.9	2.0	66.4	62.9	64.8	51.5	77.0	39.9
C	346.3	464.0	608.3	702.1	505.6	432.9	475.1	398.8	621.8	770.5	457.7	463.7	821.4	862.9	1230.1	1472.7	963.3	896.7
TOTAL	409.3	525.7	671.2	750.9	579.7	470.8	478.5	400.1	623.7	773.1	460.6	465.7	887.8	925.8	1294.9	1524.2	1040.3	936.6
MARITIMES																		
R	34.8	52.9	86.4	56.8	68.6	60.6	2.0	0	0	0	0	0	36.8	52.9	86.4	56.8	68.6	60.6
C	14.9	0	0	0	0	0	41.0	0	0	0	0	0	55.9	0	0	0	0	0
TOTAL	49.7	52.9	86.4	56.8	68.6	60.6	43.0	0	0	0	0	0	92.7	52.9	86.4	56.8	68.6	60.6
NATIVE	2.1	2.5	5.7	6.2	6.1	4.6	25.0	26.3	25.3	33.7	26.0	25.8	27.1	28.9	31.0	39.9	32.2	30.4
TOTAL	466.6	592.6	780.0	833.2	677.4	550.5	644.9	539.7	779.0	951.1	633.4	615.8	1111.5	1132.3	1559.0	1784.3	1310.8	1166.3

* Numbers may not add directly due to rounding process

R = Recreational
C = Commercial

NOTE: ALL CATCH FIGURES FOR 1989 ARE PRELIMINARY

February 15, 1990

Table B: Nominal Catches (Provisional) of Atlantic Salmon in Canada for 1989 (in kg round fresh weight)

	GRILSE	% OF TOTAL	SALMON	% TOTAL	TOTAL	% OF TOTAL
QUEBEC						
R	9,900	1.8	48,924	8.0	58,824	5.0
C	4,629	0.8	75,289	12.2	79,918	6.9
TOTAL	14,529	2.6	124,213	20.2	138,742	11.9
NFLD						
R	37,870	6.9	2,009	0.3	39,879	3.4
C	432,938	78.7	463,743	75.3	896,681	76.9
TOTAL	470,808	85.6	465.732	75.6	936,560	80.3
MARITIMES						
R	60,600	11.0	0	0	60,600	5.2
C	0	0.0	0	0	0	0.0
TOTAL	60,600	11.0	0	0	60,600	5.2
NATIVE FOOD FISHERY (ALL AREAS)	4,609	0.8	25,792	4.2	30,401	2.6
TOTAL	550,546	100.0	615,757	100.0	1,166,303	100.0

R = Recreational (Total = 159,303kg or 13.7%)
C = Commercial (Total = 976,599 kg or 83.7%)

NOTE: All catch figures for 1989 are preliminary

February 15, 1990

Table D: Harvest (tonnes) by Zone in the Newfoundland Commercial Salmon Fisheries, 1978-82, Average and Yearly since 1983

Zone	1978-82 Average Catch	1983 Catch (Tonnes)	1984 Catch (Tonnes)	1985 Catch (Tonnes)	1986 Catch (Tonnes)	1987 Catch (Tonnes)	1988 Catch (Tonnes)	1989* Catch (Tonnes)	1989 compared to 1978-82
1	124	81	51	72	89	75	65	108	-13
2	485	286	211	139	309	407	292	223	-54
3	257	191	134	123	192	369	184	152	-41
4	166	125	128	111	200	180	103	130	-22
5	70	58	60	72	61	60	39	36	-49
6	57	30	35	65	54	48	25	27	-53
7	45	23	20	25	19	26	16	13	-71
8	40	24	32	31	24	23	19	11	-73
9	17	9	12	11	8	7	8	7	-59
10	36	22	28	51	49	28	18	38	+6
11	54	44	34	101	67	53	21	34	-37
12	79	53	0	0	0	0	0	0	-100
13	40	33	43	32	79	66	78	45	+13
14	36	37	33	30	79	132	96	73	+103
Total	1,504	1,016	821	862	1,230	1,472	963	897	-40
Insular Nfld. only	895	649	559	651	832	991	607	566	-37

* All figures for 1989 are preliminary

Canadian Atlantic Fisheries
Scientific Advisory Committee

CAFSAC Advisory Document 89/14

EVALUATION OF THE FIVE-YEAR SALMON MANAGEMENT PLAN AND STATUS OF SALMON STOCKS IN ATLANTIC CANADA IN 1989

CAFSAC, at its meeting of 26 October, 1989, reviewed available information on the impact of the 1984-1988 Five-year Atlantic Salmon Management Plan and, at the December 14, 1989 meeting, reviewed the status of the salmon stocks for 1989.

Executive Summary

The management measures applied during the five-year salmon management plan have resulted in increased egg deposition for seven of the eight river systems where such information is available. This was expected because the hook and release program for large salmon as well as the absence of a commercial fishery in the Maritime Provinces can only have had a positive impact on egg deposition.

The analyses conducted to estimate the changes in interception rate indicate that commercial catch off eastern Newfoundland have been delayed by 1.5 to 2 weeks and that both the percentage of large salmon in commercial catch and the total catch of large salmon have declined. Although the conclusions are not definite, CAFSAC considers that the changes in timing and composition of the catches are consistent with the five-year plan objectives.

Despite the positive results of the five-year plan, the estimated number of returns of grilse in 1989 has generally been low compared with 1988 and with the previous five or ten years. For most rivers, the observed large salmon returns were, as in 1987 and 1988 lower than the values forecast in previous years. The differences could be due to a number of factors such as the varying marine survival from year to year, the changes in sea-age maturation, and drought conditions in rivers. It is not presently possible to predict these factors and incorporate them into forecasting models and CAFSAC is therefore reluctant to provide quantitative forecasts of salmon returns to rivers. Despite lower returns of grilse to rivers in 1989, the returns of large salmon in 1990 are expected to be average or slightly above in several rivers. CAFSAC, however, considers that this overall assessment of salmon stock status is incomplete because of the unavailability of Newfoundland commercial salmon catch statistics for 1989.

JUNE 1990
HELSINKI

ANNEX 8

NORTH AMERICAN COMMISSION

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CAFSAC REPORT

EVALUATION OF THE FIVE YEAR SALMON MANAGEMENT PLAN AND STATUS OF SALMON STOCKS IN ATLANTIC CANADA IN 1989

- all part-time commercial licenses in Newfoundland and Labrador were cancelled with mandatory buy-back;

- all commercial salmon fisheries in the Maritimes were closed with fishermen compensated for catch foregone and offered a buy-back of their license; and

- a tagging system was introduced for any salmon exported from Newfoundland. In the recreational fishery, the hook-and-release regulation was extended to include grilse. Released fish were not considered part of the bag limit.

In 1986,

- the closing date of the commercial fishery in Newfoundland was advanced to October 15 from December 31, except in SFA 13 where the closure date was already July 10.

Mandatory tagging was introduced in 1987 for all salmon harvested commercially in Newfoundland rather than just for fish exported. A limit of four was placed on the number of fish an angler could hook-and-release per day; and a season bag limit of 15 fish was also imposed. In 1988, a mandatory tagging program was introduced in the Newfoundland recreational fishery.

In Quebec, measures introduced in 1984 included the closure of commercial fisheries of the Gaspe, the introduction of seven-fish seasonal and one-fish daily bag limit in the recreational fisheries, and more restrictive seasons for most recreational fisheries.

Throughout the following discussion, the term "large" salmon is used to denote fish that have spent more than one winter at sea, and "grilse" refers to fish that have spent only one winter in the sea before returning to spawn. Furthermore, because of the variable number of years that salmon spend in freshwater and because most growth occurs at sea, it is appropriate to consider the age of salmon in terms of their sea age, which starts in the year that they become smolts in freshwater and migrate to the sea.

As was done in Adv. Doc. 88/19, this document presents as assessment of the plan on the basis of indicators of increased spawning escapement of large salmon in the Gulf and Scotia-Fundy regions and of decreased interception of large salmon from these stocks in the Newfoundland Region.

1.2 Spawning Escapement

The objective of increasing spawning escapement is based on the existence of a positive relationship between the number of salmon eggs deposited and subsequent recruitment. Therefore, measures to increase the number of eggs deposited are expected to have a beneficial long term impact on the status of the stocks. Reductions in commercial fisheries and catch and release programs for large salmon in rivers should have had an immediate impact of increasing spawning escapement and subsequent egg deposition. However, the life cycle of salmon is such that the

1. Evaluation of the Five-Year Salmon Management Plan

1.1 Introduction

CAFSAC has provided a preliminary review of the impact of the first four years of the 1984-1988 Atlantic Salmon Management Plan in Advisory Document 88/19. The present review is based on more complete data, including information from the fifth year of the plan.

The five-year plan was considered necessary because estimates of spawning escapement in 1983 were lower than in previous years and were below target levels for most rivers except those on the east and south coasts of Newfoundland and in the Inner Bay of Fundy (Adv. Doc. 83/23). In addition, the low abundance of grilse in 1983 suggested that the abundance of large salmon in 1984 would be lower than in 1983.

In 1984, the Department of Fisheries and Oceans (DFO) and the Province of Quebec introduced new programs for salmon management which were more comprehensive and more stringent than those implemented in previous years. There have been some modifications each year, but the general thrust has been one of conservation to attain spawning requirements, principally through protection of large salmon and by reducing the interception in mixed stock fisheries of salmon originating in another province.

The management plan implemented by DFO in 1984 involved the following:

- closure of Area J2, (Salmon Fishing Area (SFA) 12, and a small portion of SFA 11) (Fig 1) to commercial fishing with a mandatory buy-back of all commercial licenses;
- delay in the opening of the commercial salmon season in Newfoundland-Labrador by 2 weeks from May 20 to June 5;
- shorter and delayed seasons in most commercial salmon fisheries of the Maritime Provinces;
- closure of SFA 16 and 23 (Miramichi and Saint John rivers) commercial fisheries in New Brunswick;
- prohibition of retention of large salmon in the recreational fisheries of insular Newfoundland, New Brunswick, Prince Edward Island and Nova Scotia (hook-and-release regulation);
- reduced seasonal bag limits in the recreational fishery in Nova Scotia;
- prohibited retention of salmon by-catch in commercial fisheries for other species; and
- a commitment to seek reduction in the West Greenland salmon quota.

The following modifications were made in 1985:

1.3 Interceptions in Newfoundland Waters

The analysis of interceptions in Newfoundland waters was conducted over three 5-year time periods: 1974-1978, 1979-1983, 1984-1988 by investigating changes: (1) in the timing of commercial catches, (2) in the relative proportion of large salmon in commercial catches and, (3) in the actual catches in commercial fisheries.

1.3.1 Timing of Commercial Catches

The timing of the commercial catches in Newfoundland is considered an important factor because catches early in the year consist of a larger proportion of large salmon on their migration back to Quebec, New Brunswick or Nova Scotia rivers. Therefore, the provision of the five-year plan for later openings of the commercial fishery along the coast of insular Newfoundland was intended to decrease the interception of mainland origin salmon in Newfoundland.

Delayed openings do not necessarily result in a change of interception of mainland origin salmon depending on when the catches were actually made during plan years compared with pre-plan years. The timing of commercial catches was investigated by determining the date at which various percentages of the total large salmon catch (in numbers) were taken. No statistically significant changes over the three time periods were noted in Labrador (SFAs 1-2) and northeast Newfoundland (SFAs 3-4). This was expected for Labrador because weather and ice conditions rarely permit fishing prior to June 5. In east (SFAs 5-8) Newfoundland, the catch occurred about 1.5 to 2 weeks later during plan years than pre-plan years. CAFSAC concludes that the later date of catch of large salmon has likely resulted in a smaller interception of mainland origin large salmon than would have otherwise been the case if the opening of the seasons had not been delayed. Some of these fish that were not intercepted may have been harvested elsewhere, or could have returned to home waters.

1.3.2 Relative Proportions of Large Salmon in the Commercial Catches

Because the catch of salmon is influenced by the fishing effort and the abundance of salmon, it is difficult to detect a change in the interception of mainland origin salmon by looking only at the catches of large salmon. If it is assumed that the relative abundance of grilse and large salmon has remained unchanged over the three time periods mentioned above, then a decrease in the proportion of large salmon caught in the commercial fisheries would indicate a decrease in the interception of large salmon from mainland origin.

Yearly estimates of the percentage of large salmon in the commercial catch for each SFA are shown in Figure 4. The mean percentages of large salmon (by weight) in the commercial fishery by groupings of SFA's and three time periods are given in the table below (SFAs are given in parentheses):

adult progeny resulting from the benefits of management measures aimed at increasing recruitment by improving egg deposition could not be detected earlier than about five years after the measures were implemented. Therefore, management measures undertaken in 1984 to increase spawning escapement would be expected to possibly produce results in terms of adult progeny only in 1989.

Relative changes in spawning escapement between pre-plan and plan years have been estimated by considering: the proportion of large salmon that survive to spawn after returning to the vicinity of the river mouth; sport catches; estimates from counting facilities; and commercial and native catches. The success of the management measures is also assessed in terms of increased juvenile densities. Detailed information is available for a few rivers only. The results for those rivers are considered representative for rivers of the same salmon fishing area but for which less information is available.

The information available for the rivers in SFA 13 on the west coast of Newfoundland indicate that river returns have not increased during the plan years, but increased commercial catches suggest that homewater returns to SFA 13 have increased. On the Margaree River, the data available on angling since 1979 and estimates of large salmon released since 1984 suggest that the plan has had a positive effect on spawning escapement (Fig.2). Estimated egg deposition increased significantly in both the Restigouche and Miramichi rivers between the pre-plan and plan periods (Fig 3). Average egg deposition increased by a factor of three in the Restigouche River and by a factor of two in the Miramichi River during the plan. Despite the increases in the Restigouche River, target egg deposition (71.4 million eggs) was apparently not met. In the Miramichi River, the target egg deposition (132 million eggs) was met in four of the five years when the plan was in effect. Egg deposition on the LaHave River (SFA 21), above Morgan Falls has generally exceeded the target since 1978, increasing by about 36% from 1978-1983 to 1984-1989. On the Saint John River (SFA 23) above Mactaquac Dam, the target egg deposition of 29.4 million eggs has not been met in the three years preceding the 1984 Management Plan or during the last three years of the plan.

Densities of juvenile Atlantic salmon have been monitored annually by electrofishing at 15 fixed stations in each of the Restigouche and Miramichi rivers since 1972. Average densities of age 0+ parr increased in both rivers but age 1+ parr increased significantly only in the Miramichi River. Stock recruitment relationships (egg deposition compared with age 0+ or age 1+ parr) were found in both rivers. On the Saint John River, West River St Mary's, and Stewiacke River, parr densities generally increased between pre-plan and plan years, although the increases were not always statistically significant.

The measures applied during the five-year salmon management plan are such that they can only have had a beneficial effect with regard to egg deposition. The quantification of the results may be confounded by events at sea, both fisheries and environment related but it is unquestionable that the hook and release program for large salmon as well as the absence of a commercial fishery in the Maritime Provinces can only have had a positive impact on egg deposition. However, the nature and variability of the data collected as well as unknown events during the marine life complicate the interpretation of the positive results of the five-year plan with regards to the increase in egg deposition.

however, that most of the changes in timing and composition of the catches, and the level of catch are consistent with the five-year plan objectives.

2. Status of Salmon Stocks in Atlantic Canada in 1989

2.1 Introduction

Catch statistics are important information in the overall assessment of stock status. For Atlantic salmon in particular, estimates of recreational catches are often a major indicator used in evaluating the total numbers of salmon returning to rivers. However, there are many uncertainties about the number of salmon that are caught. This is because there are no accurate statistics on poaching, while legitimate catches by anglers must be estimated either by sample observation or from reports completed and submitted by anglers themselves. A further uncertainty has been added by the compulsory release of large salmon, since many fish that are hooked and lost may also be counted as released. In addition, hook-and-release estimates for large salmon are not available for all rivers. Despite the uncertainties, estimates of recreational catch are often a major indicator used in evaluating the total numbers of salmon returning to rivers. CAFSAC recognizes however, that angling catches are also influenced by environmental conditions such as water temperature and level. In some years, rivers are closed to angling for various periods due to low water conditions. This makes interpretation of annual comparisons of angling catches more complex. Alternative and more reliable statistics on salmon returns are derived from counts obtained from fishways, counting fences, and estimates derived from mark-recapture studies, but those are not available for all rivers.

Despite the positive results of the five-year plan, the estimated number of returns of grilse in 1989 has generally been low compared with 1988 and with the previous five or ten years. For most rivers, the observed large salmon returns were, as in 1987 and 1988 lower than the values forecast in previous years. The differences could be due to a number of factors such as the varying marine survival from year to year, the changes in sea-age maturation, and drought conditions in rivers. It is not presently possible to predict these factors and incorporate them into forecasting models and CAFSAC is therefore reluctant to provide quantitative forecasts of salmon returns to rivers. Despite lower returns of grilse to rivers in 1989, the returns of large salmon in 1990 are expected to be average or slightly above in several rivers. CAFSAC, however, considers that this overall assessment of salmon stock status is incomplete because of the unavailability of Newfoundland commercial salmon catch statistics for 1989.

Table 1 provides an Atlantic overview of the status of Atlantic salmon stocks in 1989 using various indicators including recreational catches, commercial catches, and estimates of returns to rivers. Data for 1989 are compared relative to:

(1) 1988;
(2) previous five-year, 1984-88, means; and
(3) previous ten-year, 1979-88, means.

Differences are expressed in terms of changes, whether increases or decreases, of greater than 10%, or no change, that is an increase or decrease of less than 10%.

	Mean Percentage of Large Salmon		
	1974-1978	1979-1983	1984-1988
Labrador (1-2)	80.5%	72.1%	67.7%
NE Nfld (3-4)	55.1%	43.5%	44.3%
East Nfld (5-8)	69.6%	58.7%	46.6%
South Nfld (9-11)	60.9%	49.8%	38.8%
Insular Nfld (3-11)	61.8%	48.4%	44.2%

A decrease in the percentage of large salmon in the catches is seen in all areas, but the decline is statistically significant only in southern Newfoundland. In addition, the decline between the first (1974-1978) and second (1979-1983) periods were generally larger than between the second period and plan years. CAFSAC notes that the decrease in the proportion of large salmon in catches is consistent with the goals of the plan to decrease the interception of mainland origin large salmon, but cannot be considered as proof that interception has decreased.

1.3.3 Large Salmon Catches in Newfoundland Commercial Fishery

If it is assumed that the total abundance of large salmon has remained relatively constant over the years, the total catch of large salmon in the Newfoundland commercial fishery would be an indicator of the interception of mainland origin large salmon.

Yearly catches of large and small salmon by SFA are shown in Figure 5. The mean commercial catch (in weight) of large salmon in groupings of SFAs are compared for three time periods in the table below (SFAs are given in parentheses):

	Mean catch (t) of large salmon		
	1974-1978	1979-1983	1984-1988
Labrador (1-2)	466.4	386.2	223.2
NE Nfld (3-4)	215.8	194.8	153.2
East Nfld (5-8)	242.8	119.0	69.0
South Nfld (9-11)	102.6	51.8	38.4
Insular Nfld (3-11)	561.2	365.6	260.6

A decline is observed in all areas, but it is statistically significant between the first and third periods only except for northeastern Newfoundland. Although there is a decline between the second and third period, it is not statistically significant. CAFSAC notes that in this case also the observations are consistent with the five-year plan objectives.

Similar to the analyses conducted to estimate the increase in egg deposition, those conducted to estimate the changes in interception rate are influenced by environmental changes and the conditions experienced by salmon at sea. This causes the conclusions not to be as clear as could be desired. It should be noted,

2.2 Newfoundland Region, SFAs 1-11

"Allowance catches" were introduced in the commercial fishery for each SFA for the first time in 1989. Otherwise, management measures were the same as those in effect for 1988.

CAFSAC's examination of the status of stocks in 1989 is incomplete because of the unavailability of commercial catch data. However, recreational catch data were available. The recreational catch (11,525 fish) for the insular portion of the Newfoundland Region in 1989 declined by about 50% from that of 1988 and the previous 5-year average. The catch was even lower than that of 1987 (13,013 fish) when drought conditions resulted in the closure of most rivers to angling for nearly the entire season. Although there were river closures in 1989 as a result of low water levels and high water temperatures, fewer rivers were closed and the duration of periods of closure was less than in 1987. In Labrador, preliminary catch estimates of both 1SW and MSW salmon increased over the 5-year average.

Counts of 1SW salmon at most fishways and counting fences in 1989 decreased from 1988. Most notable decreases occurred for Exploits River, Salmon Brook (Gander River), Middle Brook, Rocky River, Biscay Bay River, and Conne River. Counts of 1SW salmon for Northeast River (Placentia), Colinet River, and Grand Bank Brook increased over 1988. For the most part, compared to 1988, counts of MSW salmon in 1989 either increased or remained similar.

2.2.1 Conne River, Newfoundland, SFA 11

The Atlantic salmon stock of Conne River, Newfoundland, contributed to commercial, recreational and native food fisheries in 1989. Management measures were essentially the same as in past years: the commercial fishing season was from June 5 to July 10; the recreational season extended from June 17 to September 4; anglers were prohibited from retaining large salmon (>= 63cm); and the quota assigned to the native food fishery was 1,200 small salmon (<63cm). However, dead large salmon in the native food fishery could be retained.

Scale samples of large salmon in Conne River in 1989 confirmed the presence of virgin MSW salmon. The majority of the large fish, however, were repeat spawners, both alternate and consecutive spawning fish. All fish over 63cm in size that have been sampled for gender have been females.

Spawning escapement in 1989 is estimated to be 3386 small salmon and 303 large salmon. Spawning escapement of small salmon was 35% lower than in 1988 while large salmon escapement decreased by 24%. Estimated egg deposition of 7.56 million eggs by small (86%) and large (14%) salmon was calculated from a fecundity-length relationship developed in 1987.

Target number of spawners used since 1987 has been 4,000 small salmon or 7.8 million eggs. Normally egg deposition from large salmon has been considered as a buffer to estimates of spawning requirements. In 1989 the contribution by large salmon ensured that the target egg deposition was achieved (97%). CAFSAC notes that limited information based on two years of data suggests that the target number of spawners may be too high and research is on-going to examine this subject.

2.1.1 Atlantic Overview

Recreational catches in most salmon fishing areas and estimated returns to rivers of one-sea-winter (1SW) salmon in Newfoundland Region (SFAs 1-11) were below 1988, and previous five- and ten-year means (Table 1). The recreational catch for insular Newfoundland declined by about 50% as did some of the counts at selected fishways or counting fences.

Gulf Newfoundland (SFAs 12-14) experienced similar declines in recreational catches of 1SW salmon (44-53%) while commercial catches of small salmon decreased slightly less relative to 1988, but were only 20% below previous five- and ten-year means. Commercial catches of large salmon were similar to 1988 values, but 17 to 44% below previous five- and ten-year averages. Returns of 1SW salmon to rivers in SFA 14 were 20-30% below 1988, and previous five- and ten-year means. Multi-sea-winter (MSW) returns, while 31% greater than 1988, were 50-70% lower than long term averages.
Northeastern New Brunswick (SFAs 15-16) had total returns of 1SW salmon about 38-57% below 1988 levels and were also 17-40% lower than 1984-88, and 1979-88 means. MSW returns also declined 21-28% from the previous year and only in SFA 15 were returns similar to or higher than previous five- and ten-year averages. Angling catches of 1SW salmon generally reflected these reduced returns. Decreased angling catches and returns of 1SW salmon also occurred in Prince Edward Island and Gulf Shore, Nova Scotia (SFAs 17 and 18).

An exception to the above pattern of decreases occurred in southwest Nova Scotia (SFA 21). Recreational catches of 1SW salmon were 24% higher than in 1988 and 20% greater than previous five-year means. Returns of wild 1SW salmon to the Saint John River (SFA 23) were the highest recorded while MSW returns were double that of 1988. Returns of 1SW salmon to the LaHave River fishway (SFA 21) however, decreased by 15% from 1988 but were still above previous five- and ten-year means. MSW returns to the La Have River were up 29% from 1988 and were similar to 1984-88 estimates.

Declines in salmon catches and returns observed in much of the Maritimes and Newfoundland were also evident in the Quebec Region. Recreational catches of 1SW salmon in the Gaspe (Q1-Q3) and North Shore areas (Q5-Q9) decreased from 25 to 43% from 1988 but were similar to previous five-year means. MSW catches also decreased from 6 to 22% from the previous year. On Anticosti Island (Q10), 1SW catches decreased 63% from 1988 and 57% from the 1984-88 average. MSW catches have decreased by 15% and 48% for the same two periods. The Ungava area (Q11) was also subject to poor recreational catches of both 1SW and MSW salmon in 1989 declining 21% and 36% respectively from the previous year. Commercial fisheries along part of the Quebec North Shore (Q7-Q9) fared no better with landings of small salmon down 46% and large salmon down 10% in comparison with 1988.

Regional stock status summaries, including assessments of specific rivers are presented below.

2.3.2 Restigouche River, New Brunswick, SFA 15

During 1989, Atlantic salmon in the Restigouche River were exploited by anglers and native fishermen. Regulations controlling the harvest of salmon in 1989 were the same as regulations in 1988. Anglers in New Brunswick tributaries were obligated to release all MSW salmon (>= 63cm). Catches of 1SW salmon were limited to ten by season; a person could have a maximum of six in their possession and the daily bag limit was two. In Quebec tributaries, anglers were allowed to retain both 1SW and MSW salmon but with daily and seasonal bag limits of one and seven fish, respectively. Quebec/New Brunswick boundary waters were regulated by the catch-and-release policy for MSW salmon as in New Brunswick. Native fishermen at Restigouche, Quebec, were allocated a quota of 6995 kg. Native fishermen at Eel River Bar, New Brunswick, were not regulated by quota. Commercial fisheries in Baie des Chaleurs have been closed in both Quebec and New Brunswick since 1984. For both provinces, fishermen were prohibited from landing salmon caught in non-salmon fishing gear (by-catch).

Angling catches of 1SW salmon in SFA 15 in 1989 were 3794 fish, substantially less than reported catches for 1988 (7278) and also smaller than the 1984-1988 average of 4875 1SW salmon. Counts of 1SW salmon and MSW salmon in 1989 at the Upsalquitch protection barrier (headwaters of the Restigouche River) were less than in 1988, but only slightly (<10%). Counts of 1SW salmon at the Nepisiguit River fence decreased by 80% in 1989 from 1988. Counts of MSW salmon were also reduced in 1989 compared to 1988 (35%). The Restigouche River comprises about 80% of the total rearing area available to Atlantic salmon in SFA 15.

Egg deposition requirements for the Restigouche River, to provide a deposition rate of 2.4 eggs per m^2 are 71.4 million eggs. About 12,200 MSW salmon are required to produce these eggs, and an additional 2,600 1SW salmon are required to ensure a 1:1 sex ratio at spawning.

Three methods were used to estimate spawning escapement in 1989. The first was based on angling catches and estimates of exploitation rates. The second used a ratio of spawner to angled fish and the third method was based on fish counts on an estimated 85% of the spawning grounds.

Spawning escapement as estimated by the spawner to angled fish ratio, the method traditionally used for the Restigouche River, was 6,569 MSW salmon and 2,559 1SW salmon. These spawners would result in a total egg deposition of 39.2 million eggs (55% of the requirements). Estimates of egg deposition in 1989 based on field spawner counts and angling exploitation rates were higher (86-119% of requirements). CAFSAC notes that parr densities have increased in recent years (Fig 6), and that MSW returns in 1990 could be average.

2.3.3 Miramichi River, New Brunswick, SFA 16

During 1989, Atlantic salmon that returned to the Miramichi River, New Brunswick, were exploited by native fishermen in Miramichi Bay and upper tidal waters, and by anglers throughout all major tributaries. Regulations controlling the harvest of salmon were the same as regulations in 1988. Commercial fishing for salmon in Miramichi Bay and estuary was prohibited. Possession or sale of salmon caught

Current research on forecasting returns for Conne River is based on mark recapture estimates of the number of smolts leaving the river adjusted by using estimates of sea survival. Results suggest a return of adults in 1990 higher than that observed in 1989. CAFSAC notes a differential survival between 3+ and 4+ smolts based on two years of data. Survival of 3+ smolts has been about 10%, while survival of 4+ smolts was about 5%.

2.3 Gulf Region, SFAs 12-18

2.3.1 Newfoundland-Labrador, SFAs 12-14

Commercial regulations in 1989 were similar to those in effect for 1988. There were 403 licenses in these SFAs in 1989, licensed for 200 fathoms of gillnet each. Recreational fishery regulations were also similar to 1988. Anglers were required to release salmon >=63cm in insular Newfoundland, but these salmon could be retained in southern Labrador. The seasonal bag limit of 15 fish, daily limit of two retained, and daily limit of four hooked and released introduced in 1986 remained in effect in 1989.

Commercial landings of total salmon by number were 36% lower than 1988 but about 20% lower than five- and ten-year means. Small salmon catches were 42% lower than 1988 and about 20% lower than five- and ten-year means. Large salmon catches were similar to 1988 and five-year means but about 40% lower than ten-year means. The largest recreational catch of 1SW salmon occurred on River of Ponds, followed by the Humber River. The 1SW salmon catch was 50% lower than 1988 and long term means.

In SFA 12, 1SW salmon recreational catch was about 60% lower than 1988 and about half of 1978-84 and 1985-89 means, but similar to 1974-1977 mean catches.

In SFA 13, small salmon commercial catch was 45% of 1988 and slightly above 1974-1984 mean catches. Large salmon catches were similar to 1988 and 1985-89 means, but below 1974-77 means. 1SW salmon recreational catches were about 60% lower than 1988 and were the lowest catches recorded since 1974. Returns of 1SW salmon to a counting fence at Fischells Brook were 350 in 1989 compared to 593 in 1988. Returns of MSW salmon were similar in 1989 (11) and 1988 (9), however MSW salmon returns during weeks 25 to 29 have decreased from previous years if timing of angling catches from 1974 to 1984 is compared to fence returns. In contrast a similar decline was not observed for 1SW salmon. While Fischells Brook may not be an absolute indicator of stock abundance in SFA 13, correlations with angling catches suggest it may describe trends in this area.

In SFA 14, the commercial catch of small salmon was 30% less than 1988 but similar to the long term means. The commercial catch of large salmon was 30% less than 1988, but 20% lower than long term means. Recreational catch of 1SW salmon was 40% of 1988 and 30% of long term means. MSW salmon recreational catches in Section 50 (Gulf-Labrador portion of SFA 14) were 80% lower than in 1988 and long term means. Returns to counting facilities were below 1989 values and five-year means, except at Western Arm Brook. The large salmon catch in Statistical Section 50, SFA 14, in 1990 is forecast to be above average. For the remainder of SFA 14, the commercial catch of small and recreational catch of 1SW salmon are expected to be average.

run, after September 1. Since 1979, efforts to increase the summer component of the Atlantic salmon stock have consisted of regulatory restrictions and the introduction of hatchery-reared progeny from early-run fish. Anglers have been required to release MSW salmon during the early run since 1979. Since 1985, all MSW salmon were released regardless of date caught. In 1984, there was a reduction in the SFA 18 commercial fishery from eight to three weeks. There has been no SFA 18 commercial fishery since 1985.

Angling data used in past Margaree assessments have come from two sources and the estimates have been inconsistent. Studies conducted from 1987 to 1989 suggest that creel survey catch estimates were most representative of the fishery.

Spawning requirements have been previously estimated at 1,036 MSW salmon and 579 1SW salmon. Population estimates for the fall 1988 and fall 1989 indicate that spawning requirements were exceeded in those years. Additional egg deposition would come from salmon returning during the summer. Returns of MSW in 1990 are expected to be lower than in 1989.

2.4 Scotia-Fundy Region, SFAs 19-23

The 1989 sport fishery was conducted under the same restrictions as those of 1988 with the exception of the Alma and Point Wolfe rivers which were closed in mid-July, and Big Salmon River which allowed zero retention until late August when it appeared that spawning escapement might be met. The commercial fishery has been closed since 1984.

Counting facility and river spawner counts in 1989 indicated higher returns of 1SW and MSW fish than 1988 in all SFAs in Scotia-Fundy Region with the exception of 1SW returns to Morgan Falls (LaHave River) in SFA 21 which were down 15%. Diver counts of salmon on inner Fundy rivers of SFA 23 increased by two to five times those of 1988; those of Middle River (SFA 19) may have met spawning requirements. Escapement of 1SW fish to Inner Bay of Fundy rivers of SFA 23 increased in 1989 relative to the previous two years.

Counts of MSW salmon at fish passage facilities on the Liscomb (SFA 20), LaHave (SFA 21), and Saint John (SFA 23) rivers were nearly equal to or slightly below (1-13%) the 1984-1988 mean counts. Recreational catches (releases) of MSW salmon were 45% below and 12% above the 1984-1988 means for SFA 20 and 21, respectively.

The survival of hatchery-reared smolts released in 1988, to 1SW returns at counting facilities, was 50% or less of the return rate of the previous two years at Liscomb (SFA 20) and the second lowest on record (1988 being the lowest) for the Saint John. Survival to Morgan Falls on the LaHave River (SFA 21) was the second highest of an eleven year data set.

Recreational catches could only be estimated for SFAs 20 and 21. Estimates of Atlantic salmon sport catch for SFAs 19 and 22, based on returns of angler cards through early November has proven unreliable in each of the past two years. Recreational catch of 1SW fish relative to the 1984-1988 mean was down 25% for SFA 20 and up 21% for SFA 21. Catch estimates were not available for SFA 23

in non-salmon gear (by-catch) was also prohibited. Anglers were allowed to keep only 1SW salmon (<63cm in total length), with season, possession and daily bag limits of 10, 6 and 2 fish, respectively. Native fisheries at Burnt Church (Miramichi Bay), and Eel Ground and Red Bank (tidal waters of the Northwest Miramichi) were not restricted by quota.

Estimates of angling catches provided by the Department of Fisheries and Oceans of bright 1SW salmon in SFA 16 in 1989 were 12,914 fish, which were 24% less than in 1988 and 18% less than the previous five-year average. Angling catches of 1SW kelts in 1989 were 7081 fish, which were 64% above 1988 catches and 168% above the previous five-year mean. Catches of 1SW salmon kelts in 1989 reflected the greater than average returns of bright 1SW salmon in 1988. At Millbank trap, counts of 1SW salmon in 1989 were 38% less than in 1988, while counts of MSW salmon were 21% less. Reductions in catches at Millbank from 1988 to 1989 occurred during the late run of salmon (September and October) only.

Total egg deposition requirements for the Miramichi River, assuming a required egg deposition rate of 2.4 eggs per m^2, are 132 million eggs. Based on the average reproductive potential of Miramichi salmon, 23,600 MSW salmon are required to produce these egg depositions. An additional 22,600 1 MSW salmon are needed to ensure a 1:1 sex ratio at spawning.

Two methods were used to estimate the numbers of 1SW and MSW salmon that spawned in the Miramichi during 1989. The first was based on counts at the Millbank trap using an estimate of the trap catch efficiency based on tagging. The second was based on angling catches and an estimate of exploitation by anglers in 1989 derived from tag recaptures of fish tagged at Millbank. For both methods, salmon mortalities from disease and poaching were assumed to be 1,000 MSW salmon and 4,000 1SW salmon, as in previous assessments.

Method 1 (Millbank trap data) which has been used in past assessments to estimate spawning escapement in the Miramichi River, indicated about 14,600 MSW salmon and 50,600 1SW salmon spawned in 1989. Total egg deposition from these spawners was estimated to be 94% of the target egg deposition level; MSW salmon contributed 72% of the total egg deposition (Fig 7). Spawning escapement as estimated from method 2 was about 20% higher than the method 1 estimate. Parr densities have increased in recent years (Fig 8). A forecast of MSW returns based on a relationship between MSW and 1SW salmon at Millbank, along with an estimate of the catch of small salmon in Labrador suggests that MSW returns in 1990 will be similar to average returns observed during recent years.

2.3.4 Prince Edward Island, SFA 17

Recreational catch of 1SW and MSW salmon and counts at Morell River were 10 to 20% of 1988 returns. Counts of MSW salmon at the Morell River fishway were slightly above 1988 returns.

2.3.5 Gulf Shore, Nova Scotia, SFA 18

In the Margaree River, Nova Scotia, Atlantic salmon stocks are composed of two runs: the summer run which enters the river up to the end of August, and the fall

Table 1. Overview of the status of Atlantic salmon in Atlantic Canada during 1989. Indices include recreational catches with estimates of catch and release, where available, for MSW salmon, commercial catches, and estimated returns. Estimated returns consist of counts of salmon from fishways or counting fences, index facilities (ex. Millbank trap, SFA 16), and spawner counts for the Quebec region. The latter were derived from diver and canoe surveys. Data for 1989 are compared with 1988, and previous 5-year (1984-88) and 10-year (1979-88) means. A '-' symbol implies a decrease by more than 10%, '+' indicates an increase by more than 10% while '0' refers to a change in either direction of less than 10%.

	Recreational catch						Estimated returns						Commercial catch					
	1SW			MSW			1SW			MSW			Small			Large		
Zones	1988	1984-88	1979-88	1988	1984-88	1979-88	1988	1984-88	1979-88	1988	1984-88	1979-88	1988	1984-88	1979-88	1988	1984-88	1979-88
NEWFOUNDLAND																		
SFA																		
1	0	+	+	-	-	-												
2	-	0	0	-	+	+												
3	-	-	-															
4	-	-	-				-	-		-	-							
5	-	-	-				-	-	-	-	0	+						
6	-	-	-															
7	-	-	-															
8	+	+	+															
9	0	-	-				-	-		+	+							
10	-	-	-				+	+		+	-							
11	-	-	-				-			-								
GULF																		
12	-	-	-															
13	-	-	-				-			+			-	-	-	0	0	+
14	-	-	-	-	-	-	-	-	-	+	-	-	-	0	0	-	-	-
15	-	-	0	0	+	0	-	-	-	-	0	+						
16	-	-	+				-	-	-	-	-	-						
17	-	-					-	-		+	+							
18	-	-	-	-	-		-			+								
SCOTIA-FUNDY																		
19							-			0								
20	-	-	-	-	-		+	-	0	0	0	+						
21	+	+	+	+	+		-	0	+	+	0	+						
22																		
23							0	+	+	+	-	0						
QUEBEC																		
Q																		
1	-	0		0	+					+	+							
2	-	+		0	+					-	+							
3	-	-		-	-					0	+							
4																		
5-6	0	+		0	0					+	+							
7	0	+		-	-								-	0		0	-	
8	-	+		-	0								-	-		0	0	
9	-	-		-	-								-	-		-	0	
10	-	-		-	-													
11	-	+		-	-								-	-		-	-	

and MSW release information has not been available since the 1984 Management Plan was introduced.

Based on the relationship between MSW and 1SW salmon, returns in 1990 of MSW salmon to Liscomb River fishway (SFA 20) are forecast to be below average. While MSW returns to the LaHave River fishway (SFA 21) are expected to be above average.

Status of the Atlantic salmon stock of the Stewiacke River, Nova Scotia, a river within the inner Bay of Fundy, was reviewed using juvenile densities during 1984-1989. Rivers of the inner Bay of Fundy had lower than expected returns of grilse recruits in 1987 and 1988. Densities of fry in 1989 were higher than 1987 or 1988, and densities of age 1+ parr were not significantly lower than 1984-1988 in spite of lower sport catches of grilse in 1987.

2.4.1 Saint John River, New Brunswick, SFA 23

The 1989 Management Plan was the same as that of 1988 in that there was a total ban on homewater commercial fisheries and on the retention of MSW fish in the sport fishery. Sport fishing seasons were the same and no tributaries were closed to angling. The Kingsclear Band replaced their food fishery in favour of a guide sports fishery, the Oromocto Band was granted a license but did not fish and the Tobique Band fished without a permit between early July and mid-September.

Assessment of stocks of the lower Saint John River since 1986 have been built on the premise that returns to tributaries below Mactaquac Dam are equal to the average proportion of down river stocks to the total river returns for 1970-1983. This was necessary because catch statistics for lower river tributaries, which were used prior to 1986 to estimate returns independent of count data from Mactaquac Dam, became increasingly difficult to obtain by early November of each year. CAFSAC has expressed concern over the constant proportion method as it allowed for neither different impacts of building stocks above Mactaquac Dam with hatchery returning spawners originating from Mactaquac Hatchery, nor differential distant exploitation on the earlier run stock components above Mactaquac and later-run components of tributaries below Mactaquac. Thus, CAFSAC is unable to provide an independent assessment of stock status for tributaries below the Mactaquac Dam. Hence, the assessment is of returns and removals for that portion of the river above Mactaquac Dam.

Total estimated returns in 1989 are 9,522 wild and 1,339 hatchery 1SW fish and 4,072 wild and 469 hatchery MSW salmon (Fig 9). Target spawners are 3,200 1SW and 4,400 MSW fish. Spawning escapement was estimated to be 7191 grilse and 3147 large salmon. Spawning requirements (4,400 large salmon) were not met above Mactaquac in 1989. Forecasts of returns above Mactaquac, based on estimates of egg densities and subsequent 1SW returns, and from the average ratio between wild 1SW salmon and wild MSW returns, along with estimates of hatchery returns, suggest that 1SW returns will be similar to those of 1989 and that MSW returns will exceed those of 1989 and possibly be surplus to spawning requirements.

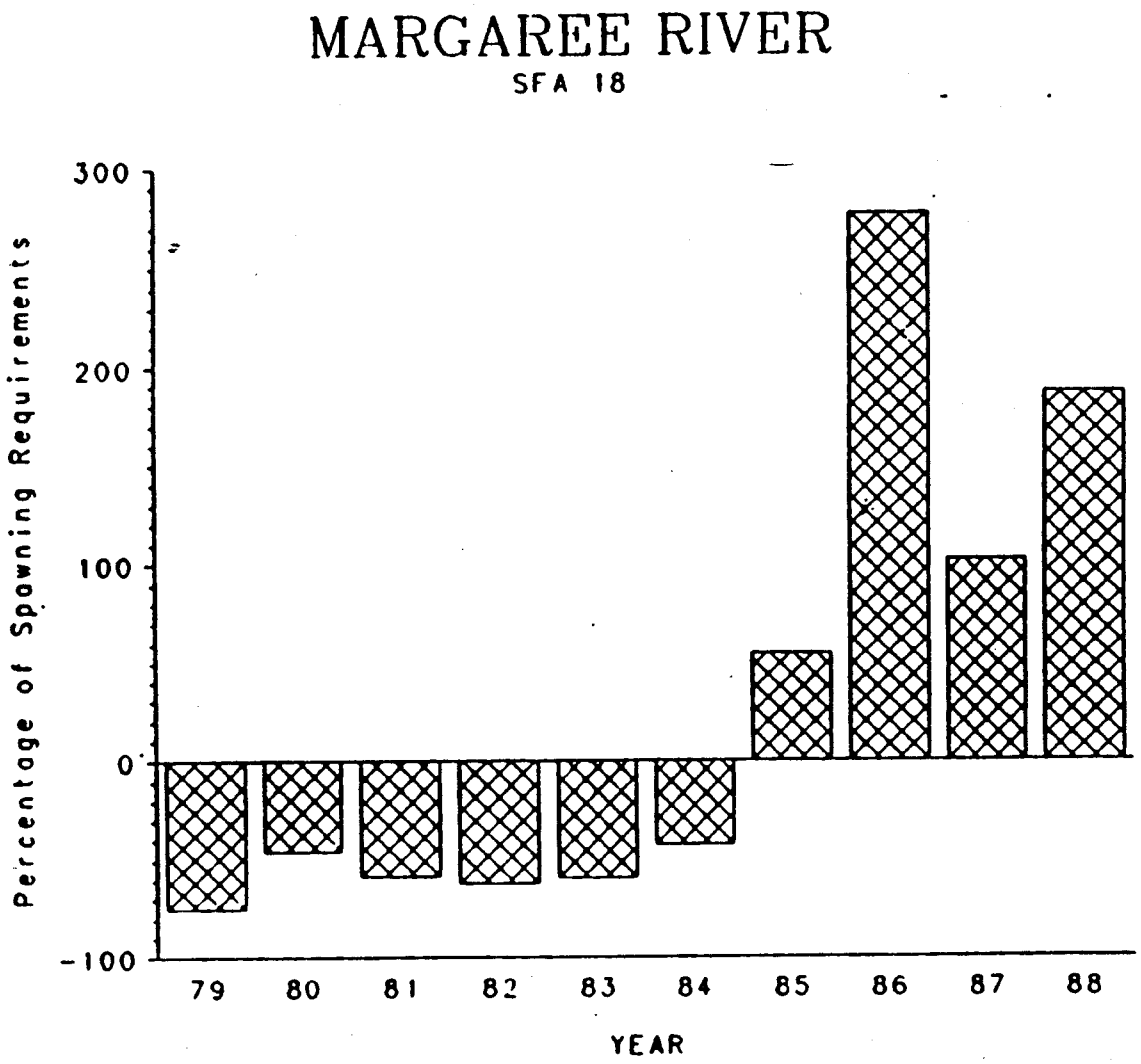


Figure 2. Percentage of spawning requirements achieved on the Margaree River, SFA 18 from 1979-1988.

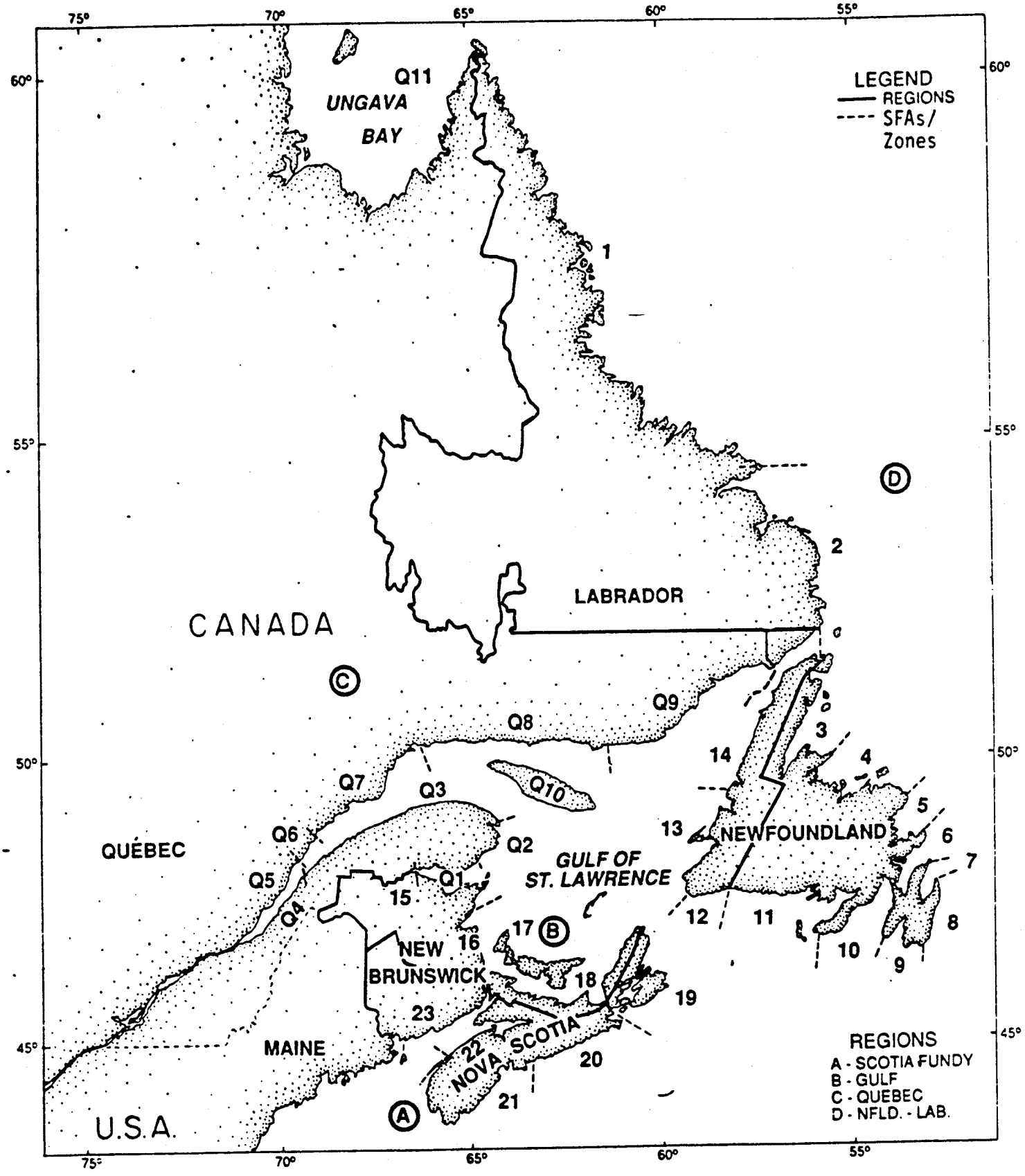


Figure 1. Map of Atlantic Provinces showing Salmon Fishing Areas 1-23, Salmon Management Zones of Quebec (Qs) 1-11, provincial and DFO regional boundaries.

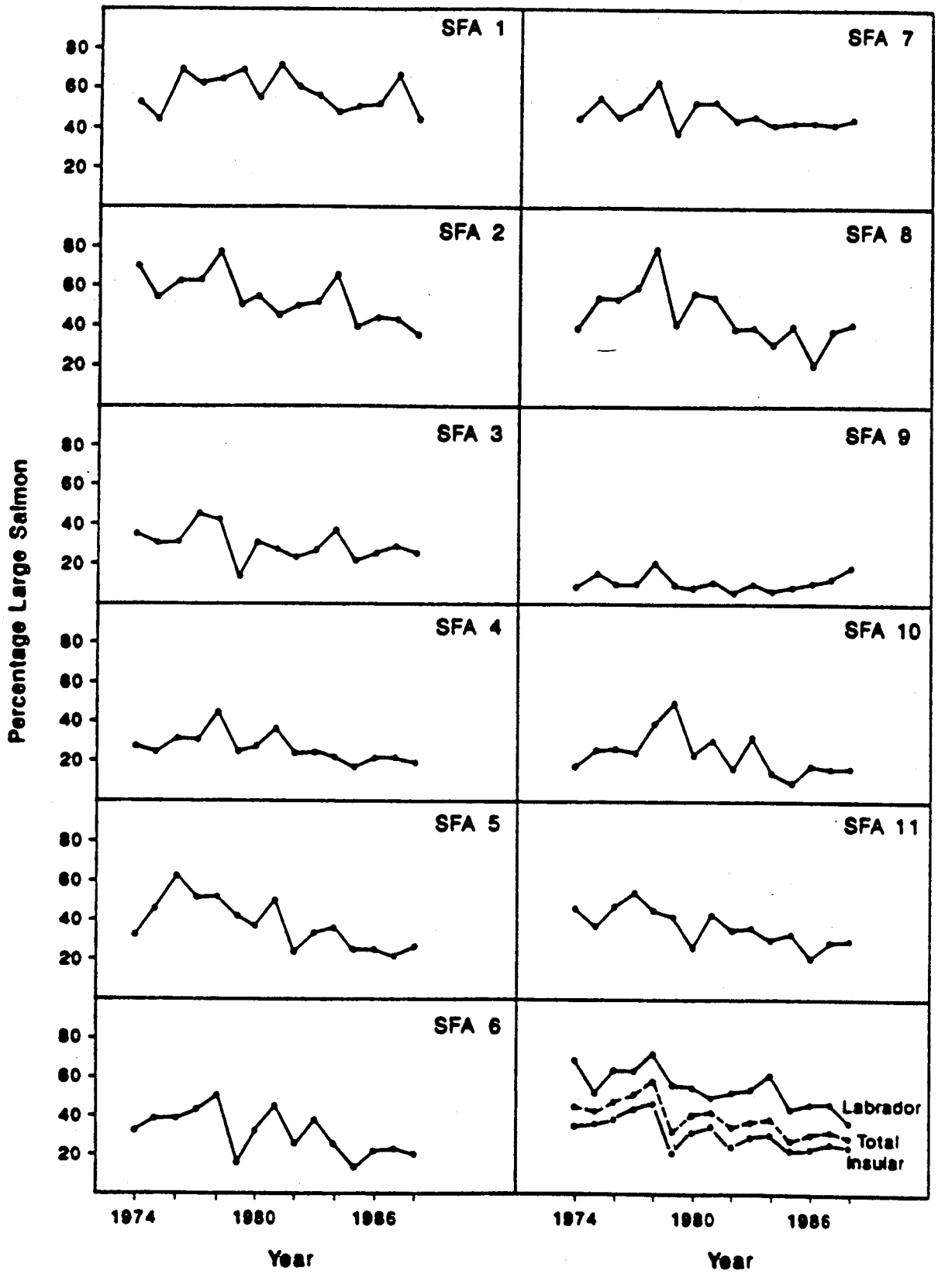


Figure 4. Percentage of large salmon in the commercial fishery (numbers) by year for each SFA, and separately for Newfoundland, Labrador, and combined for all SFAs.

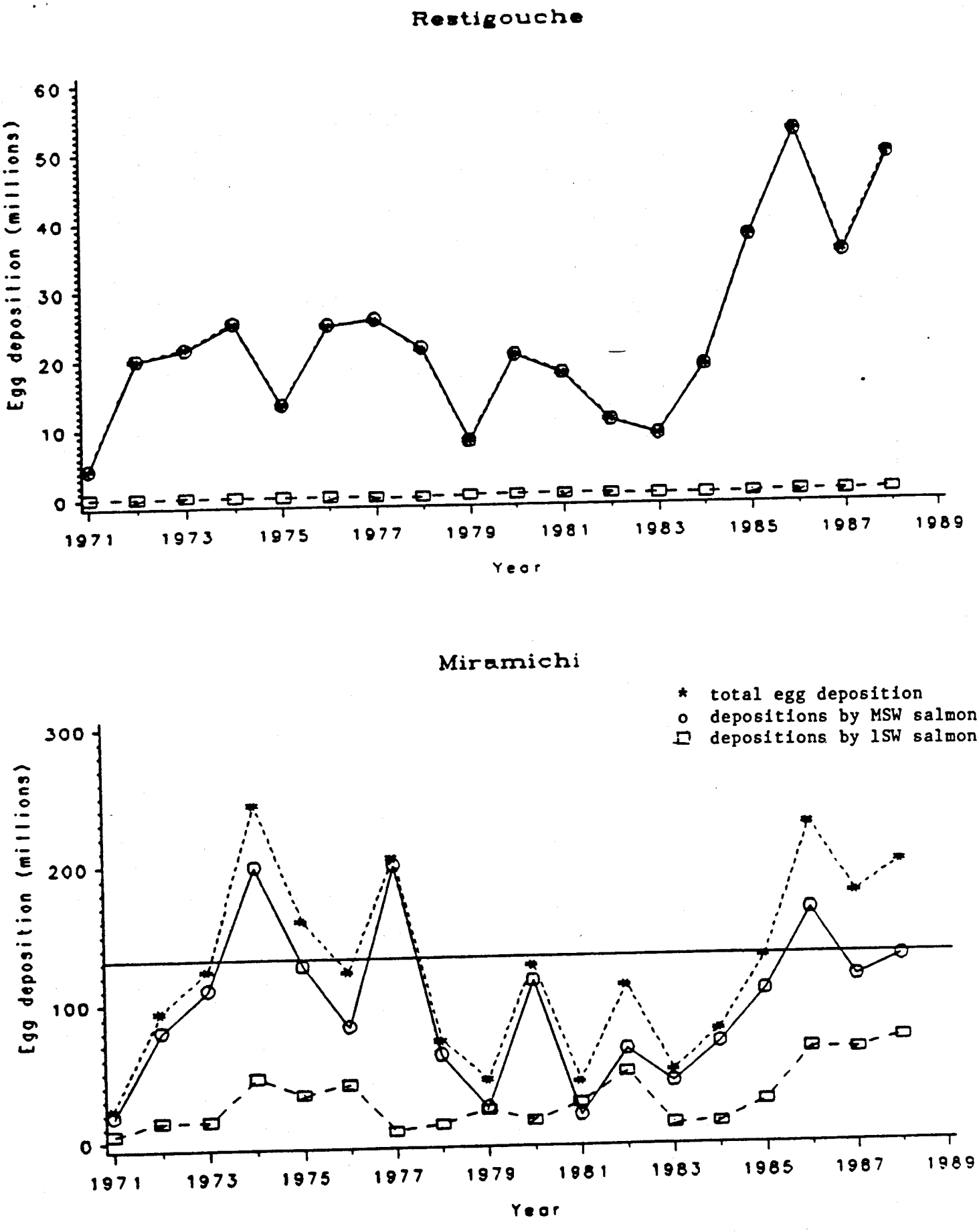


Figure 3. Estimate of total egg depositions (millions of eggs) in the upper Restigouche and Miramichi rivers 1971 to 1988.

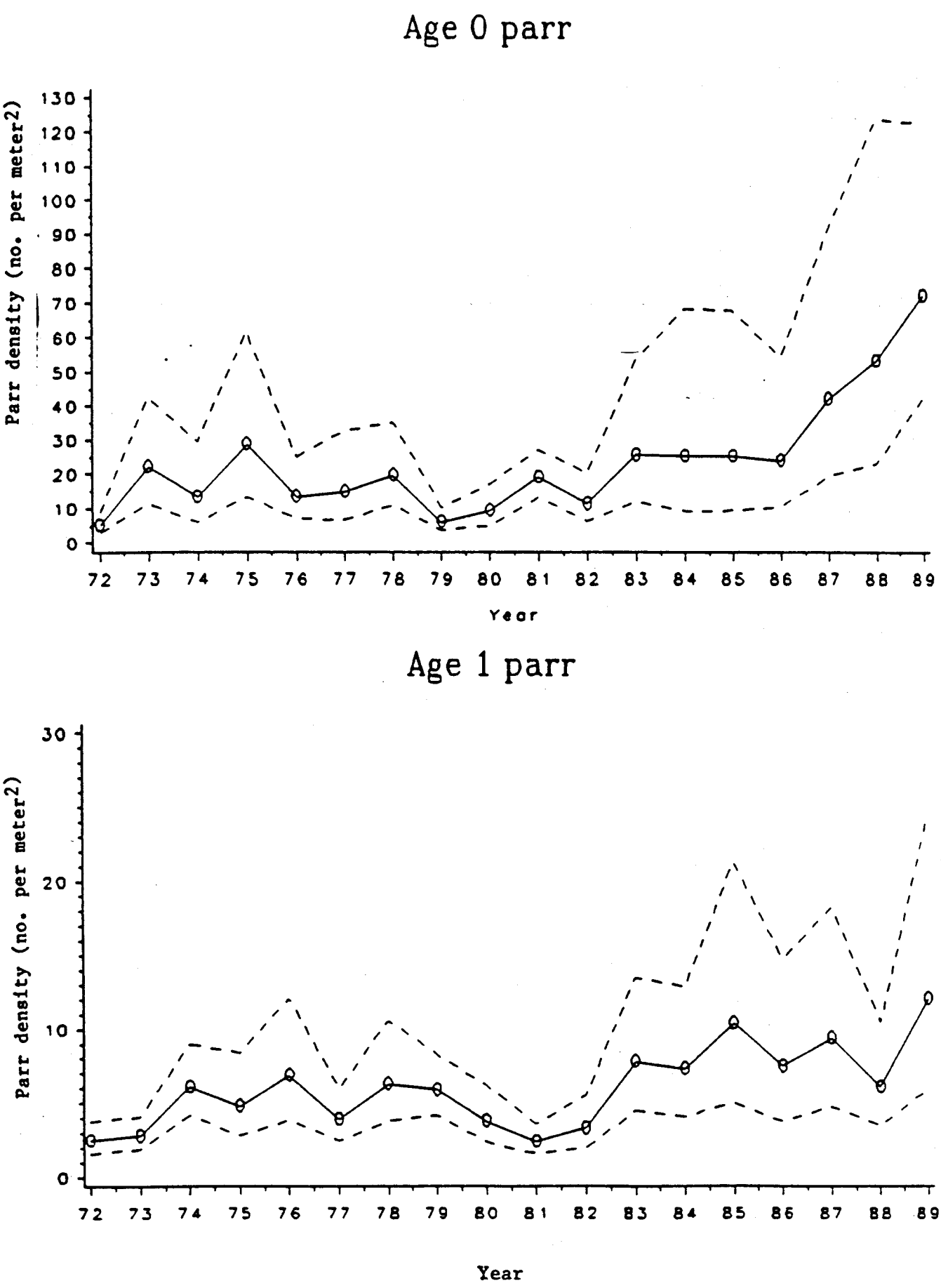


Figure 6. Mean densities of age 0 and age 1 parr at 15 electrofishing sites in the Restigouche River, 1972 to 1989. Dashed lines indicate 95% confidence intervals.

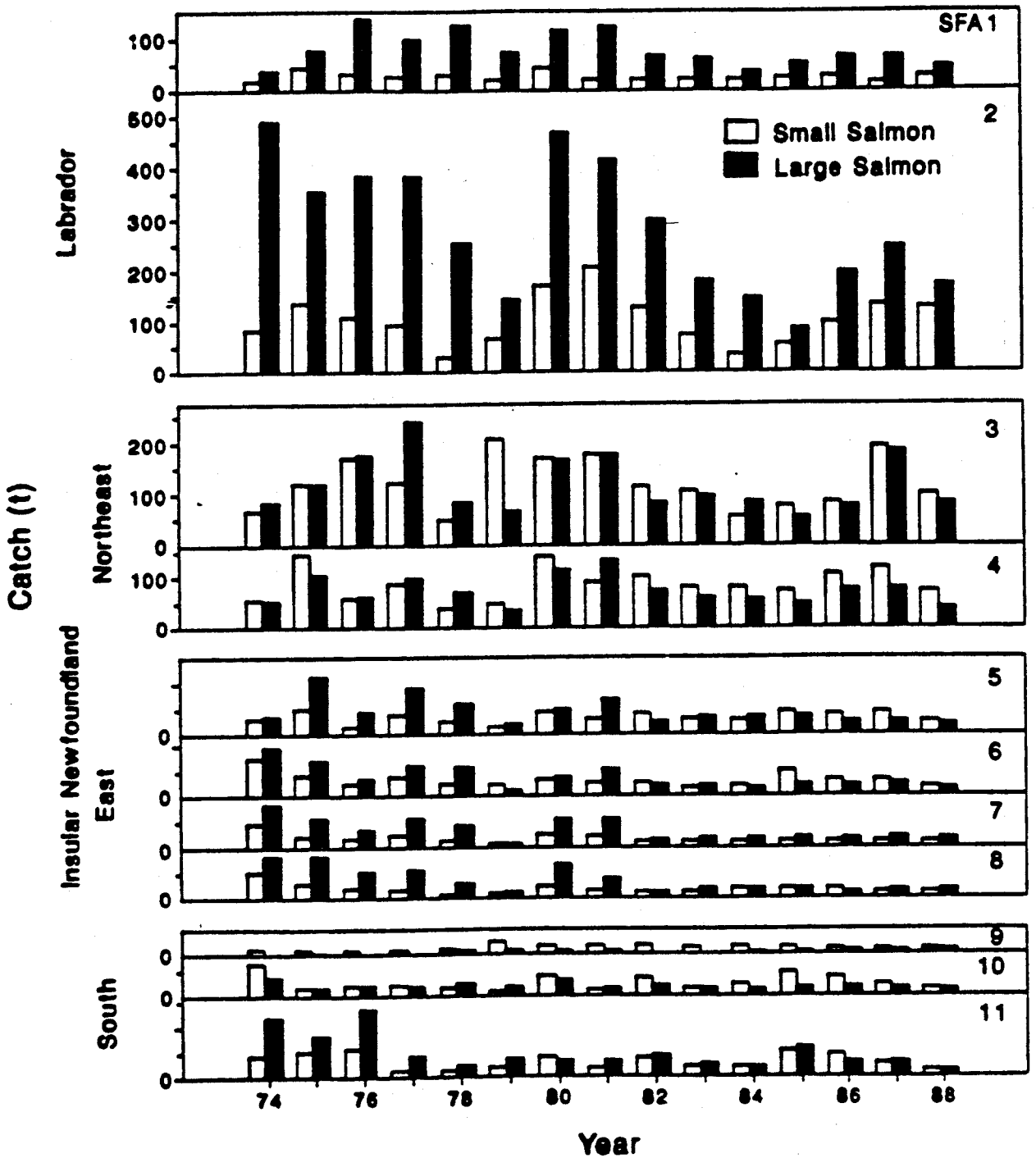
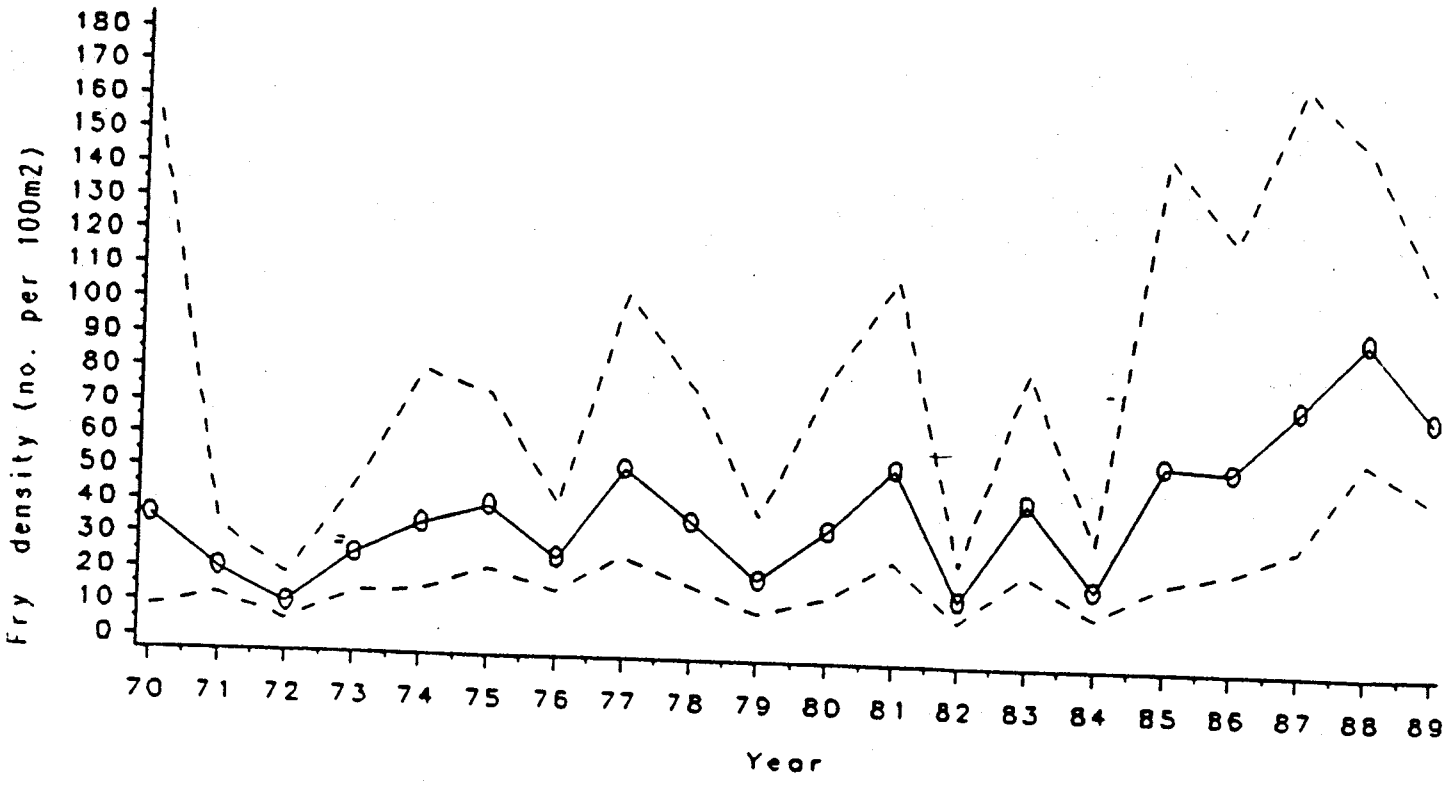


Figure 5. Newfoundland and Labrador commercial catches of large and small salmon by weight (t) for each SFA for the period 1974-1988.



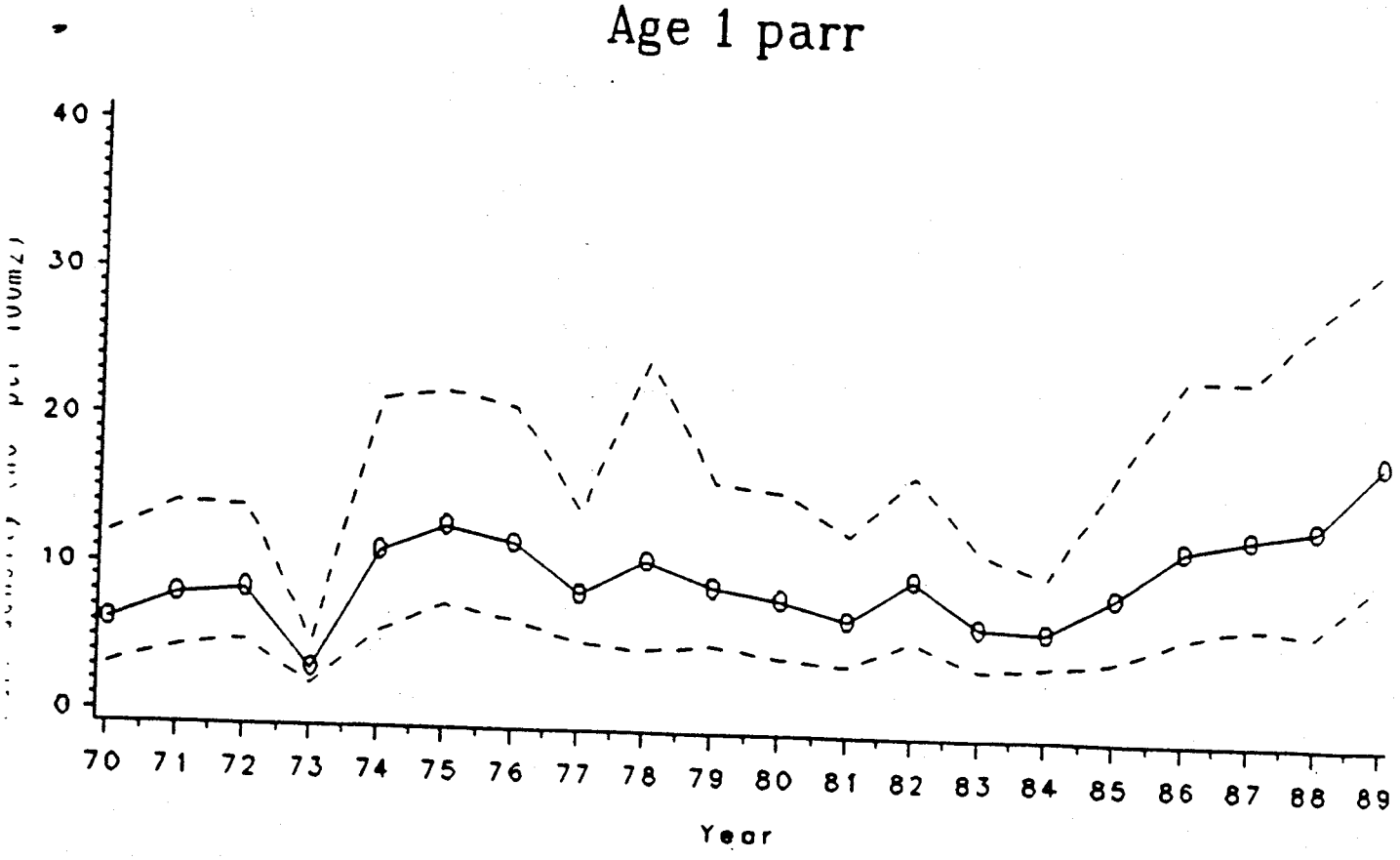


Figure 8. Mean densities of age 0 (upper) and age 1 (lower) salmon parr at 15 sites in the Miramichi River, 1970 to 1989. Densities are numbers per 100 square meters of stream area. Dashed lines indicate 95% confidence interval.

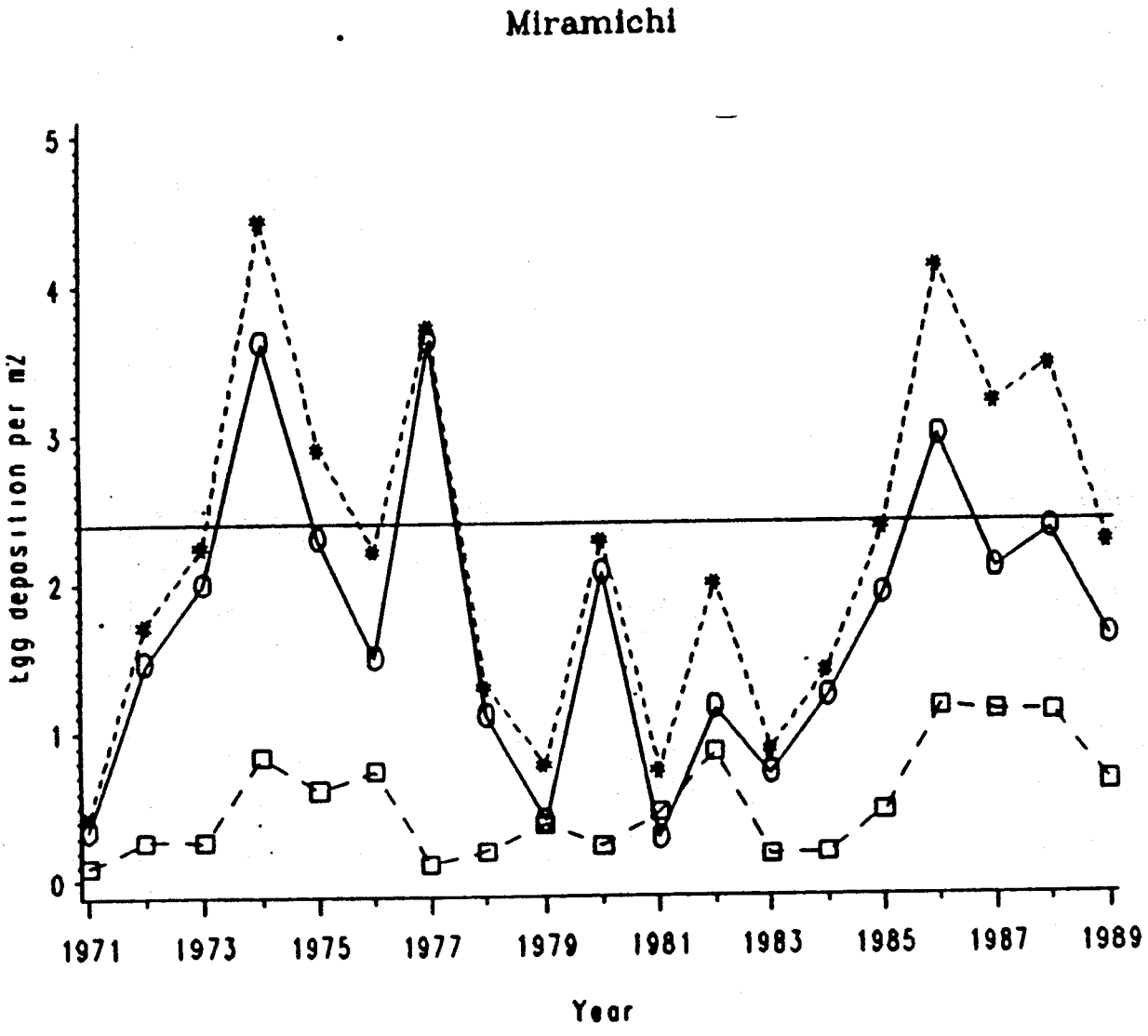


Figure 7. Estimated egg deposition rates (eggs per meter^2) in the Miramichi River, 1971 to 1989. Egg deposition for 1SW salmon (squares) and MSW salmon (circles) are shown separately. The horizontal line represents the target egg deposition rate.

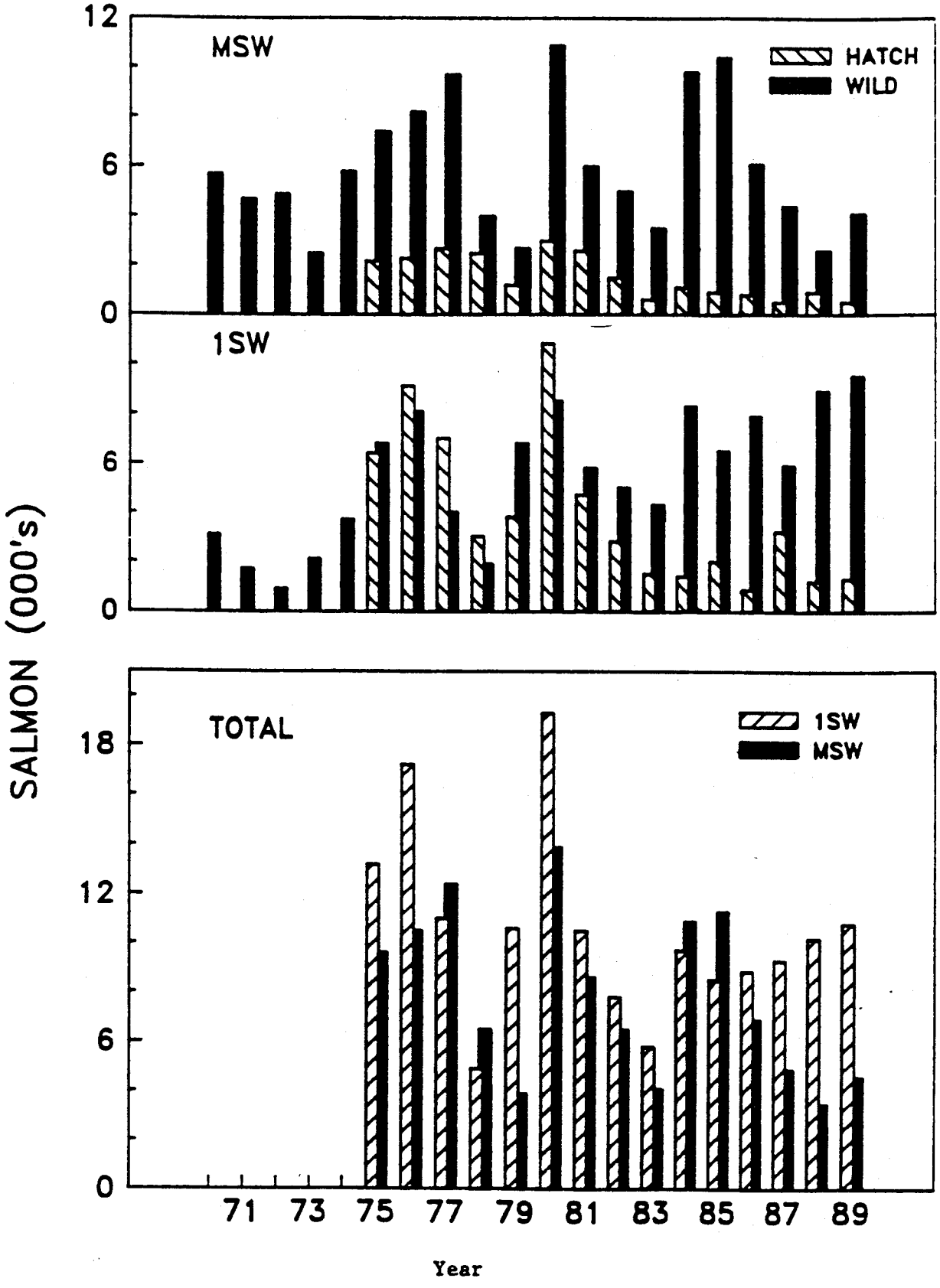


Figure 9. Estimated numbers of hatchery and wild 1SW and MSW salmon originating above Mactaquac Dam, Saint John River, 1970-1989.

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ANNEX 9

NORTH AMERICAN COMMISSION

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US ATLANTIC SALMON STOCKS

A COMPARISON OF 1989 WITH PREVIOUS 10-YEAR PERIOD

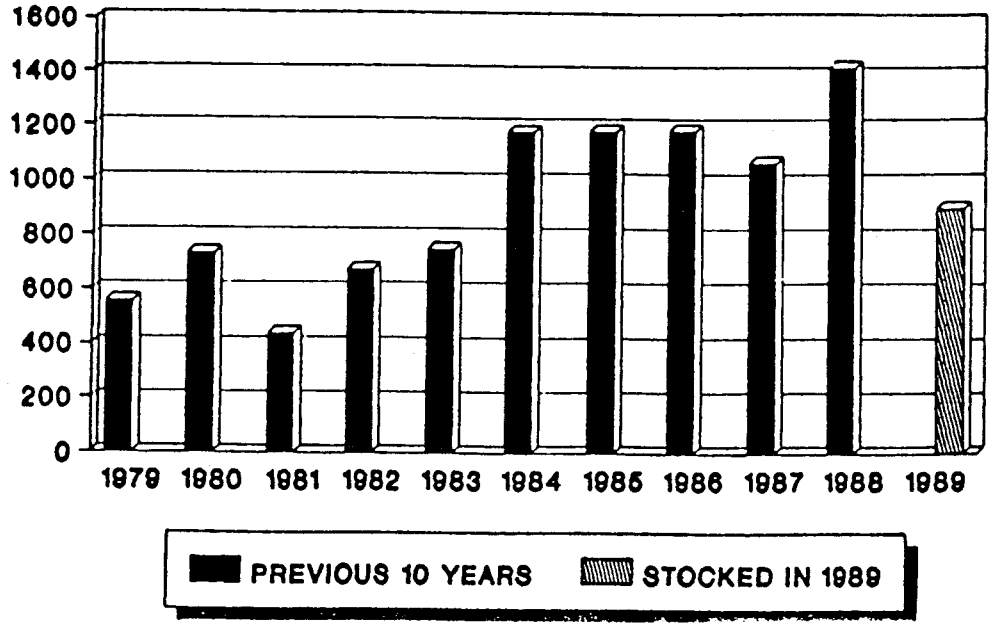
U.S. Atlantic Salmon Stocks
1989 vs 1979-1988

- Stocking
- Adult Returns
- Sport Harvest
- Regulations

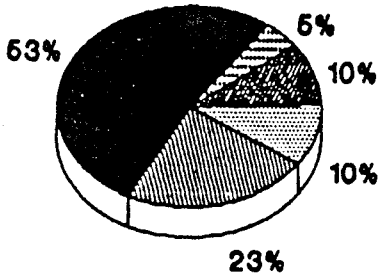
SALMON STOCKING STRATEGIES
No Major Changes in 1989

- Emphasis on five rivers: Penobscot, St Croix, Union, Merrimack, and Connecticut
- Focus production on 1-yr. old smolt (parr being a by-product)
- Increasing emphasis on fry stocking, supported by domestic (hatchery-reared) broodstock
- Primary source of broodstock for smolt production continues to be recaptured sea-run adults
- Reconditioned sea-run kelts play minor roll as broodstock in southern New England rivers

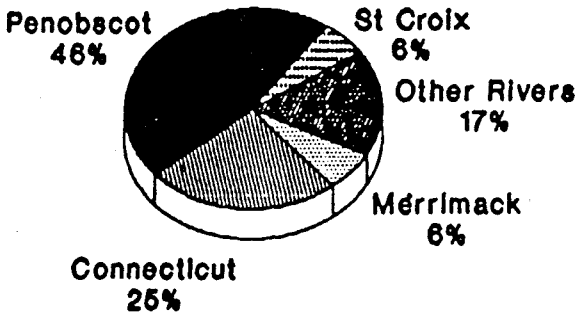
ATLANTIC SALMON SMOLTS STOCKED IN U.S. WATERS



SMOLT ALLOCATION AMONG U.S. RIVERS

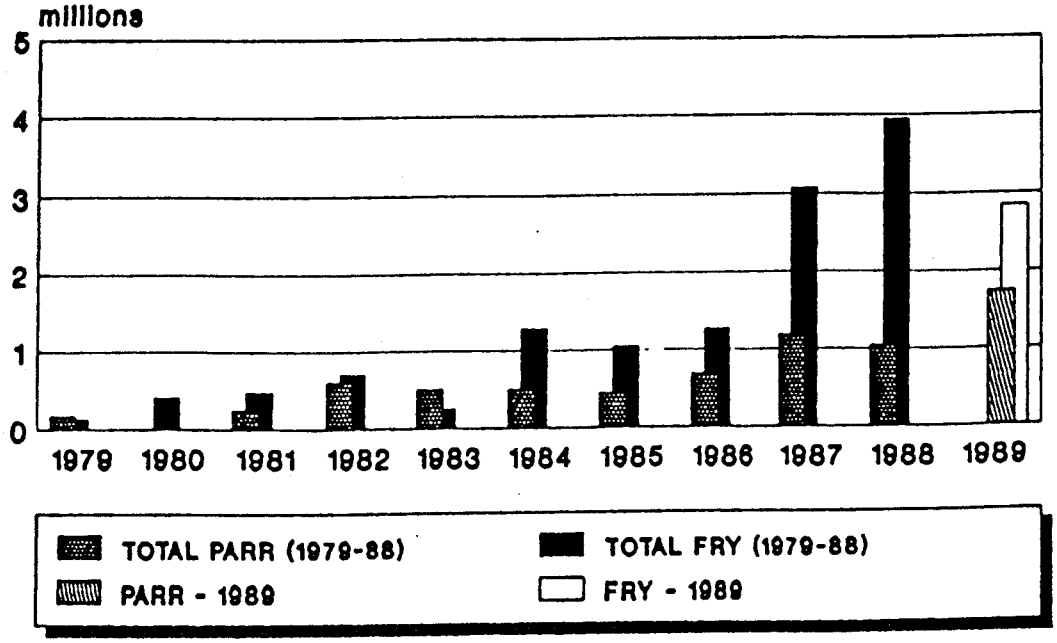


10-YEAR MEAN
(1979-1988)

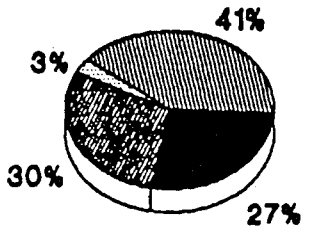


1989 STOCKING

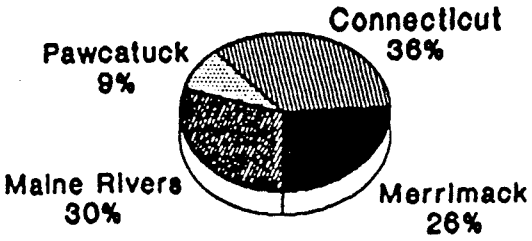
SALMON FRY & PARR STOCKED IN U.S. WATERS



DISTRIBUTION OF FRY AND PARR AMONG MAJOR AREAS

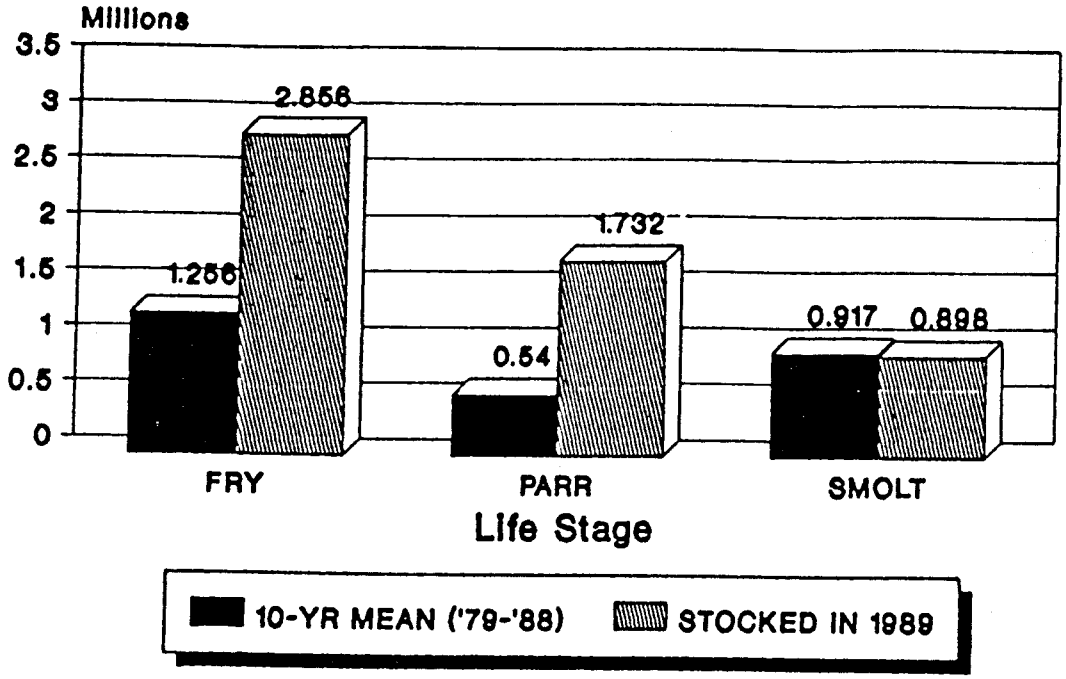


10-YR PERIOD
(1979-1988)



1989 STOCKING

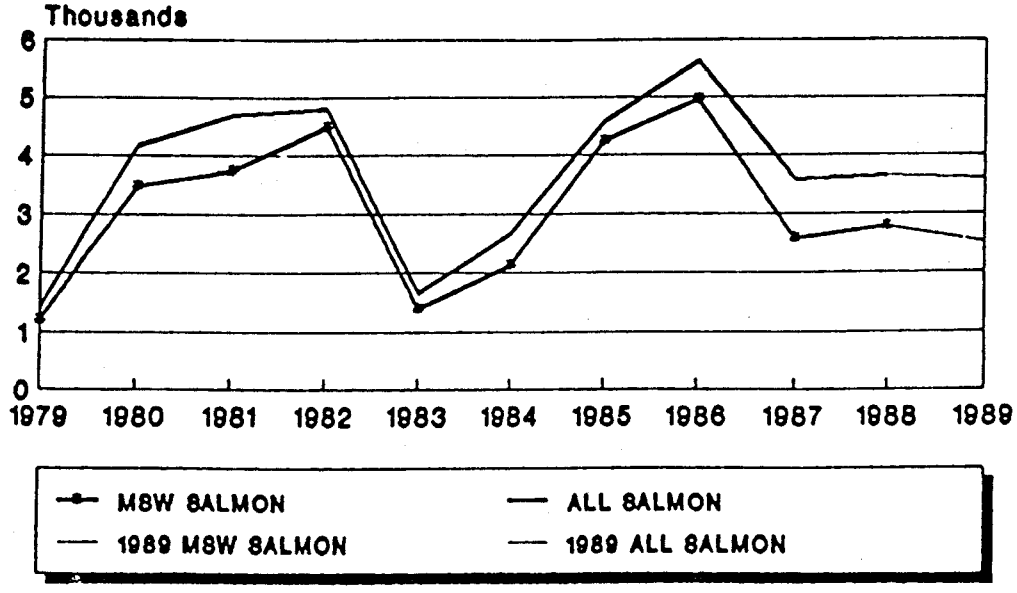
LIFE STAGES OF ATLANTIC SALMON STOCKED IN U.S. WATERS



1989 ADULT RETURNS

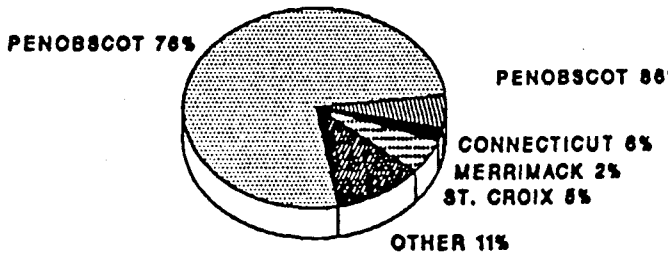
- Total Known 1989 Returns: 3,605
  (previous 10-Year Average: 3.690)
  (previous Range: 1,423 to 5,624)
- Predominantly MSW runs in all rivers (70% overall)
- Penobscot produced 86% of all 1989 MSW returns
- Number of grilse in 1989 highest in 10 years at 1099

ATLANTIC SALMON RETURNS
U.S. Rivers 1979-1989

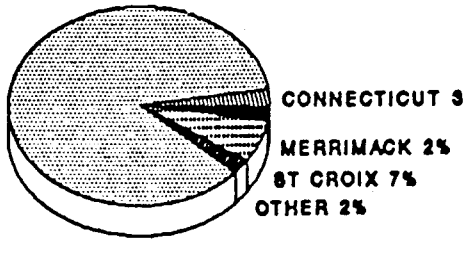


ONLY INCLUDES KNOWN RETURNS

U.S. ATLANTIC SALMON RETURNS
Known Returns of All Ages

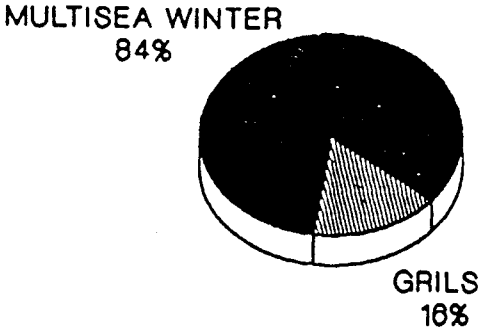


TOTAL 1979-1988 RETURNS

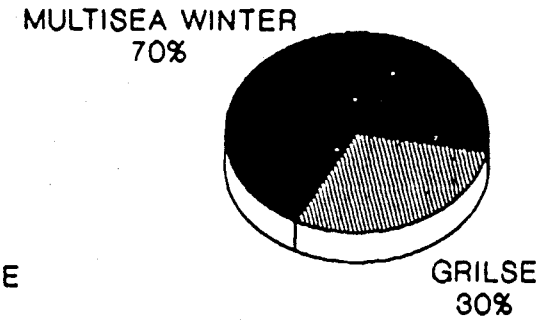


1989 RETURNS

GRILSE & MSW SALMON RETURNS
1989 vs 10-YR AVERAGE



U.S. RETURNS 1979-1988

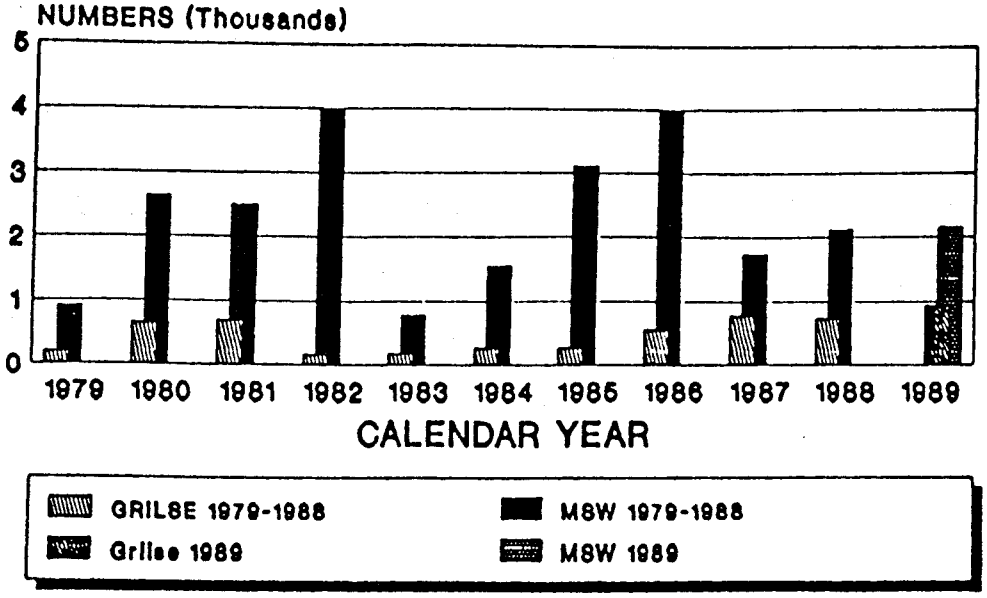


U.S. RETURNS 1989

10-YR AVERAGE based on 36,892 fish

PENOBSCOT SALMON RETURNS

Grilse and Multisea winter



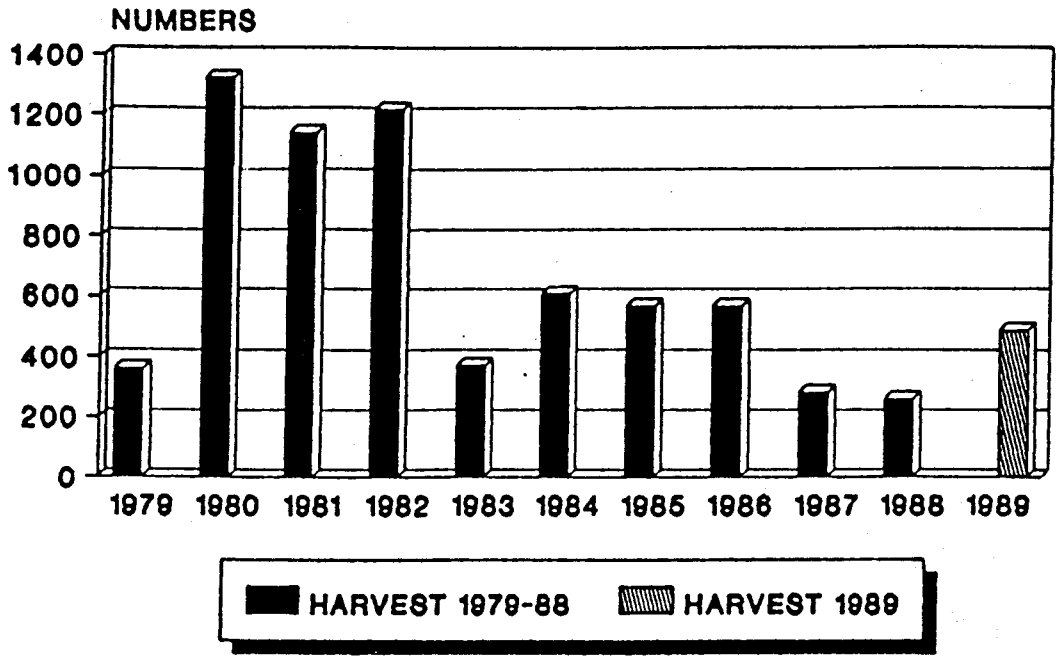
Data from Me. Sea-Run Sal. Com.

U.S. SPORT HARVEST
- 1989 -

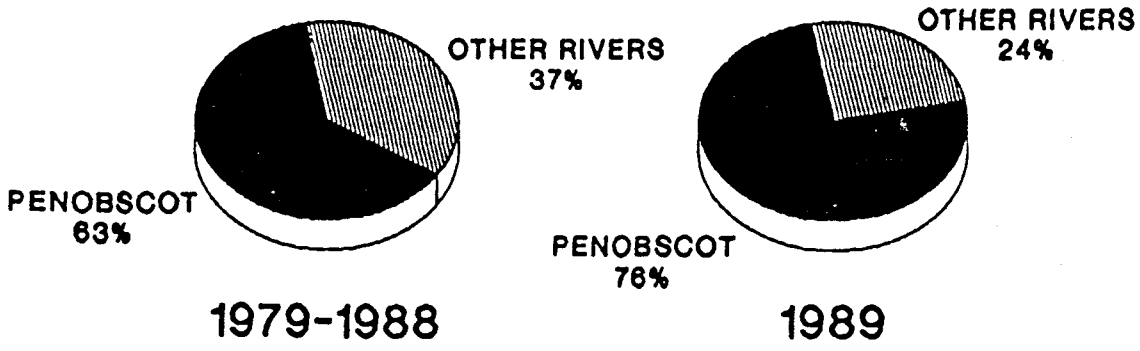
- 1989 Reported Rod Kill was 487 (previous 10-Year Average: 670)
- All occurred in Maine; 76% in Penobscot
- Recent downward trend in the Penobscot harvest rate reversed in 1989 with a 12% harvest rate

Includes only reported harvest

ATL. SALMON SPORT CATCH
Known U.S. Rod Kill 1979-1989



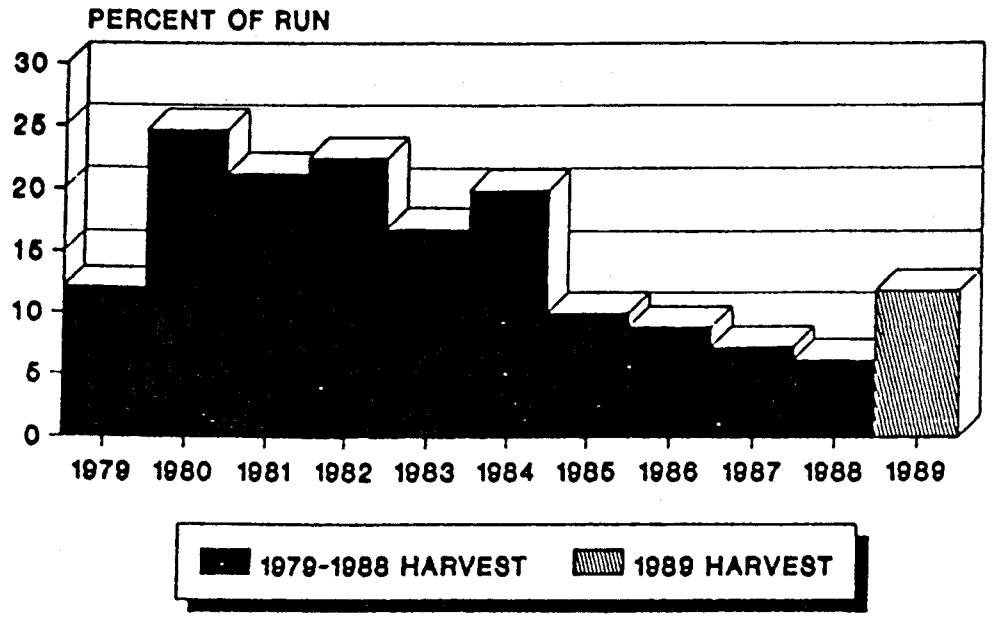
DISTRIBUTION OF U.S. CATCH
(REPORTED HARVEST ONLY)



U.S. FISHERY REGULATION
NO CHANGES IN 1989

- No directed commercial fishery
- Ocean fishery regulated by:
- » NASCO (beyond 12 miles)
  » New Eng. FMC (3-12 miles)
  » States (0-3 miles)
- Inland fishery regulated by states
- Sport fishery regulations very restrictive

PENOBSCOT ROD KILL
As a Percent of Run



Me. Atl. Sea-Run Sal. Com. data

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ANNEX 10

NORTH AMERICAN COMMISSION

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1990 ATLANTIC SALMON MANAGEMENT PLAN

1990 ATLANTIC SALMON MANAGEMENT PLAN

Guiding Principles and Major elements

The 1990 Atlantic Salmon Management Plan is guided by the principles adopted by the Department of Fisheries and Oceans through consultations with the Atlantic Salmon Advisory Board and the provincial governments. It incorporates the three Regional Atlantic Salmon Management Plans which are developed in consultation with Regional zone representations from interested associations and organizations.

In the province of Quebec, the provincial government administers management plans for the salmon stocks in that province.

A. Objectives

The main objectives of the 1989-1993 management strategy are to ensure that target spawning requirements are met in the Maritime provinces, and that spawning levels increase in insular Newfoundland rivers.

B. Principles

1. Conservation of Atlantic salmon stocks remains the overriding priority in the management of this fishery. This priority includes measures aimed specifically at the large salmon component in order to increase the spawning requirements.

2. The importance of fishing to native communities which have traditionally harvested the resource for their own consumption is recognized and is given priority after conservation.

3. The Atlantic salmon fishery will be managed so as to distribute the benefits most effectively among the largest number of Canadians.

4. In the Maritime provinces, the importance of the recreational fishery is given greater recognition based on the relatively larger potential benefits to be generated. In Newfoundland and Labrador, the commercial fishery has traditionally been of greater importance. However, the recreational fishery offers considerable potential for economic benefits.

5. Allocation of Atlantic salmon stocks will be made by Management Zones and/or river system and according to interests and/or dependence of user groups and that of industries and communities deriving benefit from the harvestable resource. In some specific areas, the concept of zonal/river management will be introduced on a trial basis.

6. Interception of migrating salmon in mixed-stock fisheries will be minimized where practical and feasible, by adjusting seasons, gear and fishing area and the introduction of quotas.

7. Incidental catches of Atlantic salmon by commercial fishermen will be minimized

by adjusting seasons, gear and area of fishing, and the retention of salmon caught under these circumstances will be illegal.

8. Access to Atlantic salmon stocks will be regulated by all or a combination of the following: seasons, quotas, gear and licensing restrictions.

9. Atlantic salmon enhancement plans will be developed in concert with Atlantic Salmon Management Plans.

10. Atlantic salmon habitat will be protected and improved to allow for maximum stock production.

11. The practice of tagging salmon catches will be maintained.

C. Major elements

1. In 1990, the Department of Fisheries and Oceans will implement zonal/river management in selected areas. This approach could be gradually introduced in other areas of the Atlantic Provinces if evaluations of this management scheme reveal positive results.

2. In 1990, quotas will be introduced in the Newfoundland and Labrador commercial fisheries. The 1990 quotas are set as follows:

Salmon Fishing Areas	**Quotas (m.t.)**	**Allowance (m.t.)**
1	--	80
2	200	--
3	155	--
4	100	
5	25	
6	20	
7	15	
8	10	
9	7	
10	25	
11	25	
12	closed	
13	35	
14	50	
TOTAL	**667**	**80**

3. The 1990 commercial fishing season for the province of Newfoundland and Labrador will commence on June 5, 1990. As well, restrictions will be put in place in 1990 to prohibit commercial salmon fishing in some inner bays and estuaries of Newfoundland.

4. Only full-time fishermen will be eligible to hold salmon licences. In the future, fishermen who may be down-graded to the part time categorization will have to regain their full-time categorization within two years in order to retain their eligibility to their salmon licence. During this two-year period, fishermen down-graded to part-time will be eligible to hold their salmon licence.

5. The commercial salmon fisheries in the Maritime Provinces will remain closed.

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

7. Transfers of commercial fishing licences will be allowed in the Maritime Provinces and in Newfoundland and Labrador among immediate family members on the condition that the recipients be full-time fishermen.

8. Only the retention of grilse will be permitted in the recreational fisheries for the provinces of New Brunswick, PEI, Nova Scotia and Newfoundland (excluding Labrador). All multi-sea winter salmon (63cm and greater in length) hooked by anglers will be required to be released immediately with the least possible harm to the fish. The Province of Quebec will maintain this restriction for the bordering rivers within the Restigouche system as has been done since 1984.

9. Recreational fishing seasons in all Atlantic Provinces may be adjusted where stock conditions permit.

10. The seasonal bag limits along with the possession and daily limits in Nova Scotia, and New Brunswick will be maintained at 10, 6 and 2 respectively which will be required to be grilse. In PEI, the bag limits will remain at 5, 1, 1. In Newfoundland and Labrador, the bag limits will remain at 15 and 2 per day; the possession limit will remain at twice the daily catch limit.

11. The daily and seasonal salmon bag limits do not include any salmon that are hooked and subsequently released. However, on a daily basis, fishermen must stop fishing for salmon once they have retained the daily limit or have released a maximum number of fish equal to twice the daily bag limit.

12. During 1990, the tagging systems will be maintained in the Atlantic Provinces for all fisheries.

NEWS RELEASE
COMMUNIQUE

For immediate release, June 4, 1990

MINISTER ANNOUNCES 1990 ATLANTIC SALMON MANAGEMENT PLAN

OTTAWA ... Fisheries and Oceans Minister Bernard Valcourt today released details of the 1990 Atlantic Salmon Management Plan.

This year's plan includes the introduction of quotas for the commercial fishery in Newfoundland. In addition, specific consideration was given to ensure that the needs of the native food fisheries are met.

"The 1990 Atlantic Salmon Management Plan, as in past years, has been developed following consultation with the Atlantic Salmon Advisory Board, provincial governments and user groups" said Mr Valcourt.

"I am committed to rebuilding Atlantic salmon stock", added Mr Valcourt. Recent scientific advice on the state of our stocks in Atlantic Canada, concludes that despite some positive results achieved in the previous five-years, the estimated number of returns of grilse in 1989 was generally lower than in previous years.

"Conservation of Atlantic salmon stocks remains the overriding priority in managing this fishery," said Mr Valcourt.

The introduction of quotas for the Newfoundland commercial fishery will address the problem of interception through controlled commercial catches. The 1990 quotas have been set in the following manner:

Salmon Fishing Area (SFA)	Quotas (t)	Allowance (t)
1	--	80
2	200	--
3	155	--
4	100	
5	25	
6	20	
7	15	
8	10	
9	7	
10	25	
11	25	
12	closed	
13	35	
14	50	
TOTAL	**667t**	**80t**

The season will open on June 5.

For salmon fishing area 1, the concept of an "allowance" established in 1989 has been maintained given the very high dependency of Northern Labrador communities on the Atlantic salmon fishery.

"The need to conserve and protect valuable Atlantic salmon stocks is crucial", said Mr Valcourt. "For this reason, we will review the commercial salmon fishery in Newfoundland and Labrador at mid-season and implement closures if it is judged necessary to further protect the salmon stocks", he added. "I believe measures in the 1990 Management Plan will address pressing conservation and protection concerns for Atlantic salmon".

Existing limitations on licence transferability will remain in effect for this season thereby maintaining the limited entry nature of the commercial salmon fishery.

Departmental officials have held numerous consultations with user groups to implement zonal/river management for 1990 or beyond in Margaree and St. Mary's Rivers in Nova Scotia, in Morrell River in Prince Edward Island and Humber River in Newfoundland. The concept of Zonal Advisory Committees has been extended to the Province of Newfoundland. This approach will ensure that in Newfoundland, zonal specific management issues are addressed in order that they may be dealt with accordingly in the future.

The importance of fishing to native communities which have traditionally harvested the resource for their own consumption is recognized and is given priority after conservation. "I have instructed my officials to intensify the discussions with Native leaders regarding their food fisheries," said Mr Valcourt. "I encourage greater cooperation and participation of the Native people in the management of Atlantic salmon."

As in previous years, there will be no commercial fishery in the Maritime provinces in order to meet conservation goals for Atlantic salmon. In these provinces, the importance of the recreational fishery is given greater recognition based on the relatively larger potential benefits to be generated. In Newfoundland and Labrador, while the recreational fishery in that province offers considerable potential for economic benefits, the commercial fishery has traditionally been of greater importance.

Therefore, the 1990 plan retains the previously established recreational salmon fishing seasons in the Maritime provinces as well as in Newfoundland and Labrador, allowing for minor adjustments where stock conditions permit. As in previous years, anglers will not be permitted to keep large salmon and bag limits will remain unchanged in all provinces. The "Report-a-Poacher" Program will continue in Newfoundland and Labrador and the "Dial-a-Poacher" Program (in western Newfoundland) will be reinstated in 1990.

Canada will continue its active role within the North Atlantic Salmon Conservation Organization (NASCO) to ensure that Canadian efforts to restore the salmon stocks are not undermined by overfishing outside Canadian waters.

FOR INFORMATION:

Edith Dussault, Resource Allocation Branch, Department of Fisheries and Oceans,
Ottawa, Ontario
(613) 990-0091

JUNE 1990
HELSINKI

ANNEX 11

NORTH AMERICAN COMMISSION

PAPER NAC(90)18

MANAGEMENT PROPOSAL SUBMITTED BY THE USA TO THE NORTH AMERICAN COMMISSION

The US continues to recognise that Canada is taking steps to restore its salmon rivers as summarised in WGC(90)7. However, interceptions off Labrador/Newfoundland remain too high. Analysis as provided in NAC(90)17 supports the need for a 47% reduction in interceptions as reflected by MSW spawning targets and exploitation rates (about 0.5). Therefore, the US proposes that Canada take whatever steps necessary to reduce the current interceptions by 50%.

Further, the US realises that the long term commitment reflected by what Canada has done could be interpreted to demonstrate a trend toward total in-river harvest. The US proposes that Canada make a specific commitment to a plan for a gradual reduction of interception in Labrador and Newfoundland resulting in a complete in-river harvest and termination of all interceptions to be complete in 1995.

JUNE 1990
HELSINKI

ANNEX 12

PAPER CNL(90)45

DRAFT REQUEST FOR SCIENTIFIC ADVICE FROM ICES

The Council decides to request the following scientific advice from ICES:

(1) With respect to Atlantic salmon in each Commission area, where relevant:

(a) describe events of the 1990 fisheries with respect to gear, effort, composition and origin of the catch;

(b) continue the development of run-reconstruction models of national stocks for input to a North Atlantic salmon model to describe fisheries interactions and stock dynamics;

(c) estimate exploitation rates and status of stocks in home water and interception fisheries on stocks occurring in the Commission area;

(d) evaluate the effects of the management measures in the salmon fisheries at Faroes and West Greenland on stocks occurring in the Commission area;

(e) evaluate the effects of the newly introduced quotas in the commercial salmon fishery of Newfoundland and Labrador and the regulations introduced into Norwegian salmon fisheries in 1989 on stocks occurring in the Commission area;

(f) specify data deficiencies and research needs;

(g) describe the distribution of parasites and diseases that are harmful to Atlantic salmon and assess their effects on wild salmon stocks.

(2) With respect to Atlantic salmon in the North-East Atlantic Commission area:

(a) provide quantitative estimates of the effect of fish farm escapees on salmon stocks and catches.

JUNE 1990
HELSINKI

ANNEX 13

NORTH AMERICAN COMMISSION

PAPER NAC(90)12

NASCO TAG REWARD SCHEME

1990 PRIZES

The draw for the 10 winners in the North American Commission was made by the Auditor at NASCO Headquarters on 1 June 1990. At the Seventh Annual Meeting of the Commission in Helsinki, Finland, the Chairman of the Commission, Mr Howard Larsen, announced the winners:

First prize - $1500 - P W Keough, Plate Cove West, Newfoundland, AOC 2EO

Second prize - $1000 - Carl Larkham, William Harbour, Labrador, Nfld, AOK 5VO

Third prize - $500 - S McNeil, P O Box 1882, Greenwood, Nova Scotia, BOP 1NO

Fourth prizes - $100

- P Conrad, Lunenburg, Nova Scotia, BOJ 2CO
- Pearce Brinson, Change Islands, Newfoundland, AOG 1RO
- Mansfield Matterface, Fortune, Newfoundland
- Mont Norrad, Boiestown, New Brunswick, EOH 1AO
- Minnie Merkeratsuk, Nain, Labrador, AOP 1LO
- R M MacLeod, Bridgewater, Nova Scotia, B4V 3H9
- Jason Curl, St Lewis, Labrador, Newfoundland, AOK 4WO

The Commission offers its congratulations to the winners.

JUNE 1990
HELSINKI

ANNEX 14

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

SEVENTH ANNUAL MEETING OF THE NORTH AMERICAN COMMISSION
22 FEBRUARY 1990, HALIFAX, NOVA SCOTIA AND
12-15 JUNE 1990, HELSINKI, FINLAND

LIST OF NORTH AMERICAN COMMISSION PAPERS

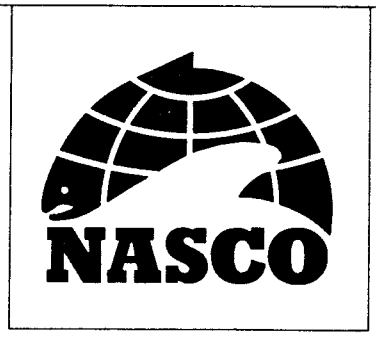
PAPER NO.	TITLE
NAC(90)1	Provisional Agenda
NAC(90)2	Draft Agenda
NAC(90)3	Election of Officers
NAC(90)4	Salmon Fisheries on St Pierre et Miquelon
NAC(90)5	List of Participants
NAC(90)6	CAFSAC Report - Evaluation of the Five Year Salmon Management Plan and Status of Salmon Stocks in Atlantic Canada in 1989
NAC(90)7	Agenda
NAC(90)8	Canadian Atlantic Salmon Catches
NAC(90)9	Progress Report on the Activities of the NAC Scientific Working Group on Salmonid Introductions and Transfers
NAC(90)10	Draft Report of the Seventh Annual Meeting
NAC(90)11	Management Proposal by the United States
NAC(90)12	NASCO Tag Reward Scheme - 1990 Prizes
NAC(90)13	Regulations in effect as of April 1 1989, pertaining to Introductions and Transfers of Salmonid/Salmonid Eggs within the Commission Area
NAC(90)14	Report of Activities, 1989/90, of NAC Scientific Working Group on Salmonid Introductions and Transfers
NAC(90)15	Summary of Salmonid Introductions and Transfers in Eastern North America 1986-1989

NAC(90)16	1990 Atlantic Salmon Management Plan
NAC(90)17	Paper withdrawn
NAC(90)18	Management Proposal submitted by the USA to the North American Commission
NAC(90)19	US Atlantic Salmon Stocks - A Comparison of 1989 with previous 10-year period
NAC(90)20	Report of the Seventh Annual Meeting of the North American Commission
CNL(90)12	Report of the ICES Advisory Committee on Fisheries Management
CNL(90)45	Draft decision of the Council to request scientific advice from ICES

NOTE: This list contains all papers submitted to the Commission pior to and at the meeting. Some but not all of these papers are included in this report as annexes.

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD



REPORT OF THE

SEVENTH ANNUAL MEETING

OF THE

NORTH-EAST ATLANTIC COMMISSION

12-15 JUNE 1990

HELSINKI, FINLAND

CHAIRMAN:	MR STEFAN DE MARE (SWEDEN)
VICE-CHAIRMAN:	MR JOHN SPENCER (EEC)
RAPPORTEUR:	MR TROND HAUKEBOE (NORWAY)
SECRETARY:	DR MALCOLM WINDSOR

NEA(90)6

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CONTENTS

NEA(90)6

REPORT OF THE SEVENTH ANNUAL MEETING OF THE NORTH-EAST ATLANTIC COMMISSION OF THE NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION 12-15 JUNE 1990, INTERCONTINENTAL HOTEL, HELSINKI, FINLAND

1. OPENING OF THE MEETING

1.1 The Seventh Annual Meeting of the North-East Atlantic Commission in the absence of the Chairman, Mr Stefan de Mare (Sweden), was opened by the Vice-Chairman, Mr John Spencer (EEC),

1.2 A list of participants is given in Annex 1.

2. ADOPTION OF THE AGENDA

2.1 The Commission adopted its agenda, NEA(90)5 (Annex 2).

3. ELECTION OF OFFICERS

3.1 The Commission elected Mr Henrik Schmiegelow (EEC) as its Chairman.

3.2 The Commission elected Mr Pekka Niskanen (Finland) as its Vice-Chairman.

4. NOMINATION OF A RAPPORTEUR

4.1 The Commission nominated Mr Trond Haukeboe (Norway) as rapporteur for the meeting.

5. REVIEW OF THE 1989 FISHERY

5.1 The Commission reviewed the 1989 fishery in the Faroe Islands which had been described in detail in the ACFM report from ICES. The fishery in 1989 had amounted to 364 tonnes which was well within the quota established by the Commission in 1987.

6. ACFM REPORT FROM ICES ON SALMON STOCKS

6.1 The Chairman of the ACFM, Mr Bernard Vaske, presented the scientific advice from ICES relevant to the North-East Atlantic Commission, CNL(90)12 (Annex 3) prepared in response to a request from the Commission at its Sixth Annual Meeting.

6.2 The representative of the EEC referred to the level of catch in the Faroese fishery and asked if factors other than adverse weather had affected the catch. The representative of ICES explained that catch per unit effort (CPUE) levels had been high during the season and that the bad weather early in the year was considered to be the main reason for the low catch.

6.3 The representative of Denmark (in respect of the Faroe Islands and Greenland) requested clarification of the intention to include detailed recommendations in future ACFM reports, particularly with regard to catch options for the North Atlantic. The representative of ICES indicated that recommendations concerning catch options could only be considered in response to specific questions from NASCO.

7. EFFECT OF ESCAPEES OF FARMED SALMON ON SALMON STOCKS

7.1 The Chairman of the ACFM provided information on the behaviour of fish farm escapees and the occurrence of farmed salmon in homewaters. He reported that the rapid increase in salmon farming has led to an increased proportion of escaped salmon in fisheries and freshwater populations. There are few data on the reproductive success of fish farm escapes although farmed and wild salmon have been observed spawning together, and farmed females have been observed to cut redds on areas of gravel which had already been used by wild fish.

8. IMPACTS OF ACID RAIN ON ATLANTIC SALMON

8.1 The Acting Chairman referred to the deliberations of the Commission at its Sixth Annual Meeting, when estimates of losses of Atlantic salmon in the Commission area were provided by ICES.

8.2 The representatives of Finland and Sweden expressed their concern about the adverse impacts of acid rain on Atlantic salmon in their respective countries. In northern Finland increases in acidity in salmon rivers have been detected. The representative of Sweden suggested that at some later date it would be useful for ICES to undertake a further assessment of the losses of Atlantic salmon in the light of any new information available.

9. REGULATORY MEASURES

9.1 The Acting Chairman referred to the regulatory measure adopted at the Sixth Annual Meeting of the Commission which applies to the calendar years 1990 and 1991.

10. FISHING FOR SALMON IN INTERNATIONAL WATERS

10.1 The representative of Iceland reported to the Commission that a high incidence of net marked salmon were being observed in some Icelandic rivers and expressed concern that such damage may have resulted from netting activity in international waters. He expressed interest in increased cooperation between members of the Commission in particular in relation to an exchange of information.

10.2 The Acting Chairman noted that this issue had already been discussed at the level of Council and that there was a consensus within that body as to the necessary action to be taken relating to bilateral and multilateral approaches to the countries concerned.

11. RECOMMENDATIONS TO THE COUNCIL ON SCIENTIFIC RESEARCH

11.1 The Commission reviewed and accepted the relevant sections of paper, CNL(90)45, (Annex 4) and agreed to recommend it to the Council as part of the annual request

for scientific advice to ICES.

12. REPORT ON NASCO TAG RETURN INCENTIVE SCHEME AND ANNOUNCEMENT OF AWARDS

12.1 The Acting Chairman announced that the draw for the prizes in the Tag Reward Incentive Scheme was made by the Auditor at NASCO Headquarters on 1 June 1990. The winner of the first prize was Mr Stig Nilsson, Halmstad, Sweden. A list of all prize winners was presented to the Commission, NEA(90)4, (Annex 5). The Commission offered its congratulations to all of the winners.

13. OTHER BUSINESS

14. DATE AND PLACE OF NEXT MEETING

14.1 The Commission agreed to hold its next meeting during the Eighth Annual Meeting of the Council, 10-14 June 1991 in Edinburgh.

15. CONSIDERATION OF THE DRAFT REPORT OF THE MEETING

15.1 The Commission agreed the draft report of the meeting.

JUNE 1990
HELSINKI

ANNEX 1

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
SEVENTH ANNUAL MEETING OF THE
NORTH-EAST ATLANTIC COMMISSION
12-15 JUNE 1990, HELSINKI, FINLAND

LIST OF PARTICIPANTS

* Denotes Head of Delegation

MEMBERS OF THE COMMISSION:

DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)

*MR EINAR LEMCHE	Representative Greenland Home Rule, Copenhagen Office
MR SOFUS POULSEN	Faroese Commercial Attache, Aberdeen
MR HJALTI I JAKUPSSTOVU	Fisheries Research Institute, Torshavn, Faroe Islands
MRS AMALIE JESSEN	Directorate of Fisheries, Greenland
MR JENS MOELLER JENSEN	Greenland Fisheries Research Institute, Copenhagen
MR HERGEIR NIELSEN	Member of Home Rule Parliament, Torshavn, Faroe Islands
MR MANNE NAES	Chairman of Faroese Salmon Fishermen's Association, Torshavn, Faroe Islands
MR PAVIA NIELSEN	Fishermen's and Hunters' Organization, Greenland
MR PAVIARAQ HEILMANN	Fishermen's and Hunters' Organization, Greenland

EEC

*MR JOHN SPENCER	Representative Directorate-General of Fisheries, EEC Commission, Brussels
MR PIETER BANGMA	Representative Directorate-General of Fisheries, EEC Commission, Brussels
MR EUGENE HUTCHINSON	Presidency, Irish Permanent Representation, Brussels

MR AUGUSTO BETTE	Secretariat of the Council of the European Communities, Brussels
MR JOHN CARBERY	Secretariat of the Council of the European Communities, Brussels
MR JOHN KEOHANE	Department of the Marine, Dublin
MR DOMINIQUE PINEY	Ministère de la Mer, Direction des Pêches Maritimes, Paris
MR CHARLES MCCALL	Ministry of Agriculture, Fisheries and Food, London
MR TED POTTER	Ministry of Agriculture, Fisheries and Food, Lowestoft
DR TONY BURNE	Ministry of Agriculture, Fisheries and Food, London
MR BOB WILLIAMSON	Department of Agriculture and Fisheries for Scotland, Edinburgh
MR DAVID DUNKLEY	Department of Agriculture and Fisheries for Scotland, Montrose
MRS HANNE LAUGER	Ministry of Fisheries, Copenhagen
DR KEVIN O'GRADY	National Rivers Authority, London

FINLAND

*MR PEKKA NISKANEN	Representative Ministry of Agriculture and Forestry, Helsinki
MR EERO NIEMELA	Representative Finnish Game and Fisheries Research Institute, Helsinki
MR ERKKI IKONEN	Finnish Game and Fisheries Institute, Helsinki

ICELAND

*HELGI AGUSTSSON	Representative Ambassador, Icelandic Embassy, London
MR ARNI ISAKSSON	Representative Institute of Freshwater Fisheries, Reykjavik

NORWAY

*MR SVEIN MEHLI	Representative Directorate for Nature Management, Trondheim

MR TORMOD KARLSTROEM	Representative Ministry of the Environment, Oslo
MR STEINAR HERMANSEN	Representative Ministry of the Environment, Oslo
MR TROND WOLD	Norske fiskeoppdretteres forening, Trondheim
MR PER IVAR BERGAN	Directorate for Nature Management, Trondheim
MR LARS PETTER HANSEN	Norwegian Institute for Nature Research, Trondheim
MR TROND HAUKEBOE	Fylkesmannen i More og Romsdal, Molde
MR GEORG RIEBER MOHN	Regional Board of Salmon Fishery, Oslo
MS ASTRID LANGVATN	Directorate for Nature Management, Trondheim
MR BORRE PETTERSEN	Norwegian Hunters and Anglers Organization

SWEDEN

*MR GUNNAR HOERSTADIUS	Representative Ministry of Agriculture, Stockholm
DR INGEMAR OLSSON	Representative National Board of Fisheries, Gotborg

USSR

*DR GEORGY LUKA	Representative PINRO, Murmansk
MR ALEXANDRE ZVIRIAKO	Ministry of Fisheries, Moscow
MR KONSTANTIN BUDANOV	Murmanrybvod, Murmansk

OBSERVERS - PARTIES

CANADA (++)

MR DAVID MEERBURG	Department of Fisheries and Oceans, Ottawa, Ontario

USA (++)

MR RICHARD ROE	Representative National Marine Fisheries Service, Gloucester, MA

MR STETSON TINKHAM	Dept of State, Office of Fisheries Affairs, Washington
MR DEAN SWANSON	National Marine Fisheries Service, Silver Spring, MD
MR RICHARD SEAMANS	National Marine Fisheries Service, Gloucester, Mass.
MR HENRY LYMAN	Atlantic Salmon Federation, Boston, MA

NON-GOVERNMENT OBSERVERS

ICES

DR EMORY ANDERSON	International Council for the Exploration of the Sea, Copenhagen
DR RICHARD GRAINGER	International Council for the Exploration of the Sea, Copenhagen
MR BERNARD VASKE	Institut fur Hochseefisherei und Fischverarbeitung, German Democratic Republic
MR JOHN BROWNE	Dept of the Marine, Dublin

SECRETARIAT

Secretary	DR MALCOLM WINDSOR
Assistant Secretary	DR PETER HUTCHINSON

(++) Under Article 11, paragraph 2 of the Convention for the Conservation of Salmon in the North Atlantic Ocean, Canada and the United States of America each have the right to submit and vote on proposals for regulatory measures concerning salmon stocks originating in the rivers of Canada or the United States of America, respectively, and occurring off East Greenland.

JUNE 1990
HELSINKI

ANNEX 2

NEA(90)5
SEVENTH ANNUAL MEETING OF THE NORTH-EAST ATLANTIC COMMISSION
12-15 JUNE 1990
HELSINKI, FINLAND

AGENDA

1. Opening of the meeting
2. Adoption of the agenda
3. Election of Officers
4. Nomination of a rapporteur
5. Review of the 1989 fishery
6. ACFM report from ICES on salmon stocks
7. Effect of escapees of farmed salmon on salmon stocks
8. Impacts of acid rain on Atlantic salmon
9. Regulatory measures
10. Fishing for salmon in international waters
11. Recommendations to the Council on scientific research
12. Report on NASCO Tag Return Incentive Scheme and announcement of awards
13. Other business
14. Date and place of next meeting
15. Consideration of the draft report of the meeting.

JUNE 1990
HELSINKI

ANNEX 3

COUNCIL

PAPER CNL(90)12

REPORT OF THE ICES ADVISORY COMMITTEE ON FISHERIES MANAGEMENT (SECTION 3)

3. SALMON IN THE NORTH-EAST ATLANTIC COMMISSION AREA

Source of information: Report of the North Atlantic Salmon Working Group 1990 (ICES C.M. 1990/Assess:11).

3.1 Faroese Fishery in the Norwegian Sea

3.1.1 The fishery at the Faroes in the 1988/1989 season and in 1989

The fishery in the 1988/1989 season was poor due mainly to severe storms.

Nominal catches in tonnes

Season	Catch Wt (t)	Nos	Year	Catch Wt(t)
1983/1984	651	124,508	1984	628
1984/1985	598	135,776	1985	566
1985/1986	545	154,554	1986	530
1986/1987	539	140,304	1987	576
1987/1988	208	65,011	1988	243
Mean	508	124,031	Mean	509
1988/1989	309	93,496	1989	364

3.1.2 Catch per unit effort

The gear used in the fishery is long line. The CPUE is presented as catch per 1,000 hooks.

Catch per 1,000 hooks

Year	1983/1984	1984/1985	1985/1986	1986/1987	1987/1988	Mean	88/89
CPUE (Fishery)	51	36	58	64	48	51	72
CPUE (Faroes EEZ)	-	-	-	62	43	-	72

The CPUE was variable throughout the season starting at a high level, decreasing in January and February and increasing for the remainder of the season. Despite the low catch, the overall CPUE

was the highest recorded. There was no fishing by Faroese boats outside the Faroese EEZ in the 1988-1989 season.

3.1.3 Composition of the catch

Age composition was determined from length frequency distributions and scale samples.

Numbers by sea age in the catch

Season	Sea Age 1	%	2	%	3	%	4	%	Total No.	Catch (t)	Mean weight
1983/84	4,052	3	107,487	86	12,923	10	46	0	124,508	651	5.23
1984/85	345	0	125,158	92	10,273	8	0	0	135,776	598	4.40
1985/86	1,762	1	147,770	96	4,945	3	76	0	154,554	545	3.53
1986/87	76	0	133,078	95	7,070	5	80	0	140,304	539	3.84
1987/88	5,833	9	55,728	86	3,450	5	0	0	65,011	208	3.20
1988/89	1,351	1	86,417	92	5,728	6	0	0	93,496	309	3.30

3.1.4 Origin of the catch

Recapture rates at the Faroes per 1,000 fish released suggest that the contribution to the fishery by Norwegian stocks has remained relatively stable and considerably higher than UK and Irish stocks. Sweden contributes at a high rate but overall smolt production is relatively low. In the 1988/1989 season, tags from the USA, Canada, UK (Northern Ireland), and the USSR were recovered in the fishery.

3.1.5 Exploitation rates at the Faroes

Exploitation rates on two Norwegian stocks were estimated during the seasons 1981/1982 to 1988/1989. Exploitation on 1SW salmon has ranged from 0.5 to 5% and on 2SW salmon from 3 to 56%. In recent seasons, exploitation rates on River Imsa (Norway) and North Esk (Scotland) salmon have decreased and those on Irish and Northern Irish stocks have remained low.

3.1.6 Effectiveness of management measures

During the effort limitation programme over the period 1987-1989, the following catches (tonnes) were taken:

Season	Catch	No.	Year	Catch	Catch allowed
1986/1987	539	140,304	1987	576	626.5 + 5%
1987/1988	208	65,011	1988	243	626.5 + 5%
1988/1989	309	93,496	1989	364	625.5 + 5%
Total	1,056	298,811		1,183	1,790

The Faroese catch is controlled by an effort limitation programme such that the total nominal catch should not exceed 1,790 t in any given year. In 1989, the catch of 364t was well below the permitted maximum. The overall catch for the whole trial period was 1,183t, or 66% of the TAC.

A total of 26 licenses was permitted for the 1988/1989 season, 19 of which were issued and only 12 of which were used. The total effort for the season was 1,042,040 hooks. These were fished during 525 sets, which is a third of the permitted maximum of 1,600 annually. Since effort was voluntarily restricted, it was not possible to assess the effectiveness of mandatory effort restrictions as a management measure.

3.2 Homewater Fisheries

3.2.1 Catches

The total nominal catch in homewater fisheries in 1989 was 3,907t.

Nominal catches in tonnes

	1984	1985	1986	1987	1988	Mean	1989[1]
France	25	22	28	27	32	27	14
Eng/Wales	345	361	430	302	395	367	296
Scotland	1,013	913	1,271	922	882	1,000	780
Ireland	829	1,595	1,730	1,239	1,874	1,453	1,079
N. Ireland	78	98	109	56	114	91	142
Norway	1,623	1,561	1,598	1,385	1,076	1,449	881
Sweden	40	45	54	47	40	45	29
Finland	44	49	38	49	34	43	52
USSR	593	659	608	564	419	569	359
Iceland	159	217	310	222	396	261	275
Total	4,749	5,520	6,176	4,313	5,262	5,305	3,907

[1] Preliminary

In general, catches were lower in most countries and very low river flows were identified as a contributing factor. Iceland and the USSR reported increases in the proportion of 1SW salmon in their runs.

3.2.2 Exploitation rates

In several countries, exploitation rates were lower in 1989 although this was not uniform across all sea ages.

Exploitation rates in Homewaters

Country	Stock/Rivers	1SW	2SW	All ages
France	Elorn (W)	0.06	0.62	
Scotland	N. Esk (W)	0.35	0.36	
Ireland	Burrishoole (H)	0.72 - 0.82		
N. Ireland	R. Bush (H)	0.89	0.60	
Norway	R. Imsa (W)	0.59 - 0.67	0.67 - 0.74	
	R. Imsa 1+(H)	0.48 - 0.56	0.81 - 0.86	
	R. Imsa 2+(H)	0.27 - 0.34	0.38 - 0.44	
	R. Drammen 1+(H)	0.32 - 0.40	0.50 - 0.57	
	R. Drammen 2+(H)		0.53 - 0.60	
Iceland	R. Ellidaar			0.41
USSR	Barents Sea Rivers			0.68
	White Sea Rivers			0.52

H = Hatchery-reared stock. W = Wild stock. In some countries, 2 estimates are given depending on the tag reporting rate used or the estimate of unreported catch. These are shown as a range in the table.

3.2.3 Status of stocks

Overall stock levels in freshwater are lower relative to recent years but in some countries stock levels were reported as high.

3.2.4 Effectiveness of management measures

Iceland: Regulations introduced in 1988 have reduced the transfer of stocks between river systems.

Norway: The drift net fishery was banned, restrictions were introduced in inshore fisheries and fishing by all methods was banned in 74 of approximately 500 rivers.

Nominal catches (tonnes) by various methods in Norway

	1982	1983	1984	1985	1986	1987	1988	1989[1]
Drift nets	590	826	866	667	795	552	527	0
Other nets	469	418	458	572	497	461	314	484
Freshwater	289	306	299	322	306	372	235	397
% Freshwater	0.21	0.20	0.18	0.21	0.19	0.27	0.22	0.45
Total	1,348	1,550	1,623	1,561	1,598	1,385	1,076	881

[1] Preliminary

The ban on drift netting has resulted in a larger number of salmon being available to the other salmon fisheries, and the regulation of those fisheries has probably resulted in a substantial increase in freshwater escapement.

3.2.5 Impact of aquaculture

There were only point samples available, and it was not possible to estimate the number present in the sea. There is also a conflict in that fish that escape as smolts from cages cannot be separated from reared fish released for enhancement or sea-ranching.

Reared fish in Samples

Country	Location	Percentage Recorded
Iceland	River Ellidaar	30
Ireland	Drift Net Fishery	0.5 - 6.0
	River Burrishoole	7.0
Norway	Coastal/Fjords	7.0 - 66.0
Rivers		0 - 78.0
Scotland	Coastal	0.7 - 6.6

JUNE 1990
HELSINKI

ANNEX 4

PAPER CNL(90)45

DRAFT REQUEST FOR SCIENTIFIC ADVICE FROM ICES

The Council decides to request the following scientific advice from ICES:

(1) With respect to Atlantic salmon in each Commission area, where relevant:

(a) describe events of the 1990 fisheries with respect to gear, effort, composition and origin of the catch;

(b) continue the development of run-reconstruction models of national stocks for input to a North Atlantic salmon model to describe fisheries interactions and stock dynamics;

(c) estimate exploitation rates and status of stocks in home water and interception fisheries on stocks occurring in the Commission area;

(d) evaluate the effects of the management measures in the salmon fisheries at Faroes and West Greenland on stocks occurring in the Commission area;

(e) evaluate the effects of the newly introduced quotas in the commercial salmon fishery of Newfoundland and Labrador and the regulations introduced into Norwegian salmon fisheries in 1989 on stocks occurring in the Commission area;

(f) specify data deficiencies and research needs;

(g) describe the distribution of parasites and diseases that are harmful to Atlantic salmon and assess their effects on wild salmon stocks.

(2) With respect to Atlantic salmon in the North-East Atlantic Commission area:

(a) provide quantitative estimates of the effect of fish farm escapees on salmon stocks and catches.

JUNE 1990
HELSINKI

ANNEX 5

NORTH-EAST ATLANTIC COMMISSION

PAPER NEA(90)4

NASCO TAG REWARD SCHEME

1990 PRIZES

The draw for the 10 winners in the North-East Atlantic Commission was made by the Auditor at NASCO Headquarters on 1 June 1990. At the Seventh Annual Meeting of the Commission: meeting in Helsinki, Finland, the Vice-Chairman of the Commission, Mr John Spencer announced the winners:

First prize - $1500 - Stig Nilsson, S-302, 42 Halmstad, Sweden

Second prize - $1000 - Bjarni Vestergaard, FR-900 Vagur, Faroe Islands

Third prize - $500 - Jerry Preutz, S-263, 71 Hoganas, Sweden

Fourth prizes - $100

- Remi Sorensen, FR-740 Hvannasund, Faroe Islands
- Christina Appelqvist, S302, 65 Halmstad, Sweden
- Helgi Sinonsen, FR-700 Klaksvik, Faroe Islands
- R Melbourne, Ringwood, Hants, BH24 3D2, England
- USSR, Name to be advised
- Kurt Berthelsen, DK-3390 Hundested, Denmark
- Jens Jacobsen, Geilatun 16, FR-100 Torshavn, Faroe Islands

The Commission offers its congratulations to the winners.

JUNE 1990
HELSINKI

ANNEX 6

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
SEVENTH ANNUAL MEETING OF THE NORTH-EAST ATLANTIC COMMISSION
12-15 JUNE 1990, HELSINKI, FINLAND

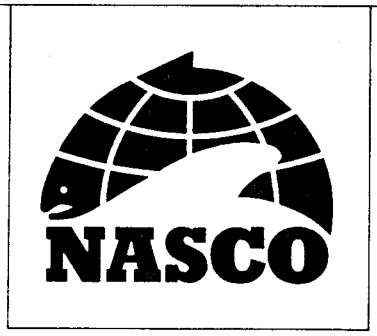
LIST OF NORTH-EAST ATLANTIC COMMISSION PAPERS

PAPER NO.	TITLE
NEA(90)1	Provisional Agenda
NEA(90)2	Draft Agenda
NEA(90)3	Election of Officers
NEA(90)4	NASCO Tag Reward Scheme - 1990 Prizes
NEA(90)5	Agenda
NEA(90)6	Report of the Seventh Annual Meeting of the North-East Atlantic Commission
NEA(90)7	Not issued
NEA(90)8	Not issued
NEA(90)9	Not issued
NEA(90)10	Draft Report of the Seventh Annual Meeting of the North-East Atlantic Commission
CNL(90)12	Report of the ICES Advisory Committee on Fisheries Management
CNL(90)45	Draft request for scientific advice from ICES

NOTE: This list contains all papers submitted to the Commission prior to and at the meeting. Some but not all of these papers are included in this report as annexes.

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

ORGANISATION POUR LA CONSERVATION DU SAUMON DE L'ATLANTIQUE NORD



REPORT OF THE

SEVENTH ANNUAL MEETING

OF THE WEST GREENLAND COMMISSION

12-15 JUNE 1990

HELSINKI, FINLAND

CHAIRMAN:	DR WILFRED CARTER (CANADA)
VICE-CHAIRMAN:	MR ARNI OLAFSSON (DENMARK IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)
RAPPORTEUR:	MR GILBERT RADONSKI (USA)
SECRETARY:	DR MALCOLM WINDSOR

WGC(90)10

11 Rutland Square Edinburgh EH1 2AS Scotland UK
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CONTENTS

WGC(90)10

REPORT OF THE SEVENTH ANNUAL MEETING OF THE WEST GREENLAND COMMISSION OF THE NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION 12-15 JUNE 1990, INTERCONTINENTAL HOTEL, HELSINKI, FINLAND

1. OPENING OF THE MEETING

1.1 The Seventh Annual Meeting of the West Greenland Commission was opened by the Chairman, Dr Wilfred Carter (Canada).

1.2 A list of participants is given in Annex 1.

2. ADOPTION OF THE AGENDA

2.1 The Commission adopted its agenda, WGC(90)9, (Annex 2).

3. ELECTION OF OFFICERS

3.1 The Commission re-elected Dr Wilfred Carter (Canada) as its Chairman.

3.2 The Commission nominated Mr Gilbert Radonski (USA) as its Vice-Chairman.

4. NOMINATION OF A RAPPORTEUR

4.1 The Commission nominated Mr Gilbert Radonski (USA) as rapporteur for the meeting.

5. REVIEW OF THE 1989 FISHERY AND ACFM REPORT FROM ICES ON SALMON STOCKS

5.1 The Chairman of the ACFM, Mr Bernard Vaske presented the scientific advice from ICES relevant to the West Greenland Commission, CNL(90)12, (Annex 3) prepared in response to a request from the Commission at its Sixth Annual Meeting.

5.2 The fishery in 1989 opened on 1 August (Division 1F) and on 18 August (Divisions 1A-1E) and ended on 22 November although the official closing date was 31 December. The total catch was 337 tonnes which is 555 tonnes less than the previous year. This corresponds to a catch of 313 tonnes with a 1 August season start. The quota in 1989 was divided into a "free" quota and a "small boat" quota, rather than having individual boat quotas as in the previous calendar year.

5.3 The representative of the USA raised the question of whether the ACFM report was the sole reference document for the West Greenland Commission.

5.4 The representative from ICES replied that the new format of the ACFM report may be too brief for a reference document and that a revised format will be considered. The Chairman concluded that the ACFM report will be the West Greenland Commission's reference document with the Working Group report as a necessary appendix.

6. REGULATORY MEASURES

6.1 The Chairman referred to the regulatory measure adopted at the Fifth Annual Meeting of the Commission. This measure applied to the calendar years, 1988, 1989 and 1990.

6.2 The representative of Canada asked the representative of Denmark (in respect of the Faroe Islands and Greenland) if they were considering bringing the West Greenland 1990 quota into line with the depressed state of the salmon resource. He noted that Canada, in response to depressed stocks, will be reducing its quotas by approximately 50% in 1990 and suggested a similar reduction at West Greenland.

6.3 The representative of Denmark (in respect of the Faroe Islands and Greenland) responded that the 1989 harvest was far below the quota but the quota can only be adjusted by 10% (about 84 tonnes) under the regulations adopted in 1988. Denmark (in respect of the Faroe Islands and Greenland) does not anticipate deviating from the 1990 quota.

6.4 The representative of the USA noted that coded wire tag (CWT) data indicated a 60% exploitation of US origin salmon at West Greenland and noted continuance of harvest at that level was unacceptable to the USA. He noted that a 50% reduction of harvest of MSW salmon at West Greenland is necessary to provide a return of salmon which would justify the huge sums of money the USA has invested in Atlantic salmon restoration.

6.5 The representative of Denmark (in respect of the Faroe Islands and Greenland) referred to the ACFM report that assumptions of high exploitation rates at West Greenland would have "consequences that substantial numbers of salmon would have to return to homewaters from feeding grounds other than those at West Greenland".

6.6 The representative of Denmark (in respect of the Faroe Islands and Greenland) said he did not believe that harvests at West Greenland have a demonstrable impact on returns to home rivers. He referred to paper WGC(90)5, (Annex 4) which presented Denmark's (in respect of the Faroe Islands and Greenland) position that reduced harvest at West Greenland in the period 1976-1983 did not result in increased returns to North American rivers. He suggested that management be based on biological rather than political grounds.

6.7 The representative of Canada tabled a proposal for an emergency regulatory measure, WGC(90)7, (Annex 5) which summarized Canada's self-imposed restrictive measures and calls for a change in the management measure for West Greenland in 1990. In 1990 Canada introduced quotas for the commercial salmon fishery in the province of Newfoundland which represent a reduction of 34% over the previous five year average catches. The proposal tabled requests a comparable reduction in

the West Greenland quota to 550 tonnes in 1990.

6.8 Upon a vote the representatives of Canada and the United States of America voted in favour of the proposal. The representative of Denmark (in respect of the Faroe Islands and Greenland) voted against the proposal. The representative of the European Economic Community abstained from the vote. In accordance with the Rules of Procedure of the Commission the proposal was rejected.

7. RECOMMENDATIONS TO THE COUNCIL ON SCIENTIFIC RESEARCH

7.1 The Commission reviewed and accepted the relevant section of paper CNL(90)45, (Annex 6) and agreed to recommend it to the Council as part of the annual request for scientific advice to ICES.

7.2 The representative of Denmark (in respect of the Faroe Islands and Greenland) tabled a paper, WGC(90)6, (Annex 7) which referred to the need to carry out ship borne surveys in order to investigate the relative distribution of salmon throughout the North Atlantic. The representative of Denmark (in respect of the Faroe Islands and Greenland) noting the high cost of conducting such a survey asked NASCO to consider playing an active role in establishing such a survey. The representative of ICES stated that such a survey would require careful planning and should be considered by the Working Group. He expressed reservations about the value of such surveys for providing data for the reconstruction models. The representative of the USA supported the remarks of the representative of ICES. Several representatives expressed their concern as to the cost and usefulness of such a survey and were therefore unable to support the request.

8. REPORT ON NASCO TAG RETURN INCENTIVE SCHEME AND ANNOUNCEMENT OF AWARDS

8.1 The Chairman announced that the draw for the prizes in the Tag Reward Incentive Scheme was made by the Auditor at NASCO Headquarters on 1 June 1990. The winner of the first prize was Johannes Molgaard, Greenland. A list of all prize winners was presented to the Commission, WGC(90)4, (Annex 8). The Commission offered its congratulations to all prize winners.

9. OTHER BUSINESS

10. DATE AND PLACE OF NEXT MEETING

10.1 The Commission agreed to hold its next meeting during the Eighth Annual Meeting of the Council, 10-14 June, 1991, in Edinburgh.

11. CONSIDERATION OF THE DRAFT REPORT OF THE MEETING

11.1 The Commission agreed the draft report of the meeting.

JUNE 1990
HELSINKI

ANNEX 1

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION
SEVENTH ANNUAL MEETING OF THE WEST GREENLAND COMMISSION
12-15 JUNE 1990, HELSINKI, FINLAND

LIST OF PARTICIPANTS

* Denotes Head of Delegation

MEMBERS OF THE COMMISSION

CANADA

*MR WAYNE SHINNERS	Representative Department of Fisheries and Oceans, Ottawa, Ontario
DR WILF CARTER	Representative Atlantic Salmon Federation, St Andrews, New Brunswick
DR GABY WARD	Representative Champlain College, Quebec
MR DAVID MEERBURG	Department of Fisheries and Oceans, Ottawa, Ontario
MS LOUISE COTE	Department of Fisheries and Oceans, Ottawa, Ontario
MR REX PORTER	Department of Fisheries and Oceans, St John's, Newfoundland
MS EDITH DUSSAULT	Department of Fisheries and Oceans, Ottawa, Ontario
MR DAVID VARDY	Department of Fisheries, Government of Newfoundland and Labrador, St John's, Newfoundland

DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)

*MR EINAR LEMCHE	Representative Greenland Home Rule, Copenhagen Office
MR SOFUS POULSEN	Faroese Commercial Attache, Aberdeen
MR HJALTI I JAKUPSSTOVU	Fisheries Research Institute, Torshavn, Faroe Islands
MRS AMALIE JESSEN	Directorate of Fisheries, Greenland
MR JENS MOELLER JENSEN	Greenland Fisheries Research Institute, Copenhagen

MR HERGEIR NIELSEN	Member of Home Rule Parliament, Torshavn, Faroe Islands
MR MANNE NAES	Chairman of Faroese Salmon Fishermen's Association, Torshavn, Faroe Islands
MR PAVIA NIELSEN	Fishermen's and Hunters' Organization, Greenland
MR PAVIARAQ HEILMANN	Fishermen's and Hunters' Organization, Greenland

EEC

*MR JOHN SPENCER	Representative Directorate-General of Fisheries, EEC Commission, Brussels
MR PIETER BANGMA	Representative Directorate-General of Fisheries, EEC Commission, Brussels
MR EUGENE HUTCHINSON	Presidency, Irish Permanent Representation, Brussels
MR AUGUSTO BETTE	Secretariat of the Council of the European Communities, Brussels
MR JOHN CARBERY	Secretariat of the Council of the European Communities, Brussels
MR JOHN KEOHANE	Department of the Marine, Dublin
MR DOMINIQUE PINEY	Ministère de la Mer, Direction des Pêches Maritimes, Paris
MR CHARLES MCCALL	Ministry of Agriculture, Fisheries and Food, London
MR TED POTTER	Ministry of Agriculture, Fisheries and Food, Lowestoft
DR TONY BURNE	Ministry of Agriculture, Fisheries and Food, London
MR BOB WILLIAMSON	Department of Agriculture and Fisheries for Scotland, Edinburgh
MR DAVID DUNKLEY	Department of Agriculture and Fisheries for Scotland, Montrose
MRS HANNE LAUGER	Ministry of Fisheries, Copenhagen
DR KEVIN O'GRADY	National Rivers Authority, London

USA

*DR FRANK CARLTON	Representative National Coalition for Marine Conservation, Savannah, Georgia
MR RICHARD ROE	Representative National Marine Fisheries Service, Gloucester, MA
MR CLINTON TOWNSEND	Representative Atlantic Salmon Federation, Boston, Mass.
MR STETSON TINKHAM	Dept of State, Office of Fisheries Affairs, Washington
MR DEAN SWANSON	National Marine Fisheries Service, Silver Spring, MD
MR JAMES MCCALLUM	US House of Representatives, Washington DC
MR ARTHUR NEILL	National Marine Fisheries Service, Woods Hole, Mass.
MR RICHARD SEAMANS	National Marine Fisheries Service, Gloucester, Mass.
DR VAUGHN ANTHONY	National Marine Fisheries Service, Woods Hole, Mass.
MR ROBERT JONES	Connecticut Bureau of Fisheries, Hartford, Connecticut
MR HENRY LYMAN	Atlantic Salmon Federation, Boston, MA
MR GILBERT RADONSKI	Sport Fishing Institute, Washington, DC
DR JAMES WEAVER	US Fish and Wildlife Service, Newton Corner, MA
MR DAVID EGAN	Connecticut River Atlantic Salmon Commission, Guilford
MR HOWARD LARSEN	US Fish and Wildlife Service, Gainesville, Florida

OBSERVERS - PARTIES

ICELAND

*HELGI AGUSTSSON	Representative Ambassador, Icelandic Embassy, London
MR ARNI ISAKSSON	Representative Institute of Freshwater Fisheries, Reykjavik

NORWAY

*MR SVEIN MEHLI	Representative Directorate for Nature Management, Trondheim

MR TORMOD KARLSTROEM	Representative Ministry of the Environment, Oslo
MR STEINAR HERMANSEN	Representative Ministry of the Environment, Oslo
MR TROND WOLD	Norske fiskeoppdretteres forening, Trondheim
MR PER IVAR BERGAN	Directorate for Nature Management, Trondheim
MR LARS PETTER HANSEN	Norwegian Institute for Nature Research, Trondheim
MR TROND HAUKEBOE	Fylkesmannen i More og Romsdal, Molde
MR GEORG RIEBER MOHN	Regional Board of Salmon Fishery, Oslo
MS ASTRID LANGVATN	Directorate for Nature Management, Trondheim
MR BORRE PETTERSEN	Norwegian Hunters and Anglers Organization
MS MAY BRITT BROFOSS	Royal Norwegian Embassy, Helsinki

SWEDEN

*MR GUNNAR HOERSTADIUS	Representative Ministry of Agriculture, Stockholm
DR INGEMAR OLSSON	Representative National Board of Fisheries, Gotborg

OBSERVERS - NON PARTIES

ICES

DR EMORY ANDERSON	International Council for the Exploration of the Sea, Copenhagen
DR RICHARD GRAINGER	International Council for the Exploration of the Sea, Copenhagen
MR BERNARD VASKE	Institut fur Hochseefisherei und Fischverarbeitung, German Democratic Republic
MR JOHN BROWNE	Dept of the Marine, Dublin

SECRETARIAT

Secretary	DR MALCOLM WINDSOR
Assistant Secretary	DR PETER HUTCHINSON

JUNE 1990
HELSINKI

ANNEX 2

WGC(90)9

SEVENTH ANNUAL MEETING OF THE WEST GREENLAND COMMISSION
12-15 JUNE 1990
HELSINKI, FINLAND

AGENDA

1. Opening of the meeting
2. Adoption of the agenda
3. Election of Officers
4. Nomination of a rapporteur
5. Review of the 1989 fishery and ACFM report from ICES on salmon stocks
6. Regulatory measures
7. Recommendations to the Council on scientific research
8. Report on NASCO Tag Return Incentive Scheme and announcement of awards
9. Other business
10. Date and place of next meeting
11. Consideration of the draft report of the meeting.

JUNE 1990
HELSINKI

ANNEX 3

COUNCIL

PAPER CNL(90)12

REPORT OF THE ICES ADVISORY COMMITTEE ON FISHERIES MANAGEMENT (SECTION 2)

2. SALMON IN THE WEST GREENLAND COMMISSION AREA

Source of information: Report of the North Atlantic Salmon Working Group (ICES, C.M. 1990/Assess:11).

2.1 The Fishery

Nominal landings in tonnes

Year	1984	1985	1986	1987	1988	Mean	1989
Actual landings	297	864	960	966	893	796	337
Agreed TAC	870	852	909	935	900	-	900

2.2 Gear

The gear used is drift net (140 mm stretched mesh).

2.3 Effort

No information for 1989.

2.4 Composition of the Catch in Numbers

Numbers of salmon of North American and European origin in West Greenland catches were as follows:

	North American	European	Total
SW1	60,020	50,339	110,359
SW2	3,378	2,001	5,379
PS	1,559	316	1,875
Total	64,957	52,656	117,613
%	55	44	

There are four methods used to obtain harvest estimates of Maine salmon in the Greenland fishery. (1) The proportional harvest method is based on the number of 1SW North American salmon of river age 1 in the West Greenland fishery, as apportioned by the relative proportions of age 1 smolts produced by USA and Canadian hatcheries. (2) A stock identification extension of the previous method, referred to as the imaging method, is based on identifications of North American 1SW, river age 1 salmon by a discriminant function based on circuli spacing on the scales of age 1 smolts produced by the various North American hatcheries. It only estimates the harvest of 1-year-old hatchery salmon in the fishery. (3) The Carlin tag method relies on the proportion of tags

in the homewater run in the year following the fishery and can only provide estimates a year after the fishery. (4) Similarly, the coded wire tag (CWT) method makes use of the proportion of fish with CWTs in the homewater run in the year after the fishery.

Harvest estimates of Maine (USA) salmon at West Greenland by various methods

	Carlin tag	CWT	Proportional harvest	Image[1]
1988	2,261	4,466	4,812	5,087
1989	-	-	4,547	2,985

[1] Estimate of 1-year-old hatchery-origin fish.

2.5 Exploitation Rates

It was not possible to precisely determine exploitation rates at West Greenland, but the USA (Maine) stocks were modelled to provide the boundaries of these rates.

Total exploitation rates in all fisheries on extant 1SW Maine stocks were estimated. These estimates depend on the tag reporting rate used in the harvest calculations. Assuming the rate normally used in the harvest model of 80%, the exploitation rates in the period 1967-1988 on 1SW salmon averaged 0.43, and ranged between 0.4 and 0.5 during 1986-1988. Assuming the reporting rate had been overestimated by a factor of 2, the average exploitation rate was 0.60 and it ranged between 0.60 and 0.68 during 1986-1988.

Estimates of exploitation rates at West Greenland depend on the fraction of the stock migrating to this fishery. The Maine stock was modelled using different values for this fraction. In 1988, the ranges varied between 0.43-0.87 and 0.6-0.93 depending on the tag reporting rate used.

Exploitation rates on Maine and St John River salmon in both the West Greenland and in the Newfoundland/Labrador fisheries were obtained using a calibration method which additionally provides estimates of the fraction of both stocks in each of the fisheries. In 1988, exploitation in West Greenland ranged between 0.44-0.63 for the St John stock and 0.43-0.62 for the Maine stocks. In 1987 in the Newfoundland/Labrador fishery, exploitation rates ranged between 0.76-0.79 for the St John stock and 0.49-0.53 for Maine-origin salmon. The different values depend on the tag reporting rate used.

The consequences of these calculations are that substantial numbers of salmon (58 to 99%) would have to return to homewaters from feeding grounds other than those at West Greenland.

ACFM encourages the use of these models, but cautions that results from them are very preliminary and suggest that the assumptions used in the models should be clearly specified and evaluated.

2.6 Effectiveness of Management Measures

After one year with individual boat quotas, the TAC was again divided into a "free quota" and a "small boat quota". Because of the low landings in 1989, it was not possible to measure the effect of that change.

JUNE 1990
HELSINKI

ANNEX 4

WGC905

WEST GREENLAND COMMISSION

PAPER WGC(90)5

STATEMENT BY DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND) ON THE EFFECTS OF MANAGEMENT OF THE FISHERIES

WGC(90)5
STATEMENT BY DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND) ON THE EFFECTS OF MANAGEMENT OF THE FISHERIES

Greenland has done its utmost in saving salmon by cutting back the salmon fishery in Greenlandic waters as illustrated by the catch figures given below.

Total Catch in West Greenlandic waters

	Tonnes	Index
1970-75	2206	1.00
1976-82	1216	0.55
1983-88	661	0.30

These cut-backs have also benefitted the North-American stock component where the development in the catches by numbers in Greenlandic waters are estimated as given below:

Catch in West Greenlandic waters of salmon of North American origin

	Numbers	Index
1970-75	225,000	1.00
1976-82	180,000	0.71
1983-88	119,000	0.47

Greenlandic refraining from fishing salmon and the loss of income to the Greenlandic society was done with the view of benefitting the salmon stocks. These potential gains do not seem to have been realized. The home run of salmon in Miramichi, the Canadian river with the higher contribution of salmon to Greenlandic waters, have recently decreased.

Estimated Home Run (Salmon 2+) to Miramichi

	Numbers	Index
1970-75	29,000	1.00
1976-82	28,000	0.96
1983-88	21,000	0.72

It is obvious that some other agent than Greenlandic fishery, whether mother nature or human, is active in this process.

It is the policy of the Greenland Home Rule Government to exploit resources in its waters prudently and with respect to sustained exploitation. The policy of cut-backs in the Greenland salmon fishery has been accepted in that light.

The Delegation of Denmark requests ICES through its ACFM to undertake such analyses as may be found appropriate to advise on the effects of the management of salmon in the North Atlantic.

JUNE 1990
HELSINKI

ANNEX 5

WEST GREENLAND COMMISSION

PAPER WGC(90)7

PROPOSAL BY CANADA FOR A CHANGE IN MANAGEMENT MEASURES FOR WEST GREENLAND IN 1990

Since 1984, Canada has taken a long list of restrictive measures both domestically and within NASCO aimed at reducing interception and protecting MSW stocks. These measures include:

a) Two and a half week delay in the opening of the Newfoundland commercial fishing;

b) Permanent closure of Area 12 at the South West of Newfoundland;

c) Both voluntary and mandatory licence buy-back which reduced the number of licences by 29 % in Newfoundland and 80 % in the Maritimes;

d) The Maritime commercial fishery has been closed since 1985;

e) The retention of salmon caught in non-salmon gear has been prohibited;

f) Closure on October 15 of the Newfoundland commercial fishery.

Despite Canada's reductions in MSW salmon harvests in the previous five years, it appears that the abundance of MSW salmon has consistently declined over that time period. As well, despite the apparent reduced salmon harvest in West Greenland, it appears that the exploitation rate remains too high.

Thus, Canada has in 1990 introduced quotas for the commercial salmon fishery in the province of Newfoundland. These quotas represent a reduction of 34 % over the previous five year average catches.

Canada has imposed very stringent measures in 1990 on its commercial fishery. These measures call for severe sacrifices from commercial fishermen at a time when the fishing industry is experiencing serious difficulties in other important commercial fisheries. Canada is therefore looking for restrictions by West Greenland to reduce exploitation rates. Canada hereby requests a comparable reduction in the West Greenland quota to be set at 550 t in 1990.

This request should be viewed as an emergency regulatory measure as defined in Article 13(5) of the NASCO Convention.

JUNE 1990
HELSINKI

ANNEX 6

PAPER CNL(90)45

DRAFT REQUEST FOR SCIENTIFIC ADVICE FROM ICES

The Council decides to request the following scientific advice from ICES:

(1) With respect to Atlantic salmon in each Commission area, where relevant:

(a) describe events of the 1990 fisheries with respect to gear, effort, composition and origin of the catch;

(b) continue the development of run-reconstruction models of national stocks for input to a North Atlantic salmon model to describe fisheries interactions and stock dynamics;

(c) estimate exploitation rates and status of stocks in home water and interception fisheries on stocks occurring in the Commission area;

(d) evaluate the effects of the management measures in the salmon fisheries at Faroes and West Greenland on stocks occurring in the Commission area;

(e) evaluate the effects of the newly introduced quotas in the commercial salmon fishery of Newfoundland and Labrador and the regulations introduced into Norwegian salmon fisheries in 1989 on stocks occurring in the Commission area;

(f) specify data deficiencies and research needs;

(g) describe the distribution of parasites and diseases that are harmful to Atlantic salmon and assess their effects on wild salmon stocks.

(2) With respect to Atlantic salmon in the North-East Atlantic Commission area:

(a) provide quantitative estimates of the effect of fish farm escapees on salmon stocks and catches.

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ANNEX 7

WEST GREENLAND COMMISSION

PAPER WGC(90)6

STATEMENT BY DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND) ON THE ESTIMATION OF EXPLOITATION RATES

WGC(90)6

STATEMENT BY DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND) ON THE ESTIMATION OF EXPLOITATION RATES

ACFM have endorsed the recommendation of its working group on North Atlantic salmon that "run reconstruction models" should be established for a number of index rivers. The Home Rule Government of Greenland sees such models as an important tool to improve the quality of management advice from the biologists to NASCO. Further ACFM has pointed to the estimation of exploitation rates and the origin of stocks as two important parameters in making these model stimulations more realistic than they appear at present. An exploitation rate is simply the ratio between the catch and the stock from which this catch was taken. Therefore there seems to be a very direct way of obtaining such an estimate through a ship borne survey. Even if such a survey would not provide an absolute estimate of abundance it would at the very least provide the relative distribution of salmon throughout the North Atlantic. Such a result would put to rest discussion of one of the parameters, the fraction of a stock which enters any of the high sea fishery areas.

Ship borne surveys are costly and NASCO may help in funding such an exercise. We would therefore ask NASCO to consider playing an active role in establishing such a survey. The planning and coordination of the actual research work we find is best placed within the established framework of ICES, which in both in salmon research and in other marine scientific projects successfully has had similar roles.

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ANNEX 8

WEST GREENLAND COMMISSION

PAPER WGC(90)4

NASCO TAG REWARD SCHEME 1990 PRIZES

The draw for the 10 winners in the West Greenland Commission was made by the Auditor at NASCO Headquarters on 1 June 1990. At the Seventh Annual Meeting of the Commission in Helsinki, Finland, the Chairman of the Commission, Dr Wilfred Carter announced the winners:

First prize - $1500 - Johannes Molgaard, Godhavn, Greenland 3953

Second prize - $1000 - Simon Nielsen, Nuuk, Greenland 3900

Third prize - $500 - Johannes Rosing, Manitsoq, Greenland 3912

Fourth prizes - $100

- Kristian Johansen, Holsteinsborg, Greenland 3911
- Sakarias Grim, Pamiut, Greenland 3940
- Martha Lyberth, Manitsoq, Greenland 3912
- Martin Jakobsen, Arsuk, Greenland 3932
- Johan Petersen, Nuuk, Greenland 3900
- Titken Moller, Nuuk, Greenland 3900
- Anguaq Siegstad, Holsteinsborg, Greenland 3911

The Commission offers its congratulations to the winners.

JUNE 1990
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ANNEX 9

NORTH ATLANTIC SALMON CONSERVATION ORGANIZATION

SEVENTH ANNUAL MEETING OF THE WEST GREENLAND COMMISSION
12-15 JUNE 1990, HELSINKI, FINLAND

LIST OF WEST GREENLAND COMMISSION PAPERS

PAPER NO.	TITLE
WGC(90)1	Provisional Agenda
WGC(90)2	Draft Agenda
WGC(90)3	Election of Officers
WGC(90)4	NASCO Tag Reward Scheme - 1990 Prizes
WGC(90)5	Statement by Denmark (in respect of the Faroe Islands and Greenland) on the effects of management of the fisheries
WGC(90)6	Statement by Denmark (in respect of the Faroe Islands and Greenland) on the estimation of exploitation rates
WGC(90)7	Proposal by Canada for a change in management measures for West Greenland in 1990
WGC(90)8	Draft Report of the Seventh Annual Meeting of the West Greenland Commission
WGC(90)9	Agenda
WGC(90)10	Report of the Seventh Annual Meeting of the West Greenland Commission
CNL(90)12	Report of the ICES Advisory Committee on Fisheries Management
CNL(90)45	Draft request for scientific advice from ICES

NOTE: This list contains all papers submitted to the Commission prior to and at the meeting. Some but not all of these papers are included in this report as annexes.