ALASKA LEGISLATURE COMMITTEE FILES 1991-1992 8672
7139 HOUSE RESOURCES

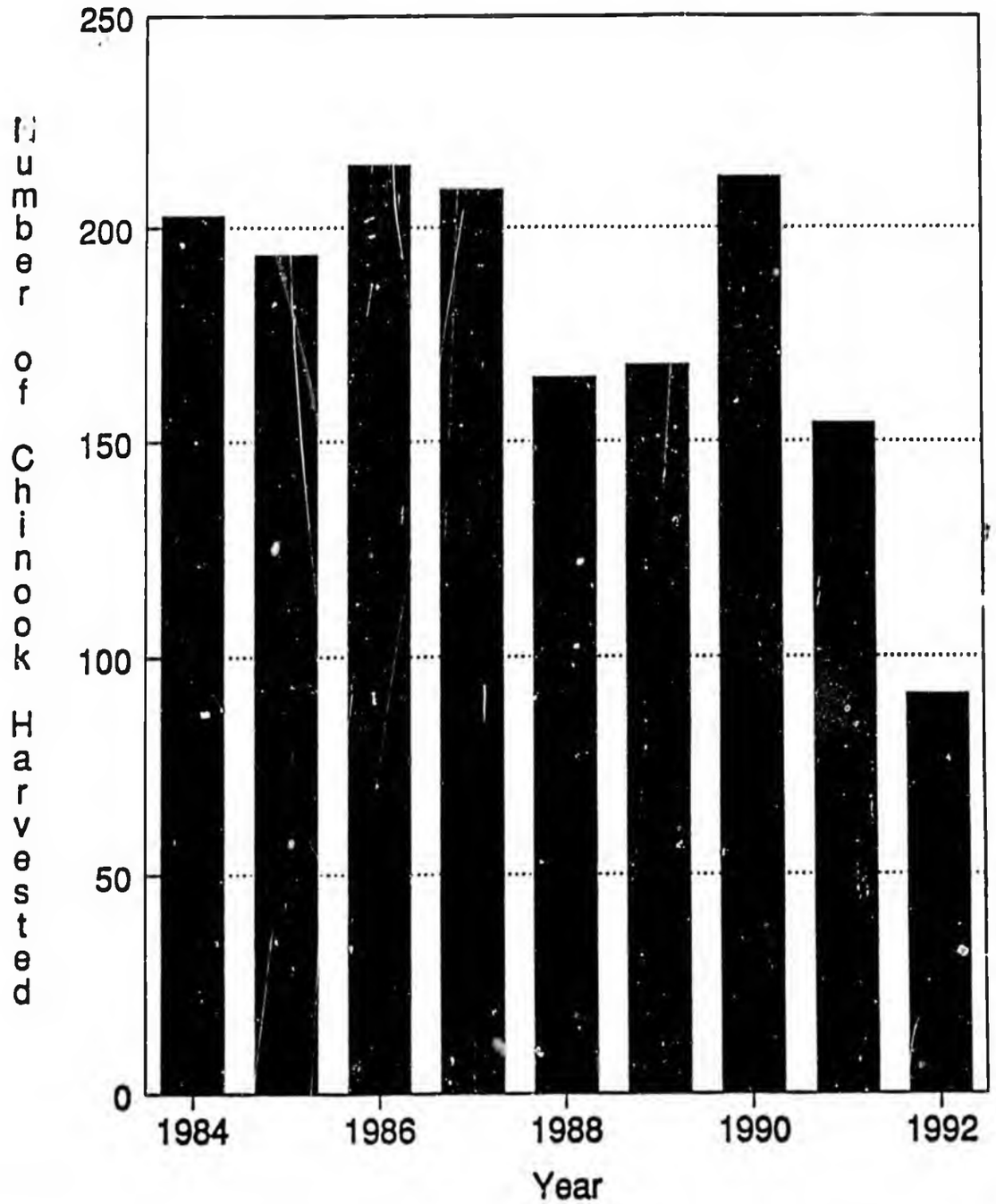


Figure 20. The number of chinook salmon (including Alaska hatchery fish) harvested in the general summer troll fishery, 1984 to 1991 and a projection for 1992.

Including Annette Island

	Net Gear	Troll Gear	Sport	Total
1965	28,207	308,902	13,000	350,109
1966	25,959	282,083	13,000	321,042
1967	26,260	274,678	13,000	313,938
1968	27,056	304,455	14,000	345,511
1969	23,844	290,168	14,000	328,012
5 Yr Avg	26,265	292,057	13,400	331,722
1970	17,713	304,599	14,000	336,312
1971	22,558	311,439	15,000	348,997
1972	44,544	242,282	15,000	301,826
1973	35,980	307,806	16,000	359,786
1974	24,469	322,099	17,000	363,568
5 Yr Avg	29,053	297,645	15,400	342,098
1975	13,365	287,342	17,000	317,707
1976	10,523	231,239	17,000	258,762
1977	13,443	271,735	17,449	302,627
1978	25,492	375,919	16,639	418,050
1979	28,455	339,151	16,581	384,187
5 Yr Avg	18,256	301,077	16,934	336,267
1980	20,114	299,872	20,213	340,199
1981	18,951	248,791	21,300	289,042
1982	48,999	242,315	25,756	317,070
1983	19,655	269,790	22,321	311,766
1984	32,398	235,629	22,050	290,077
5 Yr Avg	28,023	259,279	22,328	309,631
1985	35,469	216,086	24,858	276,413
1986	22,302	237,557	22,551	282,410
1987	15,539	242,025	24,324	281,888
1988	21,450	231,281	26,160	278,891
1989	24,276	235,731	31,071	291,078
5 Yr Avg	23,807	232,536	25,793	282,136
1990	27,696	287,931	51,200	366,827
1991	32,737	263,756	68,400	364,893

Appendix 1. Chinook salmon harvest in Southeast Alaska by year, by gear, 1965 to 1991.

	Troll Total Minus Hatchery	Net Total Minus Hatchery	Sport Total Minus Hatchery	All Total Minus Hatchery
1965	308,902	28,207	13,000	350,109
1966	282,083	25,959	13,000	321,042
1967	274,678	26,260	13,000	313,938
1968	304,455	26,934	14,000	345,389
1969	290,168	23,844	14,000	328,012
5 Yr Avg	292,057	26,241	13,400	331,698
1970	304,599	17,713	14,000	336,312
1971	311,439	22,558	15,000	348,997
1972	242,282	44,395	15,000	301,677
1973	307,806	35,955	16,000	359,761
1974	322,099	24,454	17,000	363,553
5 Yr Avg	297,645	29,015	15,400	342,060
1975	287,342	13,362	17,000	317,704
1976	231,239	10,478	17,000	258,717
1977	271,735	13,369	17,449	302,553
1978	375,433	25,295	16,639	417,367
1979	338,319	28,116	16,581	383,016
5 Yr Avg	300,814	18,124	16,934	335,871
1980	299,872	19,934	20,213	340,019
1981	248,791	18,650	21,300	288,741
1982	242,315	47,859	25,756	315,930
1983	269,790	19,461	21,449	310,700
1984	235,629	32,162	20,146	287,937
5 Yr Avg	259,279	27,613	21,773	308,665
1985	207,986	32,315	21,486	261,787
1986	227,657	19,348	17,541	264,546
1987	225,425	12,707	19,216	257,348
1988	211,508	15,622	20,615	247,745
1989	216,805	14,675	24,720	256,200
5 Yr Avg	217,876	18,933	20,716	257,525
1990	257,052	14,354	34,588	305,994
1991	224,569	17,415	41,700	283,684

Appendix 2. Chinook salmon harvest in Southeast Alaska minus fish produced by Alaskan hatcheries, by year, by gear, 1965 to 1991.

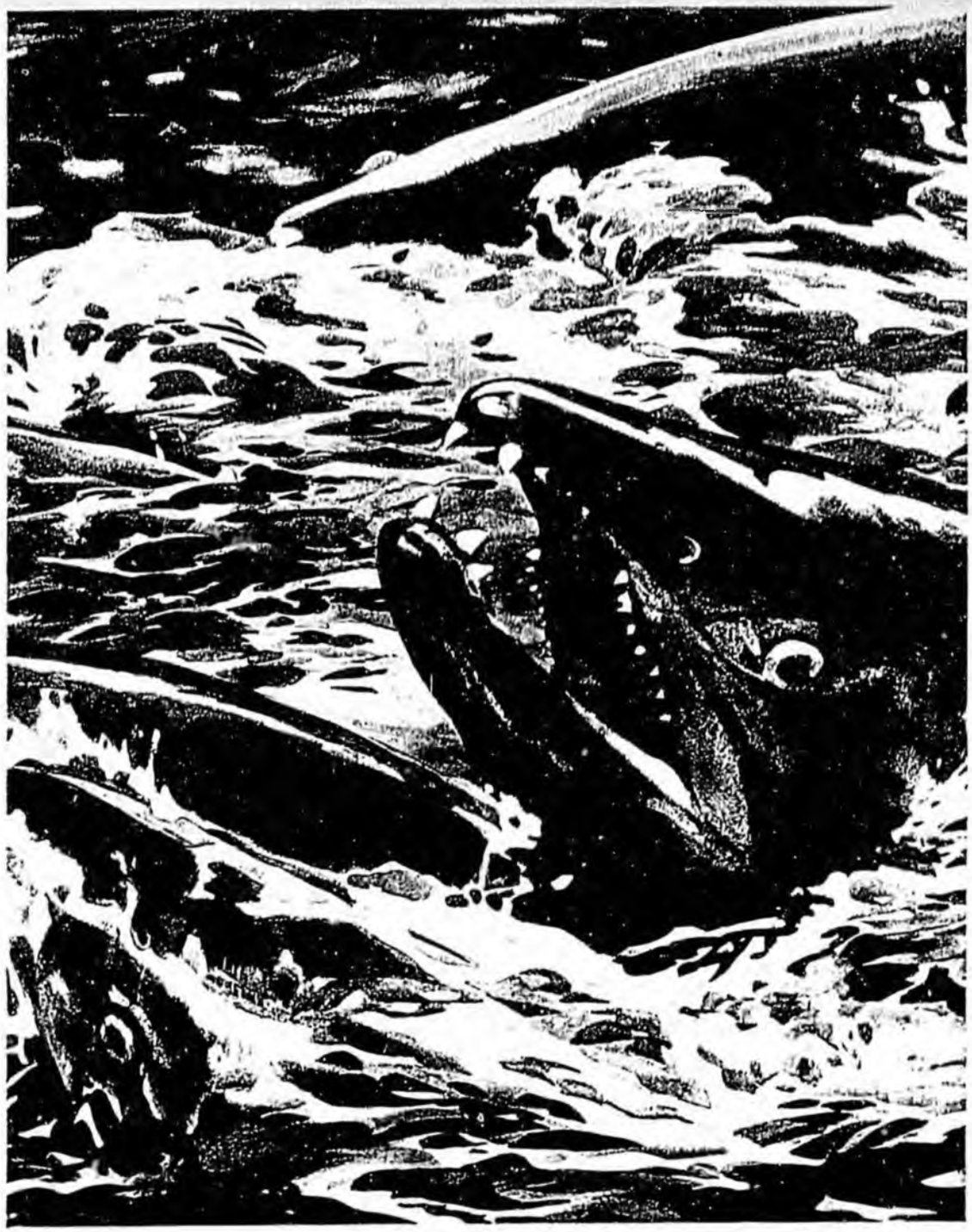
(updated 10/23/91)
ALASKA HATCHERY ADDON

YEAR	Total Alaska Hatchery	Sport Component	Troll Component	Net Component	Risk Factor	Addon
1965	0	0	0	0	0	0
1966	0	0	0	0	0	0
1967	0	0	0	0	0	0
1968	0	0	0	0	0	0
1969	0	0	0	0	0	0
1970	0	0	0	0	0	0
1971	0	0	0	0	0	0
1972	0	0	0	0	0	0
1973	0	0	0	0	0	0
1974	0	0	0	0	0	0
1975	0	0	0	0	0	0
1976	0	0	0	0	0	0
1977	0	0	0	0	0	0
1978	0	0	0	0	0	0
1979	0	0	0	0	0	0
1980	0	0	0	0	0	0
1981	0	0	0	0	0	0
1982	0	0	0	0	0	0
1983	872	872	0	0	0	0
1984	1,904	1,904	0	0	0	0
1985	13,872	3,372	8,100	2,400	700	8,172
1986	17,610	5,010	9,900	2,700	1,400	11,210
1987	24,008	5,108	16,600	2,300	2,300	16,708
1988	30,415	5,545	19,716	5,154	1,700	23,715
1989	33,986	6,351	18,804	8,831	2,300	26,686
1990	58,993	16,612	30,040	12,341	5,700	48,293
1991	79,546	26,700	38,234	14,612	9,000	65,546

Appendix 3. Total Southeast Alaska harvest of chinook salmon produced by Alaska hatcheries, by gear, with calculated "addon".

PACIFIC SALMON COMMISSION

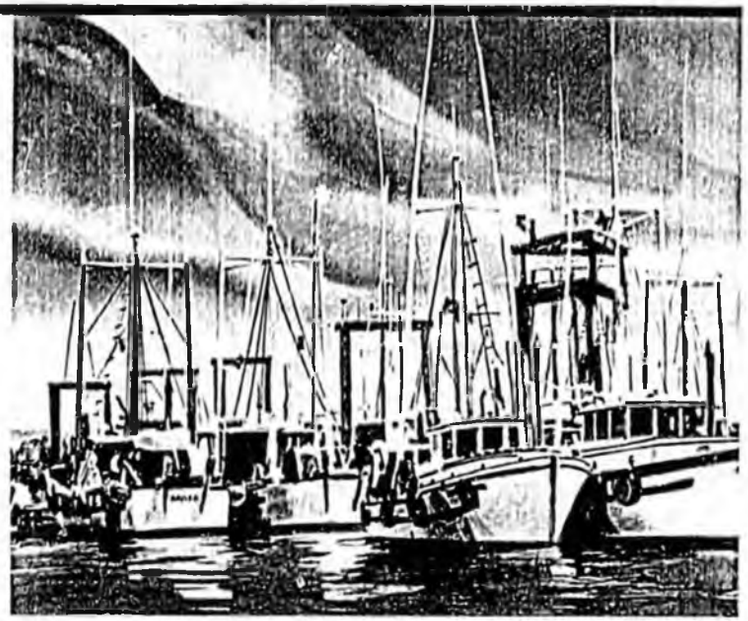
Pacific salmon roam freely in the ocean, with no sense of belonging to any one country. They recognize no international boundaries. Moving fast and far during their long ocean migrations, Pacific salmon meet and intermingle as they travel through the waters of the North Pacific Ocean. It is our shared responsibility to act with wisdom and ensure their migrations continue, by managing for rich harvests, while allowing the salmon to return in abundance to the rivers of their birth.



The Pacific Salmon Commission

Management of Pacific salmon has long been a matter of common concern to the United States and Canada. In 1985, after many years of negotiation, the Pacific Salmon Treaty was signed, setting long-term goals for the benefit of the salmon and the two countries.

The Pacific Salmon Commission is the body formed by the governments of Canada and the United States to implement the Pacific Salmon Treaty. The Commission itself does not regulate the salmon fisheries but provides regulatory advice and recommendations to the two countries. It has responsibility for all salmon originating in the waters of one country which are subject to interception by the other, affect management of the other country's salmon or affect biologically the stocks of the other country. In addition, the Pacific Salmon Commission is charged with taking into account the conservation of steelhead trout while fulfilling its other functions.



The fundamental role of the Pacific Salmon Commission is two-fold: first, to conserve the Pacific salmon in order to achieve optimum production, and second, to divide the harvests so that each country reaps the benefits of its investment in salmon management. In effect, this Commission gives both countries a forum through which to resolve their difficult salmon management problems.

The Pacific Salmon Commission is a sixteen-person body with four Commissioners and four alternates each from the United States and Canada, representing the interests of commercial and recreational fisheries as well as federal, state and tribal governments.

Each country has one vote in the Commission. The agreement of both is required for any recommendation or decision by the Commission.

Three regional panels — the Southern, Northern and Fraser River—provide technical and regulatory advice to the Commission. Each panel is made up of no more than six representatives and alternates from each country. Membership reflects a range of governmental and fishing interests.

The panels provide recommendations and comment on the management of the fisheries in their area of responsibility before and after each season's harvest. This is done by reviewing technical data on annual fishing plans and regulations, and the salmon enhancement programs of each country. Panels provide the Commission with specific recommendations for the development of fishery plans. Agreement of both sides is needed for any decision or recommendation. The Fraser River Panel is unique in that it has responsibility for in-season harvest regulation of Fraser River sockeye and pink salmon within a specified area.

Panel recommendations are based on information received by the panels from a variety of bilateral technical committees. Those committees rely upon information provided by Canadian and United States fishery management agencies.

The Commission receives administrative support from its secretariat staff, headquartered in Vancouver, British Columbia. Secretariat staff members also provide technical information and advice concerning Fraser River sockeye and pink salmon harvest. The staff is actively involved in the day-to-day regulation of sockeye and pink fisheries throughout the Fraser River Panel area of jurisdiction.

The Pacific Salmon Commission has a variety of tools at hand to achieve its mandate. The Commission may recommend that the countries implement harvest limitations, time and area closures, gear restrictions, or other measures to control harvests. In addition, the Commission may recommend use of enhancement techniques to strengthen weak runs, mitigate for damage done by logging, mining or dam-building, or for other purposes.

Essentially, the Commission works like this:

Step 1: Each country provides technical information to the Commission on the conduct of its fisheries, pre-season expectations and enhancement activities, which is:

Step 2: analyzed by bilateral technical committees, which then report to:

Step 3: Panels, which use these reports to develop their fishery recommendations. From here the various area plans are:

Step 4: sent to the Commissioners for consideration. At this stage, the Commissioners meet to review and conclude negotiations on the plans, which are then:

Step 5: transmitted to the Governments of Canada and the United States for final approval and regulatory implementation.

Each panel is assigned responsibility for salmon stocks originating in a specific geographic area. In cases where fisheries intercept stocks for which more than one panel is responsible, the appropriate panels meet jointly.

Northern Panel:

The Northern Panel has responsibility for salmon originating in rivers with mouths entering the Pacific Ocean between Cape Suckling in Alaska and Cape Caution in British Columbia.

Southern Panel:

The Southern Panel has responsibility for salmon originating in rivers with mouths south of Cape Caution, with the exception of Fraser River sockeye and pink salmon.

Fraser River Panel:

The Fraser River Panel has special responsibility for in-season regulation of Fraser River-origin sockeye and pink salmon fisheries in southern British Columbia and northern Puget Sound.

The Pacific Salmon Treaty

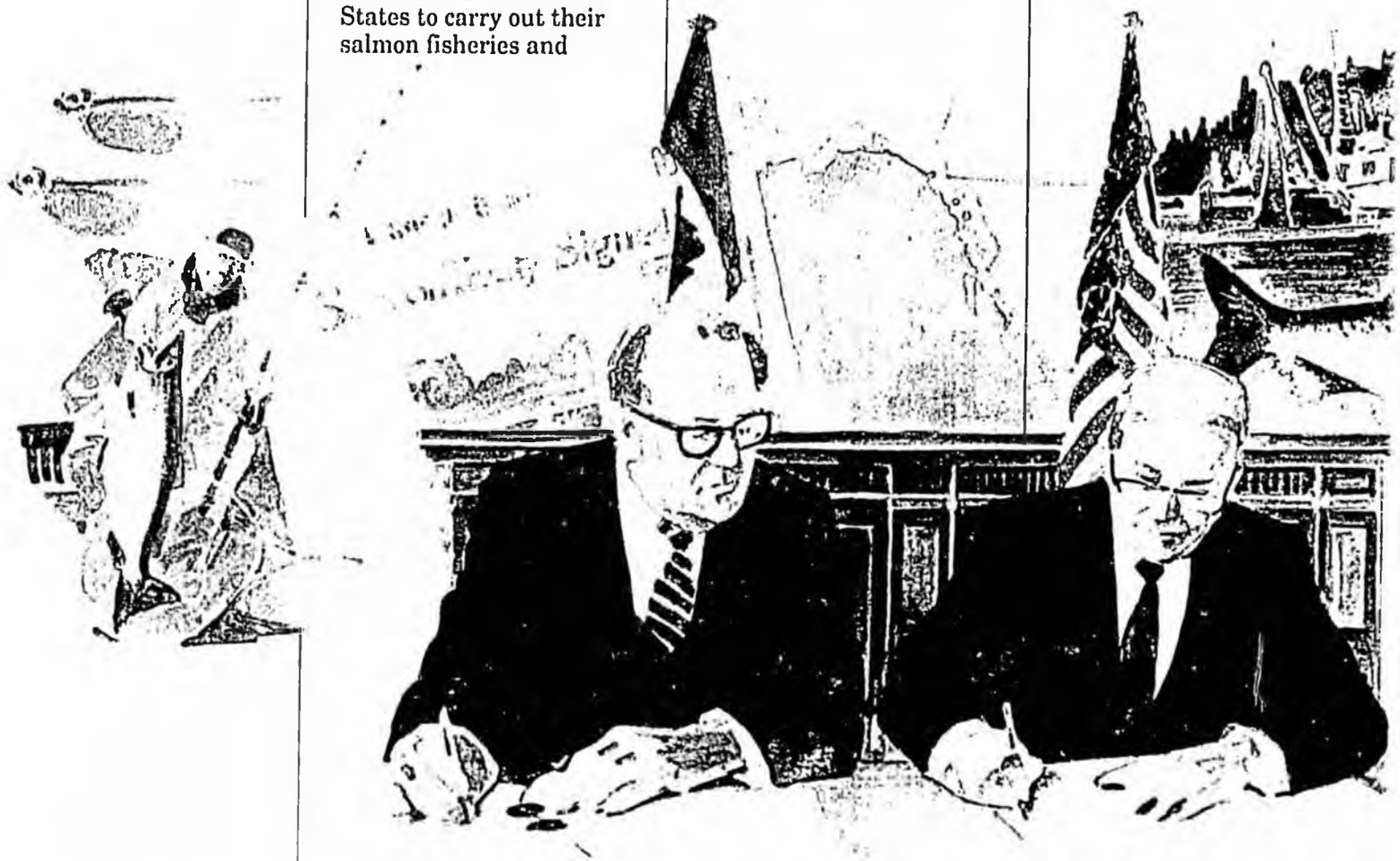
In March, 1985 the United States and Canada agreed to cooperate in the management, research and enhancement of Pacific salmon stocks of mutual concern by ratifying the Pacific Salmon Treaty.

The Treaty embodies the commitment made by Canada and the United States to carry out their salmon fisheries and enhancement programs so as to:

- prevent overfishing and provide for optimum production, and
- ensure that both countries receive benefits equal to the production of salmon originating in their waters.

In fulfilling these obligations, both countries agreed to take into account:

- the desirability in most cases of reducing interceptions
- the desirability in most cases of avoiding undue disruption of existing fisheries, and
- annual variations in abundance of the stocks.



Why we have the Treaty

Salmon fishery managers of Canada and the United States are challenged by the fact that some of the Pacific salmon each country produces are caught by fishermen of the other country. This harvest of one country's salmon by another's fishermen is called interception.

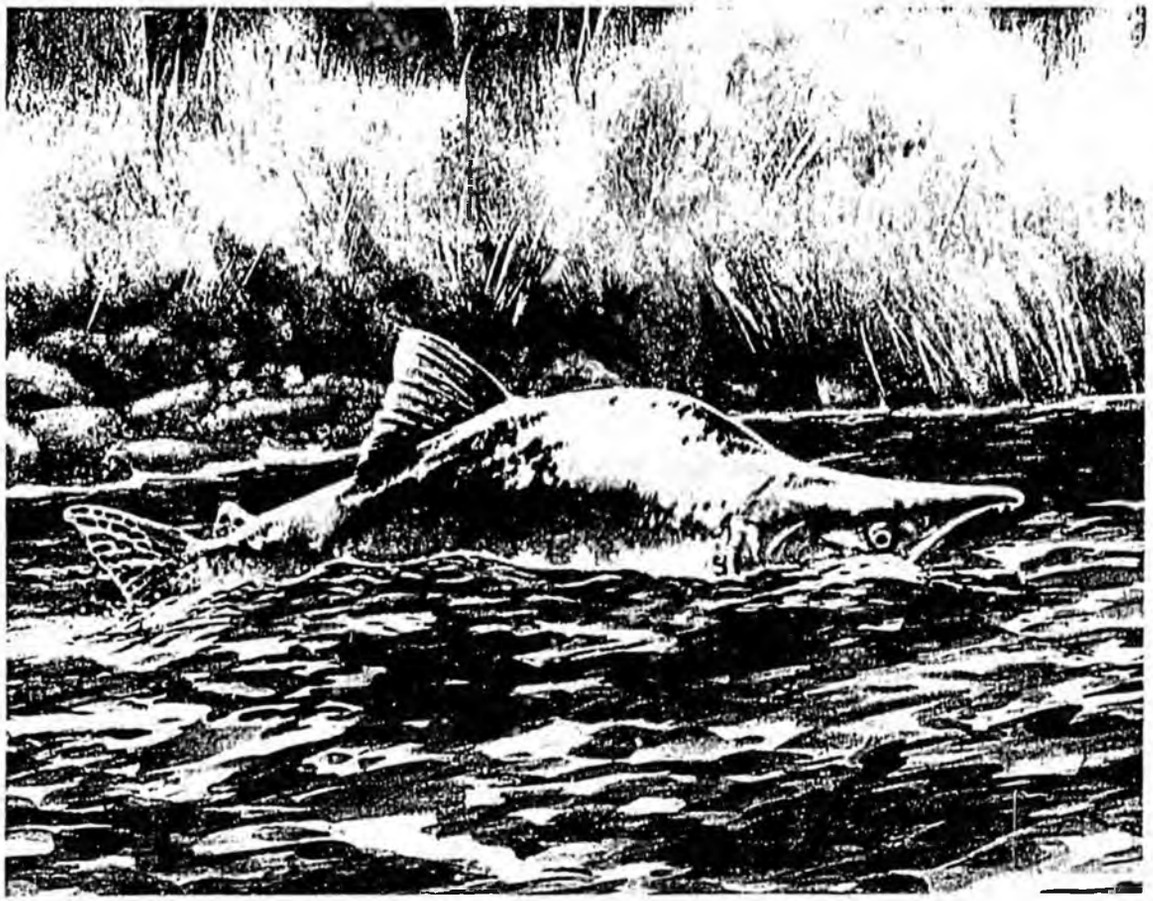
Interception exists because salmon swim across international borders, beyond the jurisdiction of the government in whose water they were spawned. The fish migrate long distances, spending several years at sea. In the course of their migratory cycle, United States-spawned fish enter the fishery zones of Canada and Canadian fish enter United States waters, where they are vulnerable to the other country's fishing fleets.

Salmon interceptions have been the subject of discussion between the two countries since the early part of this century. Over the years, research by both countries revealed that Alaskan fishermen were catching salmon bound for British Columbia, Oregon and Washington; Canadian fishermen were capturing coho, chinook and other species bound for rivers of Washington and Oregon; fishermen in northern British Columbia were intercepting salmon returning to Alaska, and United States fishermen were catching salmon as they travelled through the Strait of Juan de Fuca and San Juan Islands towards Canada's Fraser River.

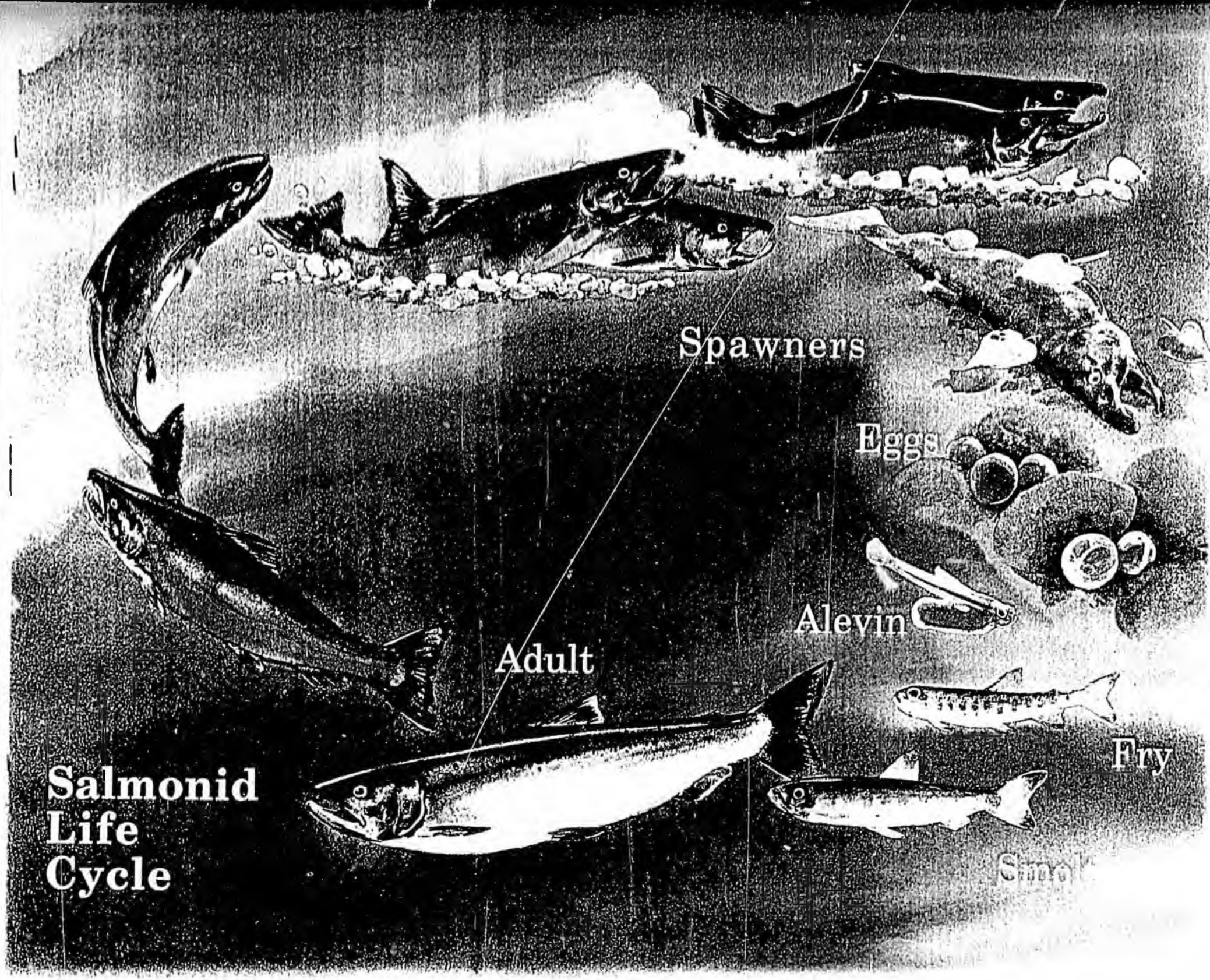
Unless management policies and conservation concerns are jointly agreed, one nation may harvest too many of the other country's stocks and frustrate the home country's management plans. Uncontrolled interceptions may also jeopardize the administrative and financial support needed for salmon enhancement programs: the home country may be reluctant to invest in hatcheries or habitat protection and restoration if the fish produced are caught by fishermen of another nation. Intercepting fisheries encourage overharvest and discourage investment in conservation and enhancement. This was the day-to-day condition of the Pacific salmon fisheries, particularly in recent decades.

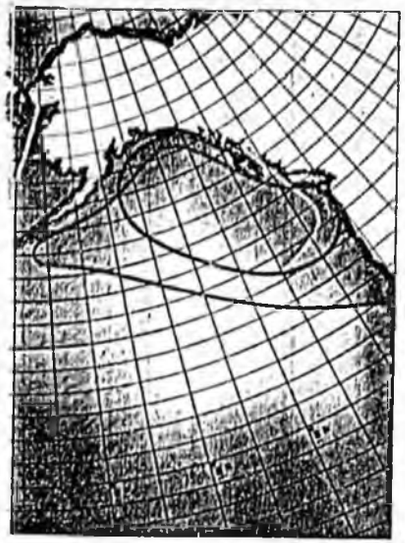
Through the years, the United States and Canada reached agreements over the management of particular salmon stocks in limited regions; for example, Fraser River sockeye and pink salmon. However, the number and diversity of each country's intercepting fisheries defied small-scale solutions. The Pacific Salmon Treaty is broad in scope, enabling it to serve as the means to coordinated management of the coastwide salmon resource.

Biology of Pacific Salmon

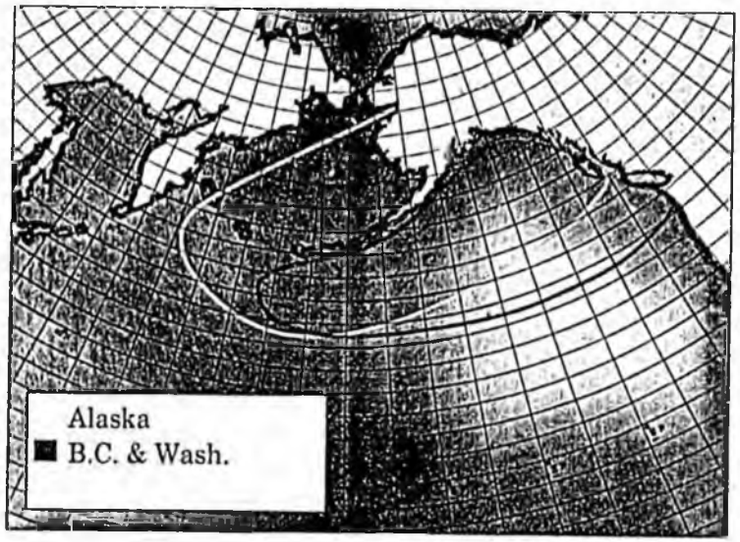


The five species of Pacific salmon found along the west coast of North America are anadromous — they migrate from the ocean to freshwater to spawn. Spawning completes their life cycle begun in the same freshwater stream two to six years earlier. Homing of Pacific salmon to their stream of origin results in important biological characteristics for groups or stocks of fish. Each stock is genetically adapted to the environment in which it resides, and exhibits unique characteristics such as migration route, migration timing, and productivity. Such biological traits make consideration of individual stocks an important part of salmon management, designed to produce optimum production from the resource.


Spawners
Eggs
Alevin
Adult
Fry
Salmonid
Life
Cycle



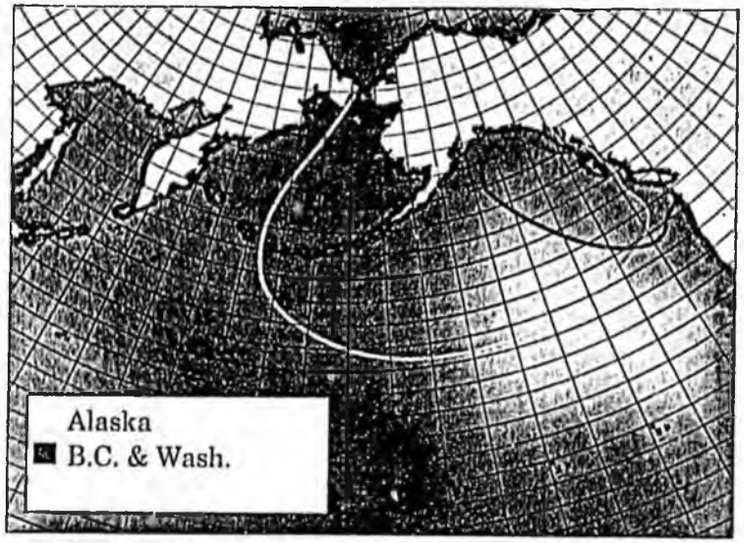
A moderate sized species, coho average eight pounds, but can weigh over 30 pounds. Coho rear from 1 to 2 years in freshwater and mature in the fall of the second year at sea. Usually found in shorter coastal rivers.



Oncorhynchus nerka

Sockeye,
Red,
Blueback

A smaller species, averaging about six pounds, sockeye typically rear for 1 or 2 years in lakes prior to migrating to sea. The fish mature after 2 or 3 years at sea.

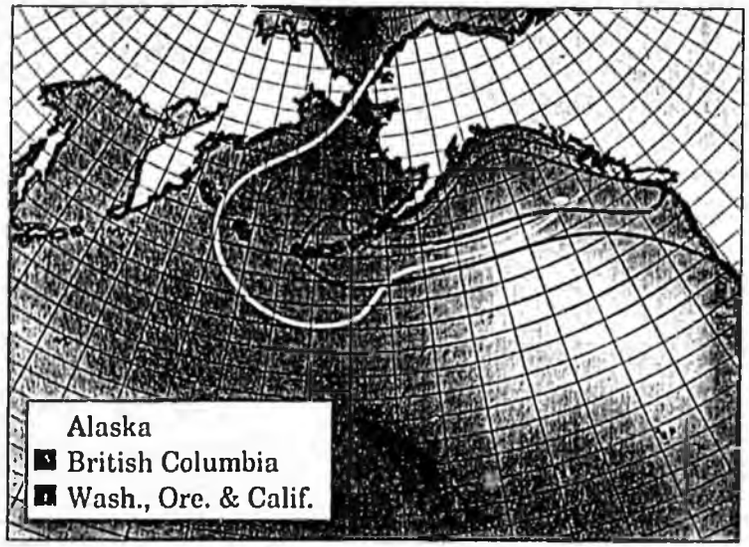


Oncorhynchus gorbuscha

Pink,
Humpback

The smallest and most abundant species, pink salmon average three to five pounds. This species matures in 2 years. The juveniles migrate directly to estuaries without rearing in freshwater.

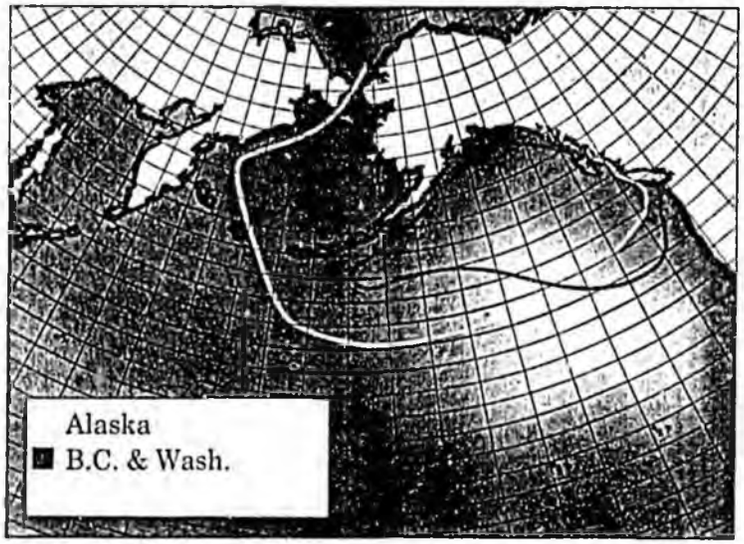
Names and Characteristics of Pacific Salmon



Oncorhynchus tshawytscha

Chinook,
King,
Spring,
Tyee,
Blackmouth,
Quinnat

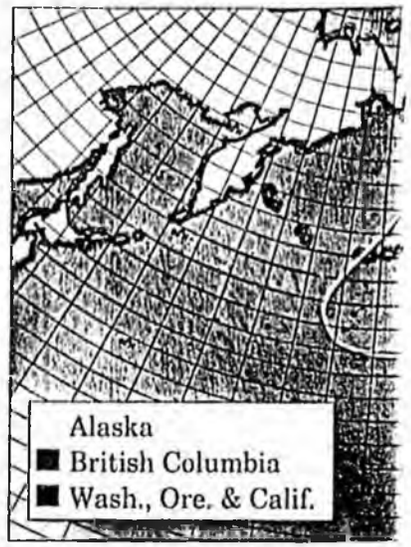
Largest of the five species, chinook average 15-20 pounds, but can weigh over 100 pounds.This species matures in 3 to 6 years. Major stocks originate in large rivers, such as the Columbia. Juveniles may migrate directly to the sea or rear for up to a year in freshwater.



Oncorhynchus keta

Chum,
Dog,
Keta

A large species, averaging eight pounds. Juveniles migrate directly to sea without rearing. Chum salmon mature after 3 or 4 years at sea.

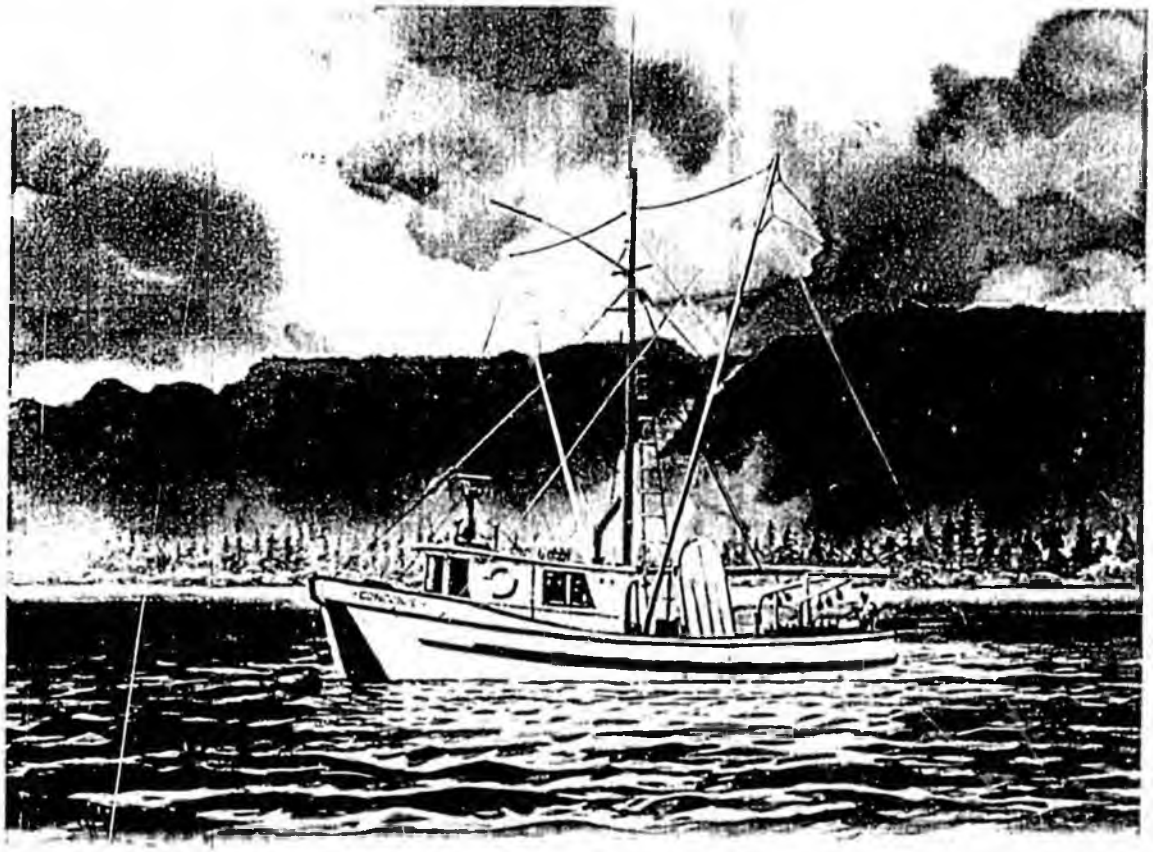


Oncorhynchus kisutch

Coho,
Silver

Values of the Salmon fisheries

The salmon play an important role in the social and economic fabric of North America's Pacific coast. Along with a cultural and historical value intricately woven into the society, the economic value of the salmon has a tremendous impact on the quality of life.



Indians

Indians of this region depend upon the Pacific salmon in almost every facet of their existence. The fish hold a central place in the ceremonial, subsistence and commercial aspects of these people's lives.

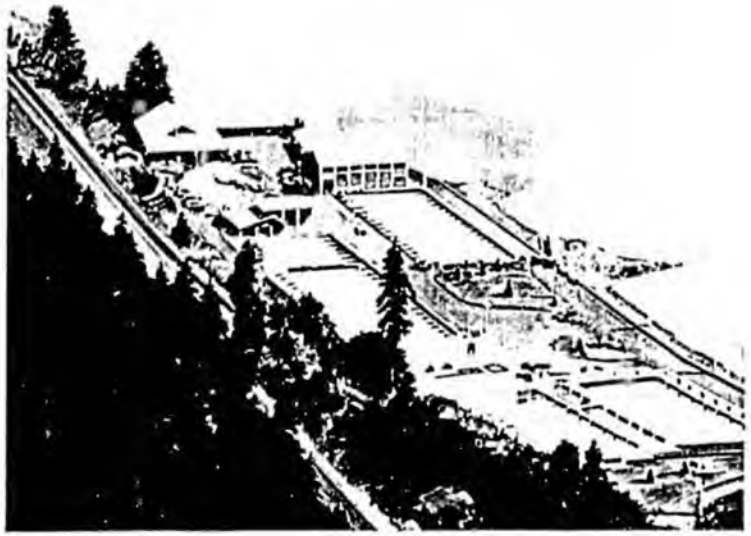
Enhancement

Over the years, tremendous demand for the salmon resource called for commitments by both countries to undertake enhancement activities as part of their overall fisheries management. Without such activities, current salmon catches could not be maintained or increased.

Enhancement covers a wide range of programs, including hatcheries, lake enrichment, fishways, spawning channels, fish rearing, stream surveys, and habitat improvement.

In addition to extensive government programs, Canada and the United States enjoy a large and vital volunteer force in salmon enhancement. Over fifteen thousand volunteers in Washington, Oregon and British Columbia — from school children to senior citizens — actively participate in more than one thousand public involvement projects and are a valued part of salmon enhancement efforts.

The Salmon Treaty offers each country the opportunity to begin new enhancement programs or expand existing operations with confidence that the benefits of those activities will not be lost to uncontrolled intercepting fisheries.

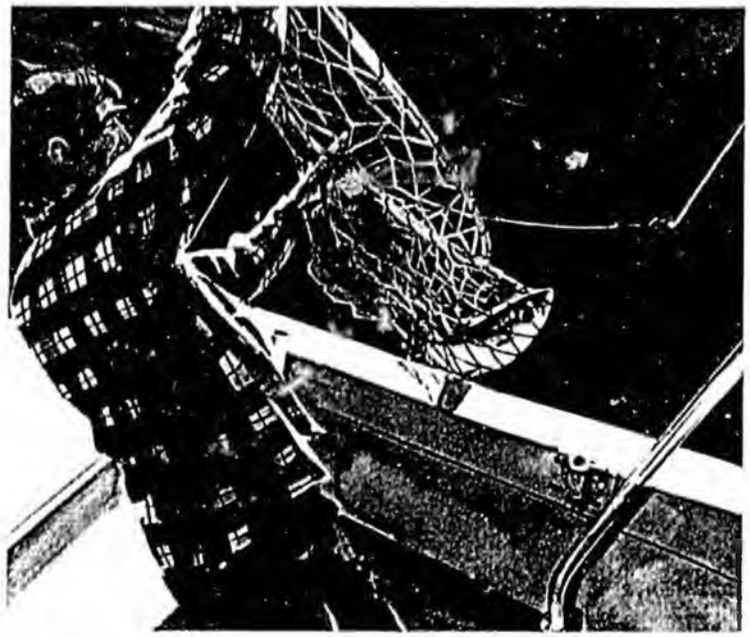


Commercial

In 1986, fishermen landed approximately 177 million Pacific salmon (almost 900 million pounds) in the United States and Canada. This harvest was worth US $682.5 million / CDN $921.4 million to the commercial fishermen. These values can be multiplied several times in determining the contribution of Pacific salmon landings to the Canadian and United States economies, leading to an approximate total value of US $1.37 billion / CDN $1.84 billion - US $2.05 billion / CDN $2.76 billion.

Recreational

Recreational, or sport fishing generates US $10.5 million in license fees in Washington, Alaska and Oregon, where about 1.5 million sport fishermen enjoy the



Pacific salmon resource. In British Columbia, with over 400,000 participating in the sport, salmon fishing contributes significantly to the tourism and recreation industry. In 1986, British Columbia's sport fishermen spent over CDN $180 million on related goods and services. About CDN $2.2 million is raised through licenses alone each year. Although estimates of the total value vary, the salmon sport fishery certainly generates many hundreds of millions of dollars for local and national economies of the United States and Canada.

The impact of the Pacific salmon fisheries can be seen in the thousands of jobs and scores of industries they support. A partial list of fishing-dependent businesses would include marina operations, fish processing industries, transportation, fuel sales, boat building and repair, retail fish sales, tackle manufacturers and distributors, hotels, restaurants and resorts. The Pacific Salmon Treaty provides strong assurance of a more stable and prosperous future for many such enterprises.

The Pacific Salmon Treaty is an ambitious agreement. Canada and the United States have agreed that salmon are to be more than a fondly remembered but dwindling piece of this region's history. The Treaty means that Pacific salmon will be an abundant, vital part of the countries' present and future. The Pacific Salmon Commission must meet the challenge of the Treaty, guiding the United States and Canada in prudent fishery management and safeguarding the future of the Pacific salmon and the people who rely upon this magnificent, renewable resource.

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PACIFIC SALMON COMMISSION

Reprint of the

PACIFIC SALMON TREATY

and

ORIGINAL ANNEXES & MEMORANDUM OF UNDERSTANDING

Treaty Between the Government of the United States of America and the Government of Canada Concerning Pacific Salmon

The Government of the United States of America and the Government of Canada,

Considering the interests of both Parties in the conservation and rational management of Pacific salmon stocks and in the promotion of optimum production of such stocks;

Recognizing that States in whose waters salmon stocks originate have the primary interest in and responsibility for such stocks;

Recognizing that salmon originating in the waters of each Party are intercepted in substantial numbers by the nationals and vessels of the other Party, and that the management of stocks subject to interception is a matter of common concern;

Desiring to cooperate in the management, research and enhancement of Pacific salmon stocks;

Have agreed as follows:

Article I

DEFINITIONS

As used in this Treaty,

1. "enhancement" means man-made improvements to natural habitats or application of artificial fish culture technology that will lead to the increase of salmon stocks;
2. "fishery" means the activity of harvesting or seeking to harvest salmon;
3. "fishery regimes" means the fishing limitations and arrangements adopted by the Parties pursuant to Article IV, paragraph 6;
4. "interception" means the harvesting of salmon originating in the waters of one Party by a fishery of the other Party;
5. "overfishing" means fishing patterns which result in escapements significantly less than those required to produce maximum sustainable yields;
6. "stocks subject to this Treaty" means Pacific salmon stocks which originate in the waters of one Party and
   (a) are subject to interception by the other Party;
   (b) affect the management of stocks of the other Party; or
   (c) affect biologically the stocks of the other Party; and
7. "transboundary river" means a river that rises in Canada and flows to the sea through the United States.

Article II

COMMISSION AND PANELS

1. The Parties shall establish a Pacific Salmon Commission, hereinafter referred to as "the Commission", to be composed of two national sections, a Canadian Section and a United States Section.

2. The Commission shall have legal personality and shall enjoy in its relations with other organizations and in the territories of the Parties such legal capacity as may be necessary to perform its functions and achieve its ends. The immunities and privileges which the Commission and its officers shall enjoy in the territory of a Party shall be subject to agreement between the Commission and the Party concerned.

3. The Commission shall consist of not more than eight Commissioners, of whom not more than four shall be appointed by each Party. Each Party may also appoint not more than four alternate Commissioners, to serve in the absence of any Commissioner appointed by that Party.

4. The Commissioners and alternate Commissioners shall hold office at the pleasure of the Party by which they were appointed.

5. At the first meeting of the Commission one section shall select from its members a Commission Chairman, and the other section shall select from its members a Vice-Chairman, each of whom shall hold office for the calendar year in which the Treaty enters into force and for such portion of the subsequent year as the Commission may determine. Thereafter the Chairman and Vice-Chairman shall hold office for a term of twelve months and shall be selected by their respective sections. The section which selects the first Chairman shall be determined by lot and thereafter the offices of Chairman and Vice-Chairman shall alternate between the sections. If either office becomes vacant before the end of a term, the appropriate section shall select a replacement for the remainder of the term.

6. Each section shall have one vote in the Commission. A decision or recommendation of the Commission shall be made only with the approval of both sections.

7. Subject to the approval of the Parties, the Commission shall make such by-laws and procedural rules, for itself, for the Panels established pursuant to paragraph 18, and for the committees established pursuant to paragraph 17, as may be necessary for the exercise of their functions and the conduct of their meetings.

8. The Commission may make recommendations to or advise the Parties on any matters relating to the Treaty.

9. Unless otherwise agreed by the Parties, the seat of the Commission shall be at New Westminster, British Columbia.

10. The Commission shall hold an annual meeting and may hold other meetings at the request of the Chairman or of either Party. The Chairman shall notify the Commissioners of the time and place of meetings. Meetings may be held at the seat of the Commission or at such other place as may be determined in accordance with the by-laws and procedural rules of the Commission.

11. Each Party shall pay the expenses of its own section.

12. The Commission shall prepare an annual budget of joint expenses and submit it to the Parties for approval. The Parties shall bear the costs of the budget in equal shares unless otherwise agreed, and shall pay their shares as the by-laws may specify after the budget has been approved by both Parties.

13. The Commission shall authorize the disbursement of funds contributed by the Parties pursuant to paragraph 12, and may enter into contracts and acquire property necessary for the performance of its functions.

14. The Commission shall submit to the Parties an annual report on its activities and an annual financial statement.

15. The Commission shall appoint an Executive Secretary, who, subject to the supervision of the Commission, shall be responsible for the general administration of the Commission.

16. The Commission may engage staff or authorize the Executive Secretary to do so. The Executive Secretary shall have full authority over the staff subject to the direction of the Commission. If the office of the Executive Secretary is vacant, the Commission shall determine who shall exercise that authority.

17. The Commission shall establish a Committee on Research and Statistics and a Committee on Finance and Administration. The Commission may eliminate or establish committees as appropriate.

18. The Commission shall establish Panels as specified in Annex I. The Commission may recommend to the Parties the elimination or establishment of Panels as appropriate.

19. The Panels shall provide information and make recommendations to the Commission with respect to the functions of the Commission and carry out such other functions as the Treaty may specify or as the Commission may direct.

20. In cases where fisheries intercept stocks for which more than one Panel is responsible, the appropriate Panels shall meet jointly to carry out the functions specified in paragraph 19. If the Panels cannot agree, each may make an independent report to the Commission.

21. Each Panel shall consist of not more than 6 members from each Party. Each Party may designate alternate Panel members to serve in the absence of any Panel member appointed by that Party.

22. Except as otherwise provided in the Treaty, paragraphs 4, 5, 6, 10 and 11 apply, *mutatis mutandis*, to each Panel.

Article III

PRINCIPLES

1. With respect to stocks subject to this Treaty, each Party shall conduct its fisheries and its salmon enhancement programs so as to:

(a) prevent overfishing and provide for optimum production; and

(b) provide for each Party to receive benefits equivalent to the production of salmon originating in its waters.

2. In fulfulling their obligations pursuant to paragraph 1, the Parties shall cooperate in management, research and enhancement.

3. In fulfilling their obligations pursuant to paragraph 1, the Parties shall take into account:

(a) the desirability in most cases of reducing interceptions;

(b) the desirability in most cases of avoiding undue disruption of existing fisheries; and

(c) annual variations in abundances of the stocks.

Article IV

CONDUCT OF FISHERIES

In order to facilitate the implementation of Articles III, VI and VII:

1. Each Party shall submit an annual report on its fishing activities in the previous year to the other Party and to the Commission. The Commission shall forward the reports to the appropriate Panels.

2. The Panels shall consider the reports submitted pursuant to paragraph 1 and shall provide their views to the Commission. The Commission shall review the reports of the Panels and shall provide its views to the Parties.

3. Each year the State of origin shall submit preliminary information for the ensuing year to the other Party and to the Commission, including:

(a) the estimated size of the run;

(b) the interrelationship between stocks;

(c) the spawning escapement required;

(d) the estimated total allowable catch;

(e) its intentions concerning management of fisheries in its own waters; and

(f) its domestic allocation objectives whenever appropriate.

The Commission shall forward this information to the appropriate Panels.

4. The Panels shall examine the information submitted pursuant to paragraph 3 and report their views to the Commission with respect to fishery regimes for the following year.

5. The Commission shall review the reports of the Panels and shall recommend fishery regimes to the Parties.

6. On adoption by both Parties, the fishery regimes referred to in paragraph 5 shall be attached to this Treaty as Annex IV.

7. Each Party shall establish and enforce regulations to implement the fishery regimes adopted by the Parties. Each Party, in a manner to be determined by the Commission, shall notify the Commission and the other Party of these regulations and shall promptly communicate to the Commission and to the other Party any in-season modifications.

Article V

SALMON ENHANCEMENT PROGRAMS

1. Salmon enhancement programs that may be established by the Parties shall be conducted subject to the provisions of Article III.

2. Each year each Party shall provide to the other Party and to the Commission information pertaining, *inter alia*, to:

(a) operations of and plans for existing projects;

(b) plans for new projects; and

(c) its views concerning the other Party's salmon enhancement projects.

The Commission shall forward this information to the appropriate Panels.

3. The panels shall examine the information and report their views to the Commission in light of the obligations set forth in Article III.

4. The Commission shall review the reports of the Panels and may make recommendations to the Parties.

Article VI

FRASER RIVER

1. This Article applies to Fraser River sockeye and pink salmon harvested in the area specified in Annex II.

2. Notwithstanding the provisions of Article IV, paragraph 7, on adoption by the Parties of the fishery regime for the stocks covered by this Article, the Fraser River panel shall propose regulations to the Commission for the harvest of salmon referred to in paragraph 1.

3. The Fraser River Panel shall review with other appropriate Panels the fishery regimes and the information provided pursuant to Article IV, paragraph 3, with respect to salmon other than Fraser River sockeye and pink salmon before proposing regulations pursuant to paragraph 2. The Fraser River Panel and the Commission shall ensure that regulatory proposals and recommendations, to the extent practicable, meet the requirements of the Parties with respect to the management of stocks other than Fraser River sockeye and pink salmon.

4. In implementing this Article, the Fraser River Panel and the Commission shall take into account and seek consistency with existing aboriginal rights, rights established in existing Indian treaties and domestic allocation objectives.

5. On the basis of the proposals made by the Panel, the Commission shall recommend regulations to the Parties for approval. The Parties shall review the recommendations for, *inter alia*, consistency with domestic legal obligations. The regulations shall become effective upon approval by the Party in whose waters such regulations are applicable.

6. During the fishing season, the Fraser River Panel may make orders for the adjustment of fishing times and areas stipulated in the annual regulations in response to variations in anticipated conditions. The Parties shall review the orders for consistency with domestic legal obligations. The Parties shall give effect to such orders in accordance with their respective laws and procedures.

7. The Parties shall not regulate their fisheries in areas outside the area specified in Annex II in a manner that would prevent achievement of the objectives of the fishery regime for the salmon referred to in paragraph 1.

ARTICLE VII

TRANSBOUNDARY RIVERS

1. This Article applies to salmon originating in transboundary rivers.

2. Notwithstanding Article IV, paragraph 3(c), whenever salmon originate in the Canadian portion of a transboundary river, the appropriate Panel shall provide its views to the Commission on the spawning escapement to be provided for all the salmon stocks of the river if either section of the Panel so requests.

3. On the basis of the views provided by the Panel pursuant to paragraph 2, the Commission shall recommend spawning escapements to the Parties.

4. Whenever salmon originate in the Canadian portions of transboundary rivers, or would originate there as a result of enhancement projects, salmon enhancement projects on the transboundary rivers shall be undertaken co-operatively, provided, however, that either Party, with the consent of the Commission, may separately undertake salmon enhancement projects on the transboundary rivers.

ARTICLE VIII

YUKON RIVER

1. Notwithstanding Articles III, paragraph 1(b), and VII, arrangements for consultation, recommendation of escapement targets and approval of enhancement activities on the Yukon River require further development to take into account the unique characteristics of that River.

2. The Parties consider it important to ensure effective conservation of stocks originating in the Yukon River and to explore the development of co-operative research and identification of potential enhancement opportunities.

3. The Parties shall initiate in 1985, and conclude, as soon as possible, negotiations to, *inter alia*,

(a) account for United States harvests of salmon originating in the Canadian section of the River;

(b) develop co-operative management procedures taking into account United States management programs for stocks originating in the United States section of the River;

(c) consider co-operative research programs, enhancement opportunities, and exchanges of biological data; and

(d) develop an organizational structure to deal with Yukon River issues.

4. Prior to the entry into force of this Treaty, the Parties shall agree upon:

(a) the range within which the accounting of United States interceptions referred to in paragraph 3(a) shall be established;

(b) arrangements for exchange of available data on the stocks; and

(c) proposals for research.

ARTICLE IX

STEELHEAD

In fulfilling their functions, the Panels and Commission shall take into account the conservation of steelhead.

ARTICLE X

RESEARCH

1. The Parties shall conduct research to investigate the migratory and exploitation patterns, the productivity and the status of stocks of common concern and the extent of interceptions.

2. The Commission may make recommendations to the Parties regarding the conduct and coordination of research.

3. Subject to normal requirements, each Party shall allow nationals, equipment and vessels of the other Party conducting research approved by the Commission to have access to its waters for the purpose of carrying out such research.

ARTICLE XI

DOMESTIC ALLOCATION

1. This Treaty shall not be interpreted or applied so as to affect or modify existing aboriginal rights or rights established in existing Indian treaties and other existing federal laws.

2. This Article shall not be interpreted or applied so as to affect or modify any rights or obligations of the Parties pursuant to other Articles and Annexes to this Treaty.

ARTICLE XII

TECHNICAL DISPUTE SETTLEMENT

1. Either Party may submit to the Chairman of the Commission, for referral to a Technical Dispute Settlement Board, any dispute concerning estimates of the extent of salmon interceptions and data related to questions of overfishing. The Commission may submit other technical matters to the Chairman for referral to a Board. The Board shall be established and shall function in accordance with the provisions of Annex III. The Board shall make findings of fact on the disputes and the other technical matters referred to it.

2. The findings of the Board shall be final and without appeal, except as provided in paragraph 3, and shall be accepted by the Commission as the best scientific information available.

3. Either Party may, by application in writing to the Chairman of the Commission, request reconsideration of a finding of a Board, provided that such request is based on information not previously considered by the Board and not previously known to or reasonably discoverable by the Party requesting such reconsideration. The Chairman shall, if possible, refer the request to the Board which made the finding. Otherwise, the Chairman shall refer the request to a new Board constituted in accordance with the provisions of Annex III.

Article XIII

ANNEXES

1. All references to this Treaty shall be understood to include the Annexes.
2. The Commission, whenever appropriate, shall review the Annexes and may make recommendations to the Parties for their amendment.
3. The Annexes may be amended by the Parties through an Exchange of Notes between the Government of Canada and the Government of the United States of America.
4. The Commission shall publish the texts of the Annexes whenever amended.

Article XIV

IMPLEMENTATION

Each Party shall:

(a) enact and enforce such legislation as may be necessary to implement this Treaty;

(b) require reports from its nationals and vessels of catch, effort and related data for all stocks subject to this Treaty and make such data available to the Commission; and

(c) exchange fisheries statistics and any other relevant information on a current and regular basis in order to facilitate the implementation of this Treaty.

Article XV

ENTRY INTO FORCE AND TERMINATION OF TREATY

1. This Treaty is subject to ratification. It shall enter into force upon the exchange of instruments of ratification at [at a place to be determined].
2. At the end of the third year after entry into force and at any time thereafter, either Party may give notice of its intention to terminate this Treaty. The Treaty shall terminate one year after notification.
3. Upon the entry into force of this Treaty, the Convention between Canada and the United States of America for the Protection, Preservation and Extension of the Sockeye Salmon Fishery in the Fraser River System, as amended, signed May 26, 1930, shall be terminated. However, the International Pacific Salmon Fisheries Commission shall continue to function insofar as is necessary to implement Annex IV Chapter 4, paragraph (1)(c). Following the termination of the Convention, the transfer of responsibilities from the International Pacific Salmon Fisheries Commission to the Commission, the Fraser River Panel and the Government of Canada shall be as agreed by the Parties.

PANELS

The following panels shall be established pursuant to Article II, paragraph 18:

(a) a Southern Panel for salmon originating in rivers with mouths situate south of Cape Caution, except as specified in sub-paragraph (b);

(b) a Fraser River Panel for Fraser River sockeye and pink salmon harvested in the area specified in Annex II; and

(c) a Northern Panel for salmon originating in rivers with mouths situate between Cape Caution and Cape Suckling.

Annex II

FRASER PANEL AREA

The area comprises the waters described in Article I of the Convention between Canada and the United States of America for Protection, Preservation and Extension of the Sockeye Salmon Fishery in the Fraser River System, as amended, signed May 26, 1930, as follows:

1. The territorial waters and the high seas westward from the western coast of Canada and the United States of America and from a direct line drawn from Bonilla Point, Vancouver Island, to the lighthouse on Tatoosh Island, Washington—which line marks the entrance to Juan de Fuca Strait—and embraced between 48 and 49 degrees north latitude, excepting therefrom, however, all the waters of Barkley Sound, eastward of a straight line drawn from Amphitrite Point to Cape Beale and all the waters of Nitinat Lake and the entrance thereto.
2. The waters included within the following boundaries:

Beginning at Bonilla Point, Vancouver Island, thence along the aforesaid direct line drawn from Bonilla Point to Tatoosh Lighthouse, Washington, described in paragraph numbered 1 of this Article thence to the nearest point of Cape Flattery, thence following the southerly shore of Juan de Fuca Strait to Point Wilson, on Quimper Peninsula, thence in a straight line to Point Partridge on Whidbey Island thence following the western shore of the said Whidbey Island, to the entrance to Deception Pass, thence across said entrance to the southern side of Reservation Bay, on Fidalgo Island, thence following the western and northern shore line of the said Fidalgo Island to Swinomish Slough, crossing the said Swinomish Slough, in line with the track of the Great Northern Railway, thence northerly following the shore line of the mainland to Atkinson Point at the northerly entrance to Burrard Inlet, British Columbia, thence in a straight line to the southern end of Bowen Island, thence westerly following the southern shore of Bowen Island to Cape Roger Curtis, thence in a straight line to Gower Point, thence westerly following the shore line to Welcome Point on Sechelt Peninsula, thence in a straight line to Point Young on Lasqueti Island, thence in a straight line to Dorcas Point on Vancouver Island, thence following the eastern and southern shores of the said Vancouver Island, to the starting point at Bonilla Point, as

shown on the British Admiralty Chart Number 579, and on the United States Coast and Geodetic Survey Chart Number 6300, as corrected to March 14, 1930, copies of which are annexed to the 1930 Convention and made a part thereof.

3. The Fraser River and the streams and lakes tributary thereto.

ANNEX III

TECHNICAL DISPUTE SETTLEMENT BOARD

1. Each Technical Dispute Settlement Board shall be composed of three members. Within 10 days of receiving a request under Article XII to refer a matter to a Board, the Chairman of the Commission shall notify the Parties. Within 20 days of this notification, each Party shall designate one member and the Parties shall jointly designate a third member, who shall be Chairman of the Board.

2. The Board shall determine its rules of procedure, but the Commission or the Parties may specify the date by which the Board shall report its findings. The Board shall provide an opportunity for each Party to present evidence and arguments, both in writing and, if requested by either Party, in oral hearing. The Board shall report its findings to the Commission, along with a statement of its reasons.

3. Decisions of a Board, including procedural rulings and findings of fact, shall be made by majority vote and shall be final and without appeal except as provided in Article XII, paragraph 3.

4. Remuneration of the members and their expense allowances shall be determined on such basis as the Parties may agree at the time the Board is constituted. The Commission shall provide facilities for the proceedings.

ANNEX IV

Chapter 1

TRANSBOUNDARY RIVERS

1. Recognizing the desirability of accurately determining exploitation rates and spawning escapement requirements of salmon originating in the Transboundary Rivers, the Parties shall establish a Joint Transboundary Technical Committee (Committee) reporting, unless otherwise agreed, to the Northern Panel and to the Commission. The Committee, *inter alia,* shall

(a) assemble and refine available information on migratory patterns, extent of exploitation and spawning escapement requirements of the stocks;

(b) examine past and current management regimes and recommend how they may be better suited to achieving preliminary escapement goals;

(c) identify enhancement opportunities that:

(i) assist the devising of harvest management strategies to increase benefits to fishermen with a view to permitting additional salmon to return to Canadian waters;

(ii) have an impact on natural Transboundary River salmon production.

2. The Parties shall improve procedures of coordinated or cooperative management of the fisheries on Transboundary River stocks.

3. Recognizing the objectives of each Party to have viable fisheries, the Parties agree that the following arrangements shall apply to the United States and Canadian fisheries harvesting salmon stocks originating in the Canadian portion of

(a) the Stikine River:

(i) in 1985 and in 1986 Canada shall annually harvest 35% of the total allowable catch of sockeye originating in the Canadian portions of the Stikine River or 10,000 such sockeye, whichever is greater;

(ii) in 1985 and in 1986 Canada shall annually harvest 2,000 Stikine River coho;

(iii) in the years 1985 through 1995, the Parties shall take appropriate management action to ensure that the escapement goal of 19,800 to 25,000 chinook salmon in the Canadian portion of the Stikine River is achieved by 1995;

(iv) in 1985, since the run of sockeye is anticipated to be below average, in-season run-size determination and subsequent management actions will be necessary to ensure that harvest objectives and escapements are met;

(v) in 1985 and in 1986, Canadian commercial catches of chinook, pink and chum salmon in the Canadian portions of the Stikine River may be taken as an incidental harvest in the directed fishery for sockeye and coho;

(b) the Taku River:

(i) in 1985 and in 1986 Canada shall annually harvest 15% of the total allowable catch of sockeye originating in the Canadian portion of the Taku River;

(ii) in 1985 and in 1986 Canadian harvests of chinook, pink, chum, and coho salmon may be taken as an incidental harvest in the directed fishery for sockeye;

(iii) in the years 1985 through 1995, the Parties shall take appropriate management action to ensure that the escapement goal of 25,600 to 30,000 chinook salmon in the Canadian portion of the Taku River is achieved by 1995.

4. The Parties agree that if the catch allocations set out in paragraph 3 are not attained due to management actions by either Party in any one year, compensatory adjustments shall be made in subsequent years. If a shortfall in the actual catch of a Party is caused by management actions of that Party, no compensation shall be made.

5. The Parties agree that the following arrangements shall apply to United States and Canadian fisheries harvesting salmon stocks originating in Canadian portions of the Alsek River:

(a) recognizing that chinook and early-run sockeye stocks originating in the Alsek River are depressed and require special protection, and in the interest of conserving and rebuilding these stocks, the necessary management actions shall continue until escapement targets are achieved;

In the event that in 1985 and in 1986 the run of sockeye is below average, additional restrictions will be required to [illegible] escapement goals.

6. The Parties agree to consider cooperative enhancement possibilities and to undertake studies as soon as possible on the feasibility of new enhancement projects on the Transboundary Rivers and adjacent areas for the purpose of increasing productivity of stocks and providing greater harvests to the fishermen of both countries.

7. Recognizing that stocks of salmon originating in Canadian sections of the Columbia River constitute a small portion of the total populations of Columbia River salmon, and that the arrangements for consultation and recommendation of escapement targets and approval of enhancement activities set out in Article VII are not appropriate to the Columbia River system as a whole, the Parties consider it important to ensure effective conservation of up-river stocks which extend into Canada and to explore the development of mutually beneficial enhancement activities. Therefore, notwithstanding Article VII, paragraphs 2, 3, and 4, during 1985, the Parties shall consult with a view to developing, for the transboundary sections of the Columbia River, a more practicable arrangement for consultation and setting escapement targets than those specified in Article VII, paragraphs 2 and 3. Such arrangements will seek to, *inter alia*,

(a) ensure effective conservation of the stocks;

(b) facilitate future enhancement of the stocks on an agreed basis;

(c) avoid interference with United States management programs on the salmon stocks existing in the non-transboundary tributaries and the main stem of the Columbia River.

Chapter 2

NORTHERN BRITISH COLUMBIA

SOUTHEASTERN ALASKA

1. Considering that the chum salmon stocks originating in streams in the Portland Canal require rebuilding, the Parties agree in 1985 to jointly reduce interception of these stocks to the extent practicable and to undertake assessments to identify possible measures to restore and enhance these stocks. On the basis of such assessments, the Parties shall instruct the Commission to identify long-term plans to rebuild stocks.

2. With respect to sockeye salmon, the United States shall

(a) during the period 1985 through 1988, limit its purse seine fishery in District 4 in a manner that will result in a maximum four-year total catch of 480,000 sockeye salmon prior to United States statistical week 31;

(b) limit its drift gillnet fishery in Districts 1A and 1B in a manner that will result in an average annual harvest of 130,000 sockeye salmon.

3. With respect to pink salmon, Canada shall

(a) limit its net fishery in Areas 3-1, 3-2, 3-3, 3-4, and 5-11 in a manner that will result in an average annual harvest of 900,000 pink salmon;

(b) in 1985 and 1986, limit its troll fishery in Area 1 in a manner that will result in a maximum two year total catch of 1 million troll pink salmon;

(c) in 1985 and 1986, if 300,000 troll pink salmon are caught in Area 1 in either year, then close to pink salmon trolling sub-areas 101-3 north of 54° 35′ north, 101-4, 101-8, and 103 north of 54° 35′ north.

4. In 1985 and thereafter, in order to ensure that catch limits specified in paragraphs 2 and 3 are not exceeded, the Parties shall implement appropriate management measures which take into account the expected run-sizes and permit each country to harvest its own stocks.

5. In setting pink salmon fisheries regimes for 1987 and thereafter, the Parties agree to take into account information from the 1984 and 1985 northern pink tagging program.

6. The Parties shall at the earliest possible date exchange management plans for the fisheries described herein.

7. In order to accomplish the objectives of this Chapter, neither Party shall initiate new intercepting fisheries, nor conduct or redirect fisheries in a manner that intentionally increases interceptions.

8. The Parties shall establish a Joint Northern Boundary Technical Committee (Committee) reporting, unless otherwise agreed, to the Northern Panel and the Commission. The Committee, *inter alia*, shall

(a) evaluate the effectiveness of management actions;

(b) identify and review the status of stocks;

(c) present the most current information on harvest rates and pattern on these stocks, and develop a joint data base for assessments;

(d) collate available information on the productivity of stocks in order to identify escapements which produce maximum sustainable harvests and allowable harvest rates;

(e) present historical catch data, associated fishing regimes, and information on stock composition in fisheries harvesting these stocks;

(f) devise analytical methods for the development of alternative regulatory and production strategies;

(g) identify information and research needs, including future monitoring programs for stock assessments;

(h) for each season, make stock and fishery assessments and recommend to the Northern Panel conservation measures consistent with the principles of the Treaty.

Chapter 3

CHINOOK SALMON

1. Considering that escapements of many naturally spawning chinook stocks originating from the Columbia River northward to southeastern Alaska have declined in recent years and are now substantially below goals set to achieve maximum sustainable yields, and recognizing the desirability of stabilizing trends in escapements and rebuilding stocks of naturally spawning chinook salmon, the Parties shall

(a) instruct their respective management agencies to establish a chinook salmon management program designed to meet the following objectives:

(i) halt the decline in spawning escapements in depressed chinook salmon stocks;

(ii) attain by 1998 escapement goals established in order to restore production of naturally spawning chinook stocks, as represented by indicator stocks identified by the Parties, based on a rebuilding program begun in 1984.

(b) jointly initiate and develop a coordinated chinook management program.

(c) establish a Joint Chinook Technical Committee (Committee) reporting, unless otherwise agreed, to the Northern and Southern Panels and to the Commission, which, *inter alia*, shall

(i) evaluate management actions for their consistency with measures set out in this Chapter and for their potential effectiveness in attaining these specified objectives;

(ii) evaluate annually the status of chinook stocks in relation to objectives set out in this Chapter and, consistent with paragraph (d)(iv) beginning in 1986, make recommendations for adjustments to the management measures set out in this Chapter;

(iii) develop procedures to evaluate progress in the rebuilding of naturally spawning chinook stocks;

(iv) recommend strategies for the effective utilization of enhanced stocks;

(v) recommend research required to implement this rebuilding program effectively;

(vi) exchange information necessary to analyze the effectiveness of alternative fishery regulatory measures to satisfy conservation objectives.

(d) ensure that

(i) in 1985 and 1986, the annual all-gear catch in northern and central British Columbia and southeast Alaska shall not exceed 526,000 chinook salmon to be divided equally between the Parties;

(ii) in 1985 and 1986, the annual troll catch off the west coast of Vancouver Island shall not exceed 360,000 chinook;

(iii) in 1985 and 1986, the total annual catch by the sport and troll fisheries in the Strait of Georgia shall not exceed 275,000 chinook;

(iv) if recommended by the Committee, in 1986 and subsequent years adjustments to the ceilings may be made in response to reductions in chincok abundance so that the indicator stocks are rebuilt by 1998; provided that reductions in ceilings for 1986 will not be made unless the Committee recommends a reduction greater than 15 percent, based on reductions in stock abundance for that year;

(v) fishing regimes are reviewed by the Committee and structured so as not to affect unduly or to concentrate disproportionately on stocks in need of conservation;

(vi) if catch ceilings are exceeded in any year, the differences shall be addressed by the responsible Party in a manner that will ensure rebuilding of the affected stocks by 1998.

(e) evaluate all sources of induced fishing mortality, estimate unreported catches of chinook salmon, assess the impact and minimize the effects of these factors in 1985 and 1986. The Commission shall take into account such estimates of total chinook mortality in implementing the chinook rebuilding program.

(f) manage all salmon fisheries in Alaska, British Columbia, Washington and Oregon, so that the bulk of depressed stocks preserved by the conservation program set out herein principally accrue to the spawning escapement.

(g) establish at the conclusion of the chinook rebuilding program fishery regimes to maintain the stocks at optimum productivity and provide fair internal allocation determinations. It is recognized that the Parties are to share the benefits of coastwide rebuilding and enhancement, consistent with such internal allocation determinations and this Treaty.

(h) exchange annual management plans prior to each season.

2. The Parties agree that enhancement efforts designed to increase production of chinook salmon would benefit the rebuilding program. They agree to consider utilizing and redirecting enhancement programs to assist, if needed, in the chinook rebuilding program. They agree that each region's catches will be allowed to increase above established ceilings based on demonstrations to the Commission and assessments by it of the specific contributions of each region's new enhancement activities, provided that the rebuilding schedule is not extended beyond 1998.

Chapter 4

FRASER RIVER SOCKEYE AND PINK SALMON

1. In order to increase the effectiveness of the management of fisheries in the Fraser River Area (hereinafter the Area) and in fisheries outside the Area which harvest Fraser River sockeye and pink salmon, the Parties agree

(a) that the preliminary expectations of the total allowable catches of Fraser River sockeye and pink are:

[In millions]

	Sockeye	Pink
1985	6.6	11.0
1986	12.5	
1987	3.1	12.0
1988	3.6	
1989	7.1	14.0
1990	13.0	
1991	3.1	14.0
1992	3.6	

(b) that (i) based on these preliminary expectations, the United States shall harvest as follows:

[In millions]

	Sockeye	Pink
1985	1.78	3.6
1986	3.0	.....
1987	1.06	3.6
1988	1.16	.....

(ii) the United States catches referred to in paragraph 1(b)(i) herein shall be adjusted in proportion to any adjustments in the total allowable catches set out in paragraph 1(a) herein that are due to any agreed adjustments in pre-season or in-season expectations of run-size. When considering such adjustment, the Parties shall take into account all fisheries that harvest Fraser River sockeye and pink salmon including annual Fraser River Indian food fish harvests in excess of 400,000 sockeye. The United States catches shall not be adjusted due to any adjustments in the total allowable catch that may be caused by changes in escapement goals that form the basis for the agreed total allowable catches set out in paragraph 1(a) herein;

(iii) notwithstanding the agreed United States and Canadian catch levels for Fraser River sockeye and for coho off the west coast of Vancouver Island, as provided in paragraph 1(b)(i) herein and in Chapter 5, respectively, and subject to paragraph 1(b)(ii), in 1985 the United States catch of Fraser River sockeye shall be 1.73 million and the Canadian catch of coho off the west coast of Vancouver Island shall not exceed 1.75 million; and in 1986, the United States catch of Fraser River sockeye shall be 2.95 million and the Canadian catch of coho off the west coast of Vancouver Island shall not exceed 1.75 million;

(c) in 1985, to instruct the International Pacific Salmon Fisheries Commission to develop regulatory programs in the Area to give effect to the provisions of paragraph 1(b);

(d) to instruct the Fraser River Panel for 1986 through 1992 to develop regulations to give effect to the provisions of paragraphs 1(b) and 1(f);

(e) to instruct the Fraser River Panel that if management measures fail to achieve such sockeye and pink catches, any difference shall be compensated by adjustments to the Fraser fishery in subsequent years;

(f) in the period 1989 to 1992, the Fraser River Panel shall determine the annual United States catch level so that the total United States catch in this period shall not exceed 7 million sockeye, in the aggregate. In the years 1989 and 1991, the United States harvest shall not exceed 7.2 million pink salmon, in the aggregate. Nothwithstanding the foregoing, these levels shall be reduced in proportion to any decreases in the total allowable catches set out in paragraph 1(a) herein that are due to any agreed decreases in pre-season or in-season expectations of run size. When considering such reductions, the Parties shall take into account all fisheries that harvest Fraser River sockeye and pink salmon including annual Fraser River Indian

food fish harvests in excess of 400,000 sockeye. The United States catches shall not be reduced due to any decreases in the total allowable catch that may be caused by changes in escapement goals that form the basis for the agreed total allowable catches set out in paragraph 1(a) herein;

(g) to consider no sooner than 1989 adjusting the regime in accordance with the principles of Article III;

(h) to instruct the Fraser River Panel that in managing Fraser River sockeye and pink salmon, it shall take into account the management requirements of other stocks in the Area;

2. Notwithstanding the provisions of Paragraphs 1(b) and 1(f), and to ensure that Canada receives the benefits of any Canadian-funded enhancement activities undertaken following entry into force of this Treaty, any changes in the total allowable catch due to such activities shall not result in adjustment of the United States catch.

3. The Parties shall establish data-sharing principles and processes which ensure that the Parties, the International Pacific Salmon Fisheries Commission, the Commission and the Fraser River Panel are able to manage their fisheries in a timely manner consistent with this Chapter.

4. The Parties may agree to adjust the definition of the Area as necessary to simplify domestic fishery management and ensure adequate consideration of the effect on other stocks and species harvested in the Area.

5. In managing the fisheries in the Area, the Parties, the Commission, and the Fraser River Panel shall take into account fisheries inside and outside the Area that harvest Fraser River sockeye and pink salmon. The Parties, the Commission, and the Fraser River Panel shall consider the need to exercise flexibility in management of fisheries outside the Area which harvest Fraser River sockeye and pink salmon.

Chapter 5

COHO SALMON

1. Recognizing that for the past several years some coho stocks have been below levels necessary to sustain maximum harvest and that recent fishing patterns have contributed to a decline in United States catch of coho stocks of United States origin, and in order to prevent further decline in spawning escapements, adjust fishing patterns, and initiate, develop or improve management programs for coho stocks, the Parties shall

(a) establish a Joint Coho Technical Committee (Committee), reporting unless otherwise agreed to the Panels and the Commission. The membership of the Committee shall include representation from the Northern and Southern Panel Areas. The Committee, *inter alia*, shall

(i) evaluate the effectiveness of management actions;

(ii) identify and review the status of stocks;

(iii) present the most current information on harvest rates and patterns on these stocks, and develop a joint data base for assessments;

(iv) collate available information on the productivity of coho stocks in order to identify escapements which produce maximum sustainable harvests and allowable harvest rates;

(v) present historical catch data, associated fishing regimes, and information on stock composition in fisheries harvesting these stocks;

(vi) devise analytical methods for the development of alternative regulatory and production strategies;

(vii) identify information and research needs, including future monitoring programs for stock assessments;

(viii) for each season, make stock and fishery assessments and recommend to the Commission conservation measures consistent with the principles of the Treaty;

(b) unless otherwise agreed, in any area where fisheries of one Party may intercept coho stocks originating in the rivers of the other, endeavour to limit incidental coho catches by fisheries targeting on other species.

2. For coho stocks shared by Washington and southern British Columbia fisheries, each Party shall establish regimes for its ocean troll, ocean sport, and inside troll, net and sport fisheries consistent with management objectives approved by the Commission.

3. In 1985, the Parties shall adhere to presently agreed management objectives for Canadian Area 20, U.S. Areas 7 and 7A, and Juan de Fuca Strait.

4. The Parties agree

(a) that in 1985 and 1986 the total annual troll catch of coho in Canadian Management Areas 21, 23, 24, 25, 26, 27, 121, 123, 124, 125, 126, 127, and 130-1 shall not exceed 1.75 million;

(b) to avoid any alterations in coho fisheries along the west coast of Vancouver Island that would increase the proportional interception of U.S. coho stocks;

(c) to develop, in 1986 and thereafter fishery regimes for the west coast of Vancouver Island that

(i) implement conservation measures approved by the Commission and take into account any increased contributions by Canada to the fishery, and

(ii) provide for the sharing of benefits of coho production of each Party consistent with the principles of Article III.

5. If management measures result in a significant deviation from catch levels set out in paragraph 4 in any year, differences shall be compensated by adjustments to the fishery in subsequent years, provided that conservation objectives for natural coho stocks and other principles of Article III are not adversely affected.

6. Notwithstanding any other provisions of this Chapter, the Commission, for 1987 and thereafter, shall set specific harvest levels for coho salmon in the intercepting fisheries in areas described in paragraph 4.

Chapter 6

SOUTHERN BRITISH COLUMBIA—WASHINGTON CHUM FISHERIES

Considering that anticipated returns of some natural salmon stocks originating in Johnstone Strait, the Strait of Georgia, the Fraser River, Puget Sound, Juan de Fuca Strait and Nitinat Lake are expected to be weak and therefore not likely to provide a harvestable surplus in 1985, although some enhanced stocks originating in these areas may provide harvestable surpluses and anticipating locally directed fisheries on such enhanced stocks, the Parties shall

1. no later than March 31, 1985, establish a Joint Chum Technical Committee (Committee) reporting, unless otherwise agreed, to the Southern Panel and the Commission, to, *inter alia*,

(a) identify and review the status of stocks of primary concern;

(b) present the most current information on harvest rates and patterns on these stocks, and develop a joint data base for assessments;

(c) collate available information on the productivity of Chum stocks in order to identify escapements which produce maximum sustainable harvests and allowable harvest rates;

(d) present historical catch data, associated fishing regimes, and information on stock composition in fisheries harvesting those stocks;

(e) develop analytical methods to permit the exploration of alternative regulatory and production strategies;

(f) identify information and research needs, to include future monitoring programs for stock assessments;

(g) develop fishery regimes for the 1985 season and thereafter.

2. no later than August 15, 1985, instruct the Committee to present a report to the Parties on the activities set out in paragraph 1 herein.

Chapter 7

GENERAL OBLIGATION

With respect to intercepting fisheries not dealt with elsewhere in this Annex, unless otherwise agreed, neither Party shall initiate new intercepting fisheries, nor conduct or redirect fisheries in a manner that intentionally increases interceptions.

IN WITNESS WHEREOF, the undersigned representatives, duly authorized by their respective Governments, have signed this Agreement.

DONE in duplicate at Ottawa, in the English and French languages, both versions being equally authentic, this 28th day of January 1985.

FOR THE GOVERNMENT OF THE
UNITED STATES OF AMERICA

POUR LE GOUVERNEMENT DES
ETATS-UNIS D'AMERIQUE

FOR THE GOVERNMENT OF CANADA

POUR LE GOUVERNEMENT DU CANADA

MEMORANDUM OF UNDERSTANDING

The Governments of the United States of America and Canada have agreed to record the following in connection with the Treaty Concerning Pacific Salmon, in order to set out the intention of the Parties with respect to implementation of Article III, paragraph 1(b) of the said Treaty, Data Sharing and the Yukon River Transboundary Rivers and the Northern Boundary—Southeastern Alaska fisheries:

A. Implementation of Article III, paragraph 1(b)

The principal goals of the Treaty are to enable both countries, through better conservation and enhancement, to increase production of salmon and to ensure that the benefits resulting from each country's efforts accrue to that country. In this regard, research on the migratory movements of stocks subject to interception must be continued for several years. Such research is required not only to determine with more precision the extent of interceptions by both sides, but also to provide an improved basis for conservation and enhancement. The resultant long-term increases in production of salmon should fully justify the short-term expenditures on research.

With respect to the obligation to provide each Party with benefits equivalent to the production of salmon originating in its rivers (contained in Article III, paragraph 1(b) of the Treaty), it is recognized that data on the extent of interceptions in some areas are imprecise and that it is therefore not possible to determine with certainty the total production of salmon from each country's rivers. It is also recognized that methods of evaluating benefits accruing within each country may differ. For these reasons, it is anticipated that it will be some time before the Commission can develop programs to implement the provisions of Article III, paragraph 1(b) in a complete and comprehensive manner. Nevertheless, in the short term, the Commission shall ensure that the annual fishery regimes and understandings regarding enhancement are developed in an equitable manner taking into account the principle outlined in Article III 1(b). In particular, the Commission's decisions should take into account changes in the benefits flowing to each of the Parties through alteration in fishing patterns, conservation actions, or as the result of changes in the abundance of the runs.

In the longer term, if it is determined that one country or the other is deriving substantially greater benefits than those provided from its rivers, it would be expected that the Parties would develop a phased program to eliminate the inequity within a specified time period, taking into account the provisions of Article III, paragraph 3. Since correction of imbalances is a national responsibility and may involve differential fishery adjustments or enhancement projects on a regional basis within either country, the Party with the advantage shall submit appropriate proposals to the Commission for consideration. Such proposals shall be discussed within the Commission and be reflected in the agreed fishery regimes and coordinated enhancement planning in ensuing years.

B. Data Sharing

Considering that development of comprehensive evaluations of management is required in order to assess the impact of such regimes on interception fisheries and on the stocks which contribute to those fisheries, for the effective implementation of the Treaty, the Parties consider it necessary to develop a coast-wide stock assessment and management data system, including catch, effort, escapement, and coded-wire tag data that will yield reliable management information in a timely manner and to develop analytical models along with standardized methods for monitoring fishing effort. The Parties agree to maintain a coded-wire tagging and recapture program designed to provide statistically reliable data for stock assessments and fishery evaluations. The Parties agree to establish a working group prior to April 1, 1985 to review the program and to make recommendations to the Commission before April 1, 1987.

Therefore, the Parties agree to

(a) develop the capability to use current season coded-wire tag data, fishing data, spawning escapement data, and age composition data for the pre-season management process for the next season;

(b) continue in 1985 and 1986 the research program begun in 1982 in northern British Columbia and Southeast Alaska, designed to develop agreed estimates of rates of interception of salmon in the area;

(c) continue efforts to develop analytical models that forecast abundance and analyze recovery and escapement data to refine stock productivity estimates and monitor and forecast management needs;

(d) improve evaluation of escapements through improved monitoring (key index area streams, standardization of methods, etc.) and coded-wire tag recovery in escapements;

(e) develop and maintain coded-wire tagging programs for key stocks or index groups to measure exploitation rates and better define time-area distribution for development of management options;

(f) obtain coastwide estimates for non-reported incidental catches of juvenile salmon;

(g) evaluate and develop alternative techniques such as electrophoresis, scale analysis, etc., for stock identification in order to identify stocks not represented by coded-wire tag groups;

(h) explore the feasibility of in-season management;

(i) review annually methodologies and procedures for the purpose of determining performance of applied measures and maintaining "state-of-the-art" fishery management techniques.

C. Yukon River

Considering that salmon stocks originating from the Canadian section of the Yukon River and the Canadian section of the Porcupine River are harvested by fishermen of both Canada and the United States and that effective conservation and management of these resources is of mutual interest, the Parties, in order to facilitate implementation of Article VIII, shall

1. During March 1985, meet in order, *inter alia*, to

(a) determine current stock status;

(b) develop preliminary escapement goals;

(c) examine enhancement opportunities;

(d) examine conservation concerns, including habitat degradation, and recommend management strategies and goals;

(e) develop and recommend cooperative research proposals for 1985 and thereafter; and

(f) notwithstanding the Transboundary River Annex and other provisions of this Memorandum, establish the range within which the percentage of the U.S. harvest of each species of salmon originating in Canadian sections of the rivers that shall be deemed to be of U.S. origin shall be set, as required by Article VIII, paragraph (4).

2. During March 1985, establish a technical committee to compile available data and itemize research requirements for effective future management and conservation.

3. Notwithstanding the Transboundary River Annex and other provisions of this Memorandum, during October 1985, initiate negotiations as required by Article VIII, paragraph (3), to determine, *inter alia*, the percentage of the U.S. harvest of each species of salmon originating in Canadian sections of the rivers that shall be deemed to be of U.S. origin.

D. Transboundary Rivers

Whereas salmon originating in Canadian sections of Transboundary Rivers are subject to harvesting by U.S. fishermen in the U.S. waters;

And whereas the Parties have encountered difficulties in determining the percentage of the total allowable catch of salmon that shall be deemed to be of United States origin for the purpose of implementing Article III, paragraph 1(b) of the Treaty,

The Parties therefore agree that the Commission shall determine this percentage during the first year following the entry into force of the Treaty.

E. Northern Boundary—Southeastern Alaska

In recognition of the Northern Boundary Technical Committee Report which indicates that the Area 3 net fisheries in Canada harvest both Canadian and U.S. pink stocks along the boundary areas Canada shall provide to the United States a plan that ensures that fisheries in this Area are not increased during the period of mid July through mid August.

DONE in duplicate at Ottawa, in the English and French languages, both versions being equally authentic, this 28th day of January 1985.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA

POUR LE GOUVERNEMENT DES ETATS-UNIS D'AMERIQUE

FOR THE GOVERNMENT OF CANADA

POUR LE GOUVERNEMENT DU CANADA

○

PACIFIC SALMON COMMISSION

ESTABLISHED BY THE GOVERNMENTS OF CANADA AND THE UNITED STATES OF AMERICA

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Reprint of the

1991 REVISION OF

ANNEX IV, PACIFIC SALMON TREATY

including the

1991 AGREED FISHERY REGIMES

Revised Annex IV
to the Pacific Salmon Treaty
in effect for 1991

Annex IV

Chapter 1

TRANSBOUNDARY RIVERS

1. Recognizing the desirability of accurately determining exploitation rates and spawning escapement requirements of salmon originating in the Transboundary Rivers, the Parties shall maintain a Joint Transboundary Technical Committee (Committee) reporting, unless otherwise agreed, to the Northern Panel and to the Commission. The Committee, inter alia, shall

(a) assemble and refine available information on migratory patterns, extent of exploitation and spawning escapement requirements of the stocks;

(b) examine past and current management regimes and recommend how they may be better suited to achieving preliminary escapement goals;

(c) identify enhancement opportunities that:

(i) assist the devising of harvest management strategies to increase benefits to fishermen with a view to permitting additional salmon to return to Canadian waters;

(ii) have an impact on natural Transboundary river salmon production.

Att. 11B

2. The Parties shall improve procedures of coordinated or cooperative management of the fisheries on Transboundary River stocks.

3. Recognizing the objectives of each Party to have viable fisheries, the Parties agree that the following arrangements shall apply to the United States and Canadian fisheries harvesting salmon stocks originating in the Canadian portion of

(a) the Stikine River:

(i) Assessment of the annual run of Stikine River sockeye salmon shall be made as follows:

a. A pre-season forecast of the Stikine River sockeye run will be made by the Transboundary Technical Committee prior to March 1 of each year. This forecast may be modified by the Transboundary Technical Committee prior to the opening of the fishing season.

b. In-season estimates of the Stikine River sockeye run and the Total Allowable Catch (TAC) shall be made under the guidelines of an agreed Stikine Management Plan and using a mathematical forecast model developed by the Transboundary Technical Committee. Both U.S. and Canadian fishing patterns shall be based on current weekly estimates of the TAC. At the beginning of the season and up to an agreed date, the weekly estimates of the TAC shall be determined from the pre-season forecast of the run strength. After that date, the TAC shall be determined from the in-season forecast model.

c. Modifications to the Stikine Management Plan and forecast model may be made prior to June 1 of each year by agreement of both Parties. Failure to reach agreement in modifications shall result in use of the model and parameters used in the previous year.

FR HB

d. Estimates of the TAC may be adjusted in-season only by concurrence of both Parties' respective managers. Reasons for such adjustments must be provided to the Transboundary Technical Committee.

(ii) Harvest sharing of naturally occurring Stikine River sockeye salmon for the period 1988 to 1992, contingent upon activities specified in the February 1988 Understanding between the United States and the Canadian Section of the Pacific Salmon Commission concerning Joint Enhancement of Transboundary River Salmon Stocks (Understanding) shall be as follows:

a. When the estimated TAC of Stikine River sockeye salmon is zero or less:

1. Canada may conduct its native food fishery but the catch shall not exceed 4,000 fish, there will be no commercial fishing;

2. The United States shall not direct commercial fisheries at Stikine River sockeye salmon in District 108;

3. The United States may fish in the commercial gill net fisheries in the Sumner Strait portion of District 106 so long as the in-season estimate of the contribution of Stikine River sockeye salmon is less than 20 percent of the total catch to date of sockeye salmon in Sumner Strait.

b. When the estimated TAC of Stikine River sockeye salmon is between 1 and 20,000 fish:

1. Canada shall conduct its commercial and native food fisheries so that the all gear catch is at least 10,000 fish and may increase its catch to include any surplus available in-river total allowable catch but not to exceed 15,000 fish;

pg 11B

2. The United States shall not direct commercial fisheries at Stikine sockeye salmon in District 108;

3. The United States may fish in the commercial gill net fisheries in the Sumner Strait portion of District 106 so long as the in-season estimate of the contribution of Stikine River sockeye salmon is less than 25 percent of the total catch to date of sockeye salmon in Sumner Strait. If the contribution of Stikine River sockeye salmon is greater than 20 percent but less than 25 percent only one day of fishing per week will be permitted, if greater than 25 percent, no fishing will be permitted in Sumner Strait.

c. When the estimated TAC of Stikine River sockeye salmon is between 20,001 and 60,000 fish:

1. Canada shall conduct its commercial and native food fisheries so that the all gear catch is at least 15,000 fish and may increase its catch to include any surplus total allowable catch but not to exceed 20,000 fish;

2. The United States may direct commercial fisheries at Stikine River sockeye salmon in District 108 if the total TAC of Stikine River sockeye salmon is greater than the actual catch of Stikine River sockeye salmon in District 106 plus 20,000

d. When the estimated TAC of Stikine River sockeye salmon is greater than 60,000 fish:

1. Canada shall conduct its commercial and native food fisheries so that the all gear catch is at least 20,000 fish and may increase its catch to include any surplus total allowable catch but not to exceed 30,000 fish;

BB HB

2. The United States may direct commercial fisheries at Stikine River sockeye salmon in District 108 if the total TAC of Stikine River sockeye salmon is greater than the actual catch of Stikine River sockeye salmon in District 106 plus 30,000.

e. United States incidental catches of Stikine River sockeye salmon in District 108 shall not be counted when computing TAC available for the Canadian fishery. For the purpose of calculation, the Canadian inriver allowable catch of sockeye salmon will be based on a 10 percent harvest rate of Stikine River sockeye salmon in the District 106 drift gill net fishery.

(iii) Canada shall harvest no more than 4,000 coho salmon annually in the Stikine River from 1988 through 1992.

(iv) Canadian harvests of chinook, pink, and chum salmon may be taken as an incidental harvest in the directed fishery for sockeye and coho salmon.

(v) Both Parties shall take the appropriate management action to ensure that the necessary escapement goals for the chinook salmon bound for the Canadian portions of the Stikine River are achieved by 1995.

(vi) If the United States unilaterally withdraws from mutually agreed enhancement goals and activities as specified in the Understanding, then the harvest sharing of naturally occurring Stikine River salmon as stated in sections (ii) through (iv) above shall remain in effect.

(vii) If Canada unilaterally withdraws from mutually agreed enhancement goals and activities as specified in the Understanding, then the harvest sharing of naturally occurring Stikine River sockeye salmon shall be as follows:

a. When the estimated TAC of Stikine River sockeye salmon is zero or less:

PL 11E

1. Canada may conduct its native food fishery but the catch shall not exceed 4,000 fish, there will be no commercial fishing;

2. The United States shall not direct commercial fisheries at Stikine River sockeye salmon in District 108;

3. The United States may fish in the commercial gill net fisheries in the Sumner Strait portion of District 106 so long as the in-season estimate of the contribution of Stikine River sockeye salmon is less than 20 percent of the total catch to date of sockeye salmon in Sumner Strait.

b. When the estimated TAC of Stikine River sockeye salmon is between 1 and 20,000 fish:

1. Canada shall conduct its commercial and native food fisheries so that the all gear catch is at least 4,000 fish and may increase its catch to include any surplus available in-river total allowable catch but not to exceed 7,000 fish;

2. The United States may direct commercial fisheries at Stikine sockeye salmon in District 108 if the total TAC of Stikine River sockeye salmon is greater than the actual catch of Stikine River sockeye salmon in District 106 plus 7,000;

3. The United States may fish in the commercial gill net fisheries in the Sumner Strait portion of District 106 so long as the in-season estimate of the contribution of Stikine River sockeye salmon is less than 25 percent of the total catch to date of sockeye salmon in Sumner Strait.

c. When the estimated TAC of Stikine River sockeye salmon is between 20,001 and 60,000 fish:

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1. Canada shall conduct its commercial and native food fisheries so that the all gear catch is at least 7,000 fish and may increase its catch to include any surplus total allowable catch but not to exceed 15,000 fish;

2. The United States may direct commercial fisheries at Stikine River sockeye salmon in District 108 if the total TAC of Stikine River sockeye salmon is greater than the actual catch of Stikine River sockeye salmon in District 106 plus 15,000.

d. When the estimated TAC of Stikine River sockeye salmon is greater than 60,000 fish:

1. Canada shall conduct its commercial and native food fisheries so that the all gear catch is at least 15,000 fish and may increase its catch to include any surplus total allowable catch but not to exceed 25,000 fish;

2. The United States may direct commercial fisheries at Stikine River sockeye salmon in District 108 if the total TAC of Stikine River sockeye salmon is greater than the actual catch of Stikine River sockeye salmon in District 106 plus 25,000.

e. United States incidental catches of Stikine River sockeye salmon in District 108 shall not be counted when computing TAC available for the Canadian fishery. For the purpose of calculation, the Canadian inriver allowable catch of sockeye salmon will be based on a 10 percent harvest rate of Stikine River sockeye salmon in the District 106 drift gill net fishery.

f. Canada shall harvest no more than 2,000 coho salmon annually.

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g. Canadian harvest of chinook, pink, and chum salmon may be taken as an incidental harvest in the directed fishery for sockeye and coho salmon.

(b) the Taku River;

(i) Harvest sharing of naturally occurring Taku River sockeye salmon for the period 1988 to 1992, contingent upon activities specified in the February 1988 Understanding concerning Joint Enhancement of Transboundary River Salmon Stocks (Understanding), shall be as follows:

a. Canada shall harvest no more than 18 percent of the TAC of the sockeye salmon originating in the Canadian portion of the Taku River each year.

b. Canada shall harvest no more than 3,000 coho salmon each year.

(ii) Canadian harvests of chinook, pink and chum salmon may be taken as an incidental harvest in the directed fishery for sockeye and coho salmon.

(iii) Both Parties shall take the appropriate management action to ensure that the necessary escapement goals for chinook salmon bound for the Canadian portions of the Taku River are achieved by 1995.

(iv) If the United States unilaterally withdraws from mutually agreed enhancement goals and activities as specified in the Understanding, then the harvest sharing of naturally occurring Taku River salmon as stated in sections (i) and (ii) above shall remain in effect.

(v) If Canada unilaterally withdraws from mutually agreed enhancement goals and activities as specified in the Understanding, then Canada's share of naturally occurring Taku River sockeye salmon shall be 15 percent of the TAC. Furthermore, Canada shall commercially harvest coho, chinook, pink, and chum salmon only incidentally during a directed sockeye salmon fishery.

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4. The Parties agree that if the catch allocations set out in paragraph 3 are not attained due to management actions by either Party in any one year, compensatory adjustments shall be made in subsequent years. If a shortfall in the actual catch of a Party is caused by management action of that Party, no compensation shall be made.

5. The Parties agree that the following arrangements shall apply to United States and Canadian fisheries harvesting salmon stocks originating in Canadian portions of the Alsek River: recognizing that chinook and early run sockeye stocks originating in the Alsek River are depressed and require special protection, and in the interest of conserving and rebuilding these stocks, the necessary management actions shall continue until escapement targets are achieved.

6. The Parties agree to consider cooperative enhancement possibilities and to undertake as soon as possible studies on the feasibility of new enhancement projects on the Transboundary Rivers and adjacent areas for the purpose of increasing productivity of stocks and providing greater harvests to the fishermen of both countries.

7. Recognizing that stocks of salmon originating in Canadian sections of the Columbia River constitute a small portion of the total populations of Columbia River salmon, and that the arrangements for consultation and recommendation of escapement targets and approval of enhancement activities set out in Article VII are not appropriate to the Columbia River system as a whole, the Parties consider it important to ensure effective conservation of up-river stocks which extend into Canada and to explore the development of mutually beneficial enhancement activities. Therefore, notwithstanding Article VII, paragraphs 2, 3, and 4, during 1985, the Parties shall consult with a view to developing, for the transboundary sections of the Columbia River, a more practicable arrangement for consultation and setting escapement targets than those specified in Article VII, paragraphs 2 and 3. Such arrangements will seek to, inter alia,

(a) ensure effective conservation of the stocks;

(b) facilitate future enhancement of the stocks on an agreed basis;

(c) avoid interference with United States management programs on the salmon stocks existing in the non-transboundary tributaries and the main stem of the Columbia River.

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Chapter 2

NORTHERN BRITISH COLUMBIA
SOUTHEASTERN ALASKA

1. Considering that the chum salmon stocks originating in streams in the Portland Canal require rebuilding, the Parties agree in 1990 and 1991 to jointly reduce interceptions of these stocks to the extent practicable and to undertake assessments to identify possible measures to restore and enhance these stocks. On the basis of such assessments, the Parties shall instruct the Commission to identify long-term plans to rebuild these stocks.

2. With respect to sockeye salmon, the United States shall

   (a) with respect to District 4 purse seine fishery:

      (i) for the four year period, 1990 through 1993, limit its fishery in a manner that will result in a maximum four-year total catch of 480,000 sockeye salmon prior to United States Statistical Week 31;

      (ii) when the annual catch reaches 160,000 sockeye salmon, no further daily fishing periods in District 4 will be allowed prior to Statistical Week 31;

      (iii) all underages not to exceed 20% of the Annex ceiling will add to, and overages will subtract from, the subsequent four-year period.

   (b) limit its drift gillnet fishery in Districts 1A and 1B in a manner that will result in an average annual harvest of 130,000 sockeye salmon.

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3. With respect to pink salmon, Canada shall

(a) limit its net fishery in Areas 3-1, 3-2, 3-3, 3-4, and 5-11 in a manner that will result in an average annual harvest of 900,000 pink salmon;

(b) with respect to the Area 1 troll fishery:

(i) for the four year period, 1990-1993, limit its Area 1 pink salmon troll catch to a total of 5.125 million;

(ii) during the period 1990 through 1993, close the pink salmon troll fishery in the most northerly portion of Area 1 in management units 101-4, 101-8, 101-3 north of 54 degrees 37 minutes N. and 103 north of 54 degrees 37 minutes N to pink salmon trolling when the pink salmon fishery has lasted 22 days starting with the beginning of the troll season in Area 1, but no earlier than July 22, except that the most northerly portion of the area shall close to pink salmon trolling whenever the catch in that area reaches 300,000 pinks.

(iii) limit the maximum harvest in the entire Area 1 in any one year to 1.95 million pink salmon; and,

(iv) all underages, not to exceed 20% of the Annex ceiling, will add to, and overages will subtract from, the subsequent four-year period.

4. In 1987 and thereafter, in order to ensure that catch limits specified in paragraphs 2 and 3 are not exceeded, the Parties shall implement appropriate management measures which take into account the expected run sizes and permit each country to harvest its own stocks.

5. In setting pink salmon fisheries regimes for 1987 and thereafter, the Parties agree to take into account information from the northern pink tagging program.

6. The Parties shall at the earliest possible date exchange management plans for the fisheries described herein.

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7. In order to accomplish the objectives of this Chapter, neither Party shall initiate new intercepting fisheries, nor conduct or redirect fisheries in a manner that intentionally increases interceptions.

8. The Parties shall maintain a Joint Northern Boundary Technical Committee (Committee) reporting, unless otherwise agreed, to the Northern Panel and the Commission. The Committee, inter alia, shall

(a) evaluate the effectiveness of management actions;

(b) identify and review the status of stocks;

(c) present the most current information on harvest rates and pattern on these stocks, and develop a joint data base for assessments;

(d) collate available information on the productivity of stocks in order to identify escapements which produce maximum sustainable harvests and allowable harvest rates;

(e) present historical catch data, associated fishing regimes, and information on stock composition in fisheries harvesting these stocks;

(f) devise analytical methods for the development of alternative regulatory and production strategies;

(g) identify information and research needs, including future monitoring programs for stock assessments; and,

(h) for each season, make stock and fishery assessments and recommend to the Northern Panel conservation measures consistent with the principles of the Treaty.

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Chapter 3

CHINOOK SALMON

1. Considering the escapements of many naturally spawning chinook stocks originating from the Columbia River northward to southeastern Alaska have declined in recent years and are now substantially below goals set to achieve maximum sustainable yields, and recognizing the desirability of stabilizing trends in escapements and rebuilding stocks of naturally spawning chinook salmon, the Parties shall

(a) instruct their respective management agencies to establish a chinook salmon management program designed to meet the following objectives:

(i) halt the decline in spawning escapements in depressed chinook salmon stocks; and,

(ii) attain by 1998, escapement goals established in order to restore production of naturally spawning chinook stocks, as represented by indicator stocks identified by the Parties, based on a rebuilding program begun in 1984;

(b) continue the chinook working group to clarify policy issues relating to the execution of this Chapter; for example, the definition of pass-through, and the development of common procedures for adjusting catch ceilings in response to changes in abundance, positive incentives and enhancement add-ons; the chinook working group will develop options for consideration by the Commission and Panels as appropriate;

(c) jointly initiate and develop a coordinated chinook management program;

(d) maintain a Joint Chinook Technical Committee (Committee) reporting, unless otherwise agreed, to the Northern and Southern Panels and to the Commission, which inter alia, shall

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(i) evaluate management actions for their consistency with measures set out in this Chapter and for their potential effectiveness in attaining these specified objectives;

(ii) evaluate annually the status of chinook stocks in relation to objectives set out in this Chapter and, consistent with paragraph (d) (v) beginning in 1986, make recommendations for adjustments to the management measures set out in this Chapter;

(iii) develop procedures to evaluate progress in the rebuilding of naturally spawning chinook stocks;

(iv) recommend strategies for the effective utilization of enhanced stocks;

(v) recommend research required to implement this rebuilding program effectively; and,

(vi) exchange information necessary to analyze the effectiveness of alternative fishery regulatory measures to satisfy conservation objectives;

(e) ensure that

(i) in 1991, the all-gear catch in Southeast Alaska shall not exceed the base ceiling of 263,000 chinook salmon plus 10,000; in 1992, the all-gear catch in Southeast Alaska shall not exceed 263,000 chinook salmon; these catches exclude the Alaska hatchery add-on as described in the letter of transmittal; in 1991 and 1992 Alaska shall open its general summer troll fishery on July 1; the June fishery shall not exceed 40,000 chinook salmon (excluding the Alaska hatchery add-on) taken in a manner similar to 1989 and 1990; and areas of high chinook abundance shall be closed during chinook non-retention periods to reduce incidental mortalities;

(ii) in 1991, the all-gear catch in Northern and Central B.C. shall not exceed the base ceiling of 263,000 chinook salmon plus 10,000; in 1992, the all-gear catch in Northern and Central B.C. shall not exceed 263,000 chinook salmon; these catches

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exclude a portion of the catch in extreme terminal areas as described in the letter of transmittal;

(iii) in 1991 and 1992, the annual troll catch off the west coast of Vancouver Island shall not exceed 360,000 chinook salmon;

(iv) in 1991 and 1992, the total annual catch by the sport and troll fisheries in the Strait of Georgia shall not exceed 275,000 chinook salmon; Canada will undertake management measures to achieve the target of rebuilding Lower Georgia Strait and Fraser River chinook stocks by 1998;

(v) adjustments to the ceilings may be made in response to reductions in chinook abundance so that the indicator stocks are rebuilt by 1998;

(vi) fishing regimes are reviewed by the Committee and structured so as not to affect unduly or to concentrate disproportionately on stocks in need of conservation;

(vii) starting with the 1987 season, a 7.5 percent management range is established above and below a catch ceiling. On a continuing basis, the cumulative deviation (in numbers of fish) shall not exceed the management range. In the event that the cumulative deviation exceeds the range, the responsible Party shall be required in the succeeding year, to take appropriate management actions to return the cumulative deviation, plus any penalty assessed, to a level within the established management range. Negative cumulative deviations shall not accumulate below the management range. It is the intent of this section to insure that, on average, the annual catch in ceilinged fisheries is equal to the agreed target ceiling; and,

(viii) in 1987 and thereafter, the United States will continue to monitor fisheries in Juan de Fuca Strait (Areas 4B, 5, 6A, 6C) and the outer portions of Puget Sound (6B, 7, 7A, 9) so as to assess the levels and trends in the interceptions of Canadian chinook salmon;

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(f) maintain the following program, recognizing that associated fishing mortalities can affect the rebuilding schedule. The Parties shall

(i) minimize the effects of such mortalities;

(ii) monitor, assess, and report associated fishing mortalities;

(iii) provide the information required by the Chinook Technical Committee to estimate the magnitude and assess the impacts of associated mortalities on an on-going basis;

(iv) beginning in 1989, the Chinook Technical Committee shall

a. review reports provided by the Parties on an annual basis, unless directed by the Commission, and estimate the magnitude of all quantifiable sources of associated fishing mortalities;

b. evaluate their impact on the rebuilding schedule and recommend management actions that will achieve the objectives of the chinook rebuilding program, taking into account the effects of all fishing mortalities; and

c. develop technical procedures and standardize methodologies to quantify the magnitude of associated fishing mortalities, including savings of fish, and assess their impacts upon the rebuilding program, including pass-through commitments;

(v) the Commission shall annually take into account, starting in 1988, the impacts of fishing mortalities, as determined by the Chinook Technical Committee, in establishing regional fishing regimes and may adjust allowable catches accordingly, to assure rebuilding by 1998;

(g) manage all salmon fisheries in Alaska, British Columbia, Washington and Oregon, so that the bulk of depressed stocks preserved by the conservation program set out herein principally accrue to the spawning escapement;

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(h) establish, at the conclusion of the chinook rebuilding program, fishery regimes to maintain the stocks at optimum productivity and provide fair internal allocation determinations. It is recognized that the Parties are to share the benefits of coastwide rebuilding and enhancement, consistent with such internal allocation determinations and this Treaty; and,

(i) exchange annual management plans prior to each season.

2. The Parties agree that enhancement efforts designed to increase production of chinook salmon would benefit the rebuilding program. They agree to consider utilizing and redirecting enhancement programs to assist, if needed, in the chinook rebuilding program. They agree that each region's catches will be allowed to increase above established ceilings based on demonstrations to the Commission and assessment by it of the specific contributions of each region's new enhancement activities, provided that the rebuilding schedule is not extended beyond 1998, and provisions of Subsection 1(e)(vi) of this Chapter are adhered to.

3. The Parties shall submit a report to the Commission by December 1991 which presents

(a) joint recommendations for chinook salmon escapement goals in the transboundary rivers;

(b) given the goals recommended in 3(a), a jointly accepted assessment of progress toward rebuilding chinook stocks in these transboundary rivers based on escapement data available through 1991, and the likelihood of achievement of these goals by 1995; and,

(c) cooperatively developed management options to be identified by December 1991 and initiated in 1992 and following seasons to ensure rebuilding of chinook stocks in the transboundary rivers which are identified in 3(b) as requiring further management actions.

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Chapter 4

FRASER RIVER SOCKEYE AND PINK SALMON

1. In order to increase the effectiveness of the management of fisheries in the Fraser River Area (hereinafter the Area) and in fisheries outside the Area which harvest Fraser River sockeye and pink salmon, the Parties agree

(a) that the preliminary expectations of the total allowable catches of Fraser River sockeye and pink are:

	Sockeye	Pink
1985	6.6 million	11.0 million
1986	12.5 million	
1987	3.1 million	12.0 million
1988	3.6 million	
1989	7.1 million	14.0 million
1990	13.0 million	
1991	3.1 million	14.0 million
1992	3.6 million	

(b) that

(i) based on these preliminary expectations, the United States shall harvest as follows:

	Sockeye	Pink
1985	1.78 million	3.6 million
1986	3.0 million	
1987	1.06 million	3.6 million
1988	1.16 million	

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(ii) the United States catches referred to in paragraph 1(b)(i) herein shall be adjusted in proportion to any adjustments in the total allowable catches set out in paragraph 1(a) herein that are due to any agreed adjustments in pre-season or in-season expectations of run-size. When considering such adjustment, the Parties shall take into account all fisheries that harvest Fraser River sockeye and pink salmon including annual Fraser River Indian food fish harvests in excess of 400,000 sockeye. The United States catches shall not be adjusted to any adjustments in the total allowable catch that may be caused by changes in escapement goals that form the basis for the agreed total allowable catches set out in paragraph 1(a) herein;

(iii) notwithstanding the agreed United States and Canadian catch levels for Fraser River sockeye and for coho off the west coast of Vancouver Island, as provided in paragraph 1(b)(i) herein and in Chapter 5, respectively, and subject to paragraph 1(b)(ii), in 1985 the United States catch of Fraser River sockeye shall be 1.73 million and the Canadian catch of coho off the west coast of Vancouver Island shall not exceed 1.75 million; and in 1986, the United States catch of Fraser River sockeye shall be 2.95 million and the Canadian catch of coho off the west coast of Vancouver Island shall not exceed 1.75 million;

(c) in 1985, to instruct the International Pacific Salmon Fisheries Commission to develop regulatory programs in the Area to give effect to the provisions of paragraph 1(b);

(d) to instruct the Fraser River Panel for 1986 through 1992 to develop regulations to give effect to the provisions of paragraphs 1(b) and 1(f);

(e) to instruct the Fraser River Panel that if management measures fail to achieve such sockeye and pink catches, any difference shall be compensated by adjustments to the Fraser fishery in subsequent years;

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(f) in the period 1989 to 1992, the Fraser River Panel shall determine the annual United States catch level so that the total United States catch in this period shall not exceed 7 million sockeye in the aggregate. In the years 1989 and 1991, the United States harvest shall not exceed 7.2 million pink salmon, in the aggregate. Notwithstanding the foregoing, these l vels shall be reduced in proportion to any decreases in the total . lowable catches set out in paragraph 1(a) herein that are due to any agreed decreases in pre-season or in-season expectations of run size. When considering such reductions, the Parties shall take into account all fisheries that harvest Fraser River sockeye and pink salmon including annual Fraser River Indian food fish harvests in excess of 400,000 sockeye. The United States catches shall not be reduced due to any decreases in the total allowable catch that may be caused by changes in escapement goals that form the basis for the agreed total allowable catches set out in paragraph 1(a) herein;

(g) to consider no sooner than 1989 adjusting the regime in accordance with the principles of Article III;

(h) to instruct the Fraser River Panel that in managing Fraser River sockeye and pink salmon, it shall take into account the management requirements of other stocks in the Area.

2. Notwithstanding the provisions of Paragraphs 1(b) and 1(f), and to ensure that Canada receives the benefits of any Canadian-funded enhancement activities undertaken following entry into force of this Treaty, any changes in the total allowable catch due to such activities shall not result in adjustment of the United States catch.

3. The Parties shall establish data-sharing principles and processes which ensure that the Parties, the International Pacific Salmon Fisheries Commission, the Commission and the Fraser River Panel are able to manage their fisheries in a timely manner consistent with this Chapter.

4. The Parties may agree to adjust the definition of the Area as necessary to simplify domestic fishery management and ensure adequate consideration of the effect on other stocks and species harvested in the Area.

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5. In managing the fisheries in the Area, the Parties, the Commission, and the Fraser River Panel shall take into account fisheries inside and outside the Area that harvest Fraser River sockeye and pink salmon. The Parties, the Commission, and the Fraser River Panel shall consider the need to exercise flexibility in management of fisheries outside the Area which harvest Fraser River sockeye and pink salmon.

6. The Parties shall establish a technical committee for the Fraser River Panel:

(a) the members shall coordinate the technical aspects of Fraser River Panel activities with and between the Commission staff and the national sections of the Fraser River Panel, and shall report to their respective national sections of the Panel. The committee may receive assignments of a technical nature from the Fraser River Panel and will report results directly to the Panel.

(b) membership of the committee shall consist of up to 3 such technical representatives as may be designated by each national section of the Commission.

(c) members of the technical committee shall analyze proposed management regimes, provide technical assistance in the development of proposals for management plans, explain technical reports and provide information and technical advice to the respective national sections of the Panel.

(d) the technical committee shall work with the Commission staff during pre-season development of the fishery regime and management plan and during in-season consideration of regulatory options for the sockeye and pink salmon fisheries of Fraser Panel Area waters to ensure that:

(i) domestic allocation objectives of both Parties are given full consideration;

(ii) conservation requirements and management objectives of the Parties for species and stocks other than Fraser River sockeye and pink salmon in the Fraser River Panel Area during periods of Panel regulatory control are given full consideration; and,

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(iii) the Commission staff is timely informed of management actions being taken by the Parties in fisheries outside of the Fraser River Panel Area that may harvest sockeye and pink salmon of Fraser River origin.

(e) the staff of the Commission shall consult regularly in-season with the technical committee to ensure that its members are fully and timely informed on the status of Fraser River sockeye and pink salmon stocks, and the expectations of abundance, migration routes and proposed regulatory options, so the members of the technical committee can brief their respective national sections prior to each in-season Panel meeting.

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Chapter 5

COHO SALMON

1. Recognizing that for the past several years some coho stocks have been below levels necessary to sustain maximum harvest and that recent fishing patterns have contributed to a decline in some Canadian and United States coho stocks, and in order to prevent further decline in spawning escapements, adjust fishing patterns, and initiate, develop, or improve management programs for coho stocks, the Parties shall

(a) instruct their respective management agencies to continue to develop coho salmon management programs designed to meet the following objectives

(i) prevent overfishing; and,

(ii) provide for optimum production;

(b) maintain a Joint Coho Technical Committee (Committee), reporting, unless otherwise agreed, to the Panels and the Commission. The membership of the Committee shall include representation from the Northern and Southern Panel Areas. The Committee, inter alia, shall, at the direction of the Commission and relevant Panels

(i) evaluate management actions for their consistency with measures set out in this Chapter and for their potential effectiveness in attaining the objectives established by the Commission;

(ii) annually identify, review, and evaluate the status of coho stocks in relation to the objectives set out in this Chapter and make recommendations for adjustments to the management measures consistent with those objectives;

(iii) present the most current information on exploitation rates and patterns on these stocks, and develop a joint data base for assessments;

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(iv) collate available information on the productivity of coho stocks in order to identify the management objectives necessary to prevent overfishing;

(v) present historical catch data and associated fishing regimes;

(vi) estimate stock composition in fisheries of concern to the Commission and Panels;

(vii) devise analytical methods for the development of alternative regulatory and production strategies;

(viii) identify information and research needs, including future monitoring programs for stock assessments;

(ix) investigate the feasibility of alternative methodologies for implementing indicator stock programs in all areas;

(x) for each season, make stock and fishery assessments and recommend to the Commission conservation measures consistent with the principles of the Treaty;

(xi) develop programs to assure the attainment of spawning escapement goals and prevent overfishing;

(xii) exchange information necessary to analyze the effectiveness of alternative fishery regulatory measures in achieving conservation objectives; and,

(xiii) work to develop, under the direction of the Joint Northern and Southern Panels, standard methodologies for coho stock and fishery assessment; and,

(c) unless otherwise agreed, in any area where fisheries of one Party may intercept coho stocks originating in the rivers of the other which require conservation action or such other action as the Commission may determine, that Party will endeavor to limit incidental coho catches in fisheries targeting on other species.

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2. For coho stocks shared by fisheries of the United States and Canada, recommendations for fishery regimes shall be made by the Northern Panel for coho salmon originating in rivers with mouths situated between Cape Caution and Cape Suckling and by the Southern Panel for coho salmon originating in rivers with mouths situated south of Cape Caution, as provided in Annex I. At the direction of the Commission, each Party shall establish regimes for its troll, sport, and net fisheries consistent with management objectives approved by the Commission.

3. The Parties agree

(a) for 1991 and 1992, the west coast of Vancouver Island (Canadian Management Areas 21, 23, 24, 25, 26, 27, 121, 123, 124, 125, 126, 127, and 130-1) annual troll harvest shall not exceed 1.8 million Coho;

(b) for 1991 and 1992, the Swiftsure Bank area will be closed to chinook and coho salmon trolling in order to address conservation concerns expressed by both Parties. Troll fishing for sockeye and pink salmon shall, upon appropriate prior notice, be permitted only in order to attain Canadian domestic troll allocation objectives on sockeye and pink;

(c) to avoid any alterations in coho fisheries along the west coast of Vancouver Island that would increase the proportional interception of U.S. coho stocks;

(d) that in 1991 and 1992, for Canadian Area 20, and U.S. Areas 7 and 7A, fisheries directed at coho salmon will be permitted. Notwithstanding this agreement, if the Commission determines that conservation concerns expressed by either Party warrant further restrictions, then the Parties shall limit their catch of coho salmon to that taken incidentally during fisheries under the control of the Fraser Panel and those permitted under the provisions of Annex IV, Chapter 6. Both Parties agree that in 1987, due to conservation concerns expressed by both Parties and agreed to by the Commission, coho fisheries in Canadian Area 20 and U.S. Areas 7 and 7A shall be limited by the levels of incidental coho catch anticipated during fisheries conducted under the control of the Fraser Panel and provisions of Annex IV, Chapter 6;

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(e) for 1991 and 1992, the United States shall adhere to presently agreed management objectives in Strait of Juan de Fuca Areas 4B, 5, and 6C; and,

(f) to develop in 1993 and thereafter, troll fishery regimes for the west coast of Vancouver Island that

(i) implement conservation measures approved by the Commission and take into account any increased contributions by the Parties to the fishery; and,

(ii) provide for the sharing of benefits of coho production of each Party consistent with the principles of Article III.

4. Notwithstanding any other provisions of this Chapter, the Commission, for 1993 and thereafter, may set specific fishery regimes as appropriate, which may include troll harvest ceilings, for coho salmon in the intercepting fisheries restricted under this Chapter that

(a) implement conservation measures approved by the Commission;

(b) take into account increased production;

(c) provide for the recognition of benefits of coho production of each Party consistent with the principles of Article III;

(d) take into account actions taken by each Party to address its conservation concerns; and,

(e) take into account time and area management measures which will assist either Party in meeting its conservation objectives while avoiding undue disruption of fisheries.

5. Starting with the 1987 season, a 7.5 percent management range is established above and below a catch ceiling. On a continuing basis, the cumulative deviation (in numbers of fish) shall not exceed that management range. In the event that the cumulative deviation exceeds the range, the responsible Party shall be required, in the succeeding year, to take appropriate management actions to return the cumulative deviation, plus any penalty assessed, to a level within the established management range. Negative cumulative deviations shall not

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accumulate below the management range. It is the intent of this section to insure that, on average, the annual catch in ceilinged fisheries is equal to the agreed target ceiling.

6. The Parties agree that enhancement efforts designed to increase production of coho salmon would, when combined with catch ceilings and/or time/area management measures, aid in rebuilding depressed natural stocks by reducing the exploitation rates on these stocks. They agree that utilizing this opportunity in the future to rebuild natural stocks is, in most cases preferable to reductions in fishing levels. A major objective of enhancement is to lay the foundation for improved fisheries in Annex areas in the future.

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Chapter 6

SOUTHERN BRITISH COLUMBIA AND WASHINGTON STATE CHUM SALMON

1. The Parties shall maintain a Joint Chum Technical Committee (Committee) reporting, unless otherwise agreed, to the Southern Panel and the Commission. The Committee, inter alia, will undertake to

(a) identify and review the status of stocks of primary concern;

(b) present the most current information on harvest rates and patterns on these stocks, and develop a joint data base for assessments;

(c) collate available information on the productivity of chum stocks to identify escapements which produce maximum sustainable harvests and allowable harvest rates;

(d) present historical catch data, associated fishing regimes, and information on stock composition in fisheries harvesting those stocks;

(e) devise analytical methods for the development of alternative regulatory and production strategies;

(f) identify information and research needs, to include future monitoring programs for stock assessment; and,

(g) for each season, make stock and fishery assessments and evaluate the effectiveness of management.

2. In 1991 and 1992, Canada will manage its Johnstone Strait, Strait of Georgia, and Fraser River chum fisheries to provide continued rebuilding of depressed naturally spawning chum stocks, and, to the extent practicable, minimize increased interceptions of United States origin chum. Terminal fisheries conducted on specific stocks with identified surpluses will be managed to minimize interception of non-targeted stocks.

3. In each of 1991 and 1992,

(a) for Johnstone Strait run sizes less than 3.0 million

(i) Canada, taking into account the catch of Canadian chum in United States Areas 7 and 7A, will limit its harvest rate in Johnstone Strait to less than 10 percent, resulting in a Johnstone Strait catch level of up to 225,000 chum; and,

(ii) when the catch in Johnstone Strait is 225,000 chum or less, the United States catch of chum in Areas 7 and 7A shall be limited to chum taken incidentally to other species and in other minor fisheries, but shall not exceed 20,000, provided, however, that catches for the purposes of electrophoretic sampling shall not be included in the aforementioned limit;

(b) for Johnstone Strait run sizes from 3.0 million to 3.7 million

(i) Canada, taking into account the catch of Canadian chum in United States Areas 7 and 7A, will limit its harvest rate in Johnstone Strait to 20 percent, resulting in a Johnstone Strait catch level of 225,000 to 640,000 chum; and,

(ii) when the catch in Johnstone Strait is from 225,000 to 640,000 chum, the United States catch of chum in Areas 7 and 7A shall not exceed 120,000;

(c) for Johnstone Strait run sizes of 3.7 million and greater

(i) Canada, taking into account the catch of Canadian chum in United States Areas 7 and 7A, will harvest at a rate in Johnstone Strait of 30 percent or greater, resulting in a Johnstone Strait catch level of 640,000 chum or greater; and,

(ii) when the catch in Johnstone Strait is 640,000 chum or greater, the United States catch of chum in Areas 7 and 7A shall not exceed 140,000;

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(d) it is understood that the Johnstone Strait run sizes, harvest rates, and catch levels referred to in 3(a), 3(b), and 3(c) are those determined in season, in Johnstone Strait, by Canada; and,

(e) the United States shall manage in a manner that, as far as practicable, maintains a traditional proportion of effort and catch between United States Areas 7 and 7A, and avoids concentrations of effort along the boundary in Area 7A.

4. In 1991 and 1992, the United States shall conduct its chum fishery in the Strait of Juan de Fuca (United States Areas 4B, 5 and 6C) so as to maintain the limited effort nature of this fishery, and, to the extent practicable, minimize increased interceptions of Canadian origin chum. The United States shall continue to monitor this fishery to determine if recent catch levels indicate an increasing level of interception.

5. If the United States chum fishery in Areas 7 and 7A fails to achieve the 1991 and 1992 catch levels specified in paragraphs 3(a)(ii), 3(b)(ii), and 3(c)(ii), any differences shall be compensated by adjustments to the Areas 7 and 7A fishery in subsequent years, except that chum catches below the level specified in paragraph 3(a)(ii) shall not be compensated.

6. Catch compositions in fisheries covered by this chapter will be estimated by post-season analysis using methods agreed upon by the Joint Chum Technical Committee.

7. Canada will manage the Nitinat net chum fishery to minimize the harvest of non-targeted stocks.

8. In 1991 and 1992, Canada shall conduct electrophoretic sampling of chum taken in the West Coast Vancouver Island troll fishery if early-season catch information indicates that catch totals for the season may reach levels similar to 1985 and 1986. Sampling, should it occur, will include catches taken from the southern areas (Canadian Areas 121-124).

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Chapter 7

GENERAL OBLIGATION

With respect to intercepting fisheries not dealt with elsewhere in this Annex, unless otherwise agreed, neither Party shall initiate new intercepting fisheries, nor conduct or redirect fisheries in a manner that intentionally increases interceptions.

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Overview

Reclamation

Mining

Regs.

3-21-92

March 5, 1991
SUPPLEMENTAL COMMENTS OF
THE NORTHERN ALASKA ENVIRONMENTAL CENTER
ON THE SECOND DRAFT OF PROPOSED REGULATIONS FOR
SB544, RECLAMATION.

Article 2 RECLAMATION STANDARD

The current draft of the regulations discounts references to waters of the state and therefore is legally not adequate.

Any reclamation standard must, at a minimum, be judicially reviewable with objective enforceable criteria which cover lands *and* waters of the state.

Most states in the west with similar legislation use performance standards, while many in the east use actual technical standards.

The language in the November 6, 1990 draft, while not perfect, was far superior to the current draft in acknowledging the full intent of the statute to cover **all** phases of mining activity - exploration, development, and mining - and that such activity must be planned and conducted in a manner that prevents unnecessary and undue degradation of land and water resources.

"Stable condition" must be defined to include biological and hydrological function, not just appearance of the stream, banks, and uplands. There is no point in requiring the miner to do reclamation work for appearances sake when functional stabilization might entail less work.

Mining standards were removed from the November draft regulations and should be a part of the final regulatory package. Mining practices and reclamation are inextricably part of the same process; they must be planned and executed concurrently so that one does not preclude the other.

ARTICLE 3. Performance Standards.

Most performance standards were eliminated from the November draft, and this section is now so lacking in specificity as

to be only marginally useful.

Access - The first draft rightly recognized that waste minimization, source reduction and access guidelines (such as the requirement to only drive across frozen, snow covered tundra) result in less reclamation liability and requirements.

Topsoil, stripping, stockpiling, revegetation, and recontouring- These performance standards lie at the heart of the regulations and must be reinstated, with improvements, into subsequent drafts.

Exploration - all phases of mining are covered by the statute. The second draft's exemption of exploration from the regulations should be deleted.

Heap Leach operations - we recommend that the language in the present draft be expanded to include consultation with DEC.

Sand and Gravel - we recommend that this section be entirely re-written following formal agency and public review.

Finally, the loopholes and inconsistencies in the "excavations exempted" and "stockpiles" sections should be rewritten or dropped.

Article 4 - The second draft provides very little guidance on the contents of a reclamation plan, a central requirement of the statute, and must be strengthened. 11 AAC 97.420 provides a loophole that virtually guarantees any mine a ten year approval. This is totally out of step with the life cycle of most operations today. We suggest three years for placer mines.

The section on modification of reclamation should require changing the reclamation plan before changing the reclamation operations.

The second draft drops important language on unanticipated conditions, such as archaeological discovery.

The second draft opens a loophole for miners transferring their operations to escape liability to successor operators.

The section on Interim Mine stabilization is another largely unenforceable loophole. We recommend that the section be rewritten along the lines of the first draft, with a clearly defined needs test and enforceable criteria.

Article 5 - The state of Alaska must not be exempt from bonding requirements, but should "self-bond", with the applicable agency paying into the pool like everyone else.

Article 6 - Violations and penalties. The definition of miner must explicitly include owner, operator, or leaseholder. Non-compliance should preclude operation for three years anywhere in the state. A risk assessment fee should be paid pending resolution of Notice of Violation or appeal.

Article 7 - The language for "Letter of Intent" found in the first draft should be adopted wholesale.

Article 8 - Cooperative agreements
11 AAC 97.800 (3)(c) is unacceptable as it undercuts a state department's ability to implement a portion so as to avoid redundant efforts.

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FORUM

Mining Reclamation from a Nevada Perspective:

Molding the Landscape

by Glenn Miller, Ph.D.

In keeping with Clementine's policy of providing an open forum, we offer the following essay by Dr. Glenn Miller. The views and recommendations below are those of Dr. Miller's and not necessarily those of the Mineral Policy Center.

Dr. Miller is an environmental chemist and has been active in environmental protection issues in Nevada for many years. He was intensely involved in the recent enactment of Nevada's new state reclamation law, for which final regulations are now being issued.

The lack of adequate hardrock mine reclamation is one of the major problems on the public lands of Nevada. Reclamation of lands disturbed by hardrock mining is not adequately considered in any federal legislation, and should be treated in a comprehensive manner in any new mining legislation.

In my home state of Nevada, gold and silver mining has undergone a very large expansion in recent years and is now a $2 billion industry each year. Approximately 100 separate mines are in operation and are creating substantial surface disturbances. The methods used to reclaim those lands will affect people for centuries. Great care must be taken when making land-use decisions which preclude productive uses of mined land for those time frames, and new federal legislation is required to regulate long-term mining land disturbances.

Reclamation Defined

Reclamation is composed of three primary issues: environmental safety, land productivity, and aesthetics.

— **Environmental safety:** Any reclamation plan must ensure physical and chemical safety for humans and wildlife. The obvious physical safety problems of falling into 500 foot drops in an area that is otherwise comprised of gentle hills must be precluded. Less visible, but perhaps more important, are the chemical hazards associated with mining. Mercury used during Comstock mining days still contaminates fish in the Carson River of Nevada, and acids and toxic metals from past mining in Montana and Colorado have destroyed many miles of fishing streams. Current precious metal mining has its own set of chemical problems, from heavy metal residues and cyanide solution used in extraction processes. Any reclamation effort should preclude release of any of these toxic substances to those levels that existed prior to mining.

— **Land productivity:** Following reclamation, the land should be able to support the same level of productive uses as existed prior to mining, including wildlife, agriculture, and recreation. Return of lands to productivity will not happen without effort, particularly in the arid west. Many disturbances created over 100 years ago remain barren waste rock dumps without useful vegetation. Careful management of topsoil and encouragement of plant growth is essential.

— **Aesthetics:** Dumps and other land carvings should be recontoured to conform to the surrounding land. Flattopped, angle-of-repose dumps should be recontoured to an aesthetically pleasing form and integrated into the natural topography. Too often the mining engineers' opinion of what is visually acceptable is based more on economics than visual quality, and has resulted in large-scale downright ugliness. Yet it is the mining engineer who usually determines the final shape of mined public lands, and not a landscape architect. None of the major hardrock mines in Nevada today has a landscape architect on its senior reclamation staff.

Mining Impacts

Impacts from mining activity occur in all phases of mining, beginning with exploration, continuing with mine development and creation of pits and waste rock dumps, and finally processing of ore which results in leached heaps and tailings impoundments. The type of reclamation required for each phase of mining varies on a site-specific basis, but any new legislation addressing reclamation must give much clearer policy direction than presently exists. New legislation must encourage creative approaches to reclamation, and require the agencies to approve only those mining plans

that protect the public resources.

For example, exploration impacts generally consist of a cobweb of roads and drill pads. These roads often switchback up a mountain, cross streams, and create channels for erosion. Much of Nevada's surface area is scarred by such exploration damage, which is clearly apparent when flying over the state. However, with proper planning and regulatory enforcement, these impacts can either be avoided or completely reclaimed to the original contour of the land. Unless the agency has a clear reason to retain a road, exploration scars can and should be completely eliminated. Legislation can explicitly require restoration of exploration impacts back to the original condition.

Waste Rock Dumps and Pits

For waste rock dumps and pits, reclamation should consist of recontouring disturbances into the natural landforms. Refilling of pits is a very visual issue which receives a large amount of public attention. Although pit refilling is perhaps not the most important issue of reclamation, the sheer magnitude of some of the pits deserves comment.

If present federal land management practices are followed, it is probable that Nevada will have over 200 major pit mines within the next 20 years that will be permanent scars on the landscape. Most of the pits being created in Nevada will exist for thousands of years. These impacts are similar to the scars left by meteorites striking the Earth, since the depth and amount of earth moves are in many cases comparable. Some of the pits along the Carlin and Getchel trends in Nevada will plunge over 1000 feet below the surrounding landscape. The Barrick Goldstrike pit will be 1400 feet deep and require removal of a billion tons of rock. When water infiltrates the pit over several decades, it will form the largest manmade lake completely in Nevada. This stagnant body of water will be unlike any in the state and will permanently affect the hydrologic characteristics of that groundwater basin. Other nearby mines promise to be nearly as large and may, in fact, connect hydrologically with the Barrick Pit.

These scars on the landscape are intrinsically undesirable and the burden should be placed on the industry to demonstrate why they should not be refilled. There are many cases where complete restoration of the landscape should be required to protect other public values. Other cases, where resources conflicts may not be as great, can perhaps be treated differently. However, when pits can be developed sequentially and are in ably close proximity, they should be refille and federal agencies should be given dire require refilling of nearby existing pits with excavated rock from new mines. Comp partial refilling of small pits may be appropriate, and successful examples of small pits exist in Nevada. Currently, th is unwilling to consider pit refilling as a native in the many documents I have re even though they have that authority un 3809 regulations.

Over the long term, the land is alway more than the gold, and we must wonder future generations will look back on us why we didn't require those who gained th to also restore the land.

More important, however, is the que what happens to all of the rock that is tak the pit. When a billion tons of rock is re that rock must be placed somewhere. I cases, the rock is simply dumped in nearb

Angle-of-Repose: The ridges in the foregro composed entirely of waste rock from the Rabb gold mine, north of Winnemucca, Nevada. Suc of-repose dumps are usually unreclaimable an permanent unproductive land and visual pro

Golden Sunlight Mine: Plans to double the size of the mining operation in Montana are being opposed by environmentalists because there is no adequate reclamation plan and the mine's impacts on water resources have not been considered. Photo: Daniel M. Horowitz

and left as waste rock or tailings. This geologic material has essentially no productive potential, and waste dumps from the Comstock era over 100 years ago remain devoid of vegetation today.

These disturbances are usually the ones that have the most impact on safety, productivity, and aesthetics of the resulting disturbed land. Reclaiming dumps, heaps, tailings, and other surface disturbances is where the most focus should be placed during reclamation planning and implementation. If the rock is not going to be put back in the pits, it should be placed in areas where it will be stable and not adversely affect other environmental values.

Too often in Nevada rock is simply dumped down the side of the mountain. These long angle-of-repose dumps are usually unreclaimable and create permanent unproductive land and visual problems. An equally unacceptable option is to create long, flat-topped dumps with angle-of-repose sides that are nearly as difficult to reclaim. As indicated above, planning for reclamation is fundamental for precluding the problems associated with misplaced dumps.

Restoring Vegetation

Once recontouring of the disturbance is accomplished, establishing a productive soil is critical. Conditions for establishing vegetation in the Intermountain West are generally harsh, and substantial effort and planning are required for developing a productive topsoil to allow revegetation. Industry often argues that topsoil is not available and hence they should be able to leave the land in a low productivity condition. While there are obvious difficulties in revegetating arid lands, it is simply not acceptable to leave the land barren. Various options do exist for developing topsoil, and the industry needs to look seriously at those issues.

Off-site mitigation is an issue which should also be considered. If a resource is lost due to mining, the company should be required to mitigate and or compensate that loss by enhancing environmental quality somewhere else. Examples include reclamation of other historically disturbed areas, repair of streams damaged by overgrazing, or purchase and transfer of lands into public ownership which have high public values.

Reclamation Done Right

Several examples of excellent reclamation exist in Nevada. The best I have seen is the Pinson mine north of Winnemucca. This group has created rolling hills of waste dumps that are indistinguishable from surrounding hills, and have been revegetated using soils that support excellent plant growth. The mine is still active, but the operators are performing reclamation concurrently with mining. The characteristic that sets this

mine apart is the realization that reclamation is an intrinsic part of mining which must be considered throughout the development of the mine, rather than an add-on at the end.

BLM's FLPMA Obligation

I also want to comment on BLM's regulations that deal with mining [Code of Federal Regulations Part 43, Section 3809, the "3809 regulations"]. The Federal Land Policy and Management Act of 1976 (FLPMA) requires, in section 302(b) that, "the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." Reasonable interpretation of this clause would mean that "best available technology" should be used. Best available technology would include clearly defined recontouring and revegetation.

Use of the best available technology is not the interpretation that BLM is taking of the 3809 regulations. In fact, the BLM interprets this clause to mean some degradation is due and necessary. The 3809 regulations set a reclamation standard for what had historically been the level of disturbance for "normal" mining. This level of disturbance was not acceptable when these regulations were implemented in 1982, and it is not acceptable now. One can argue that the BLM interprets the 1872 Mining Law as having precedence over the Federal Land Policy and Management Act of 1976. However, this agency interpretation has no real basis in law.

One of the problems with BLM's management of hardrock mining in Nevada is provided by a recent example of an Environmental Assessment on a major expansion of an existing mine south of Battle Mountain. Because of BLM staff limitations, most environmental documents are being prepared by consultants who are selected and paid by the mining company. In this example the consultant was hired by the company to prepare the Environmental Assessment. BLM commented on the EA, the consultants made comments to BLM's draft, and the resulting EA was released to the public as a BLM document. At the very least, the perception exists that the BLM is abdicating its environmental duties to a company-paid consultant.

From an environmentalist viewpoint, the BLM has a track record of not requiring acceptable reclamation nor requiring protection of public values from the impacts of mining. As indicated above, the reasons for this are the lack of a clear national policy and the lack of sufficient agency resources to accomplish this task.

Recommendations

Reform of the 1872 Mining Law must include comprehensive requirements for environmental protection and address the following two issues. First, any new legislative program must be very specific about reclamation and establish clear reclamation goals and mandate workable methods to achieve those goals. Second, any new legislation should require that mining companies pay permit fees which will cover the total costs of environmental evaluation directly to the responsible agency. The BLM can then hire additional staff or outside consultants who will be accountable to the federal agency. The current practice in which mining companies hire their own consultants to prepare public agency Environmental Assessments must be ended. Those consulting firms are responsive to the people paying the consulting bill, not the public.

Finally, the agencies must have discretion to deny mining on public lands when other public values outweigh mining. Some sites simply cannot be reclaimed and the only way to prevent future problems is to prohibit mining. I became involved with mining over 10 years ago because of a proposal to put a road up a small stream in what is now part of the National Wilderness Preservation System. The miner illegally bulldozed a road up the river last summer but up until then, he had been kept out of the canyon only because of extensive efforts by the local conservation community. The Forest Service should have been able to evaluate the relative public values and have discretion to exclude him on that basis.

Although mineral wealth is where you find it, the same can be said for fishing, hunting, scenery, and solitude. Until the federal agencies are allowed to weigh the relative values other than mining on an equal plane, those valuable places will be threatened. The land-use planning process is critically important, and the highest and best use for each piece of land should be determined in the plans.

I agree that much land can be left open to mining under reasonable reclamation requirements. Other land may be available for mining but may require complete restoration of the land, including refilling of the pits. However, other public land with high scenic, recreational, agricultural, or wildlife values should be completely protected if mining would cause those values to be lost. The public good will only be realized when agencies are required to develop land-use plans which consider all public values. ✱

11 AAC is amended by adding a new chapter to read:

CHAPTER 97. MINING RECLAMATION.

ARTICLE 1. APPLICABILITY.

ARTICLE 2. RECLAMATION STANDARD.

ARTICLE 3. RECLAMATION PERFORMANCE STANDARDS.

ARTICLE 4. RECLAMATION PLAN.

ARTICLE 5. RECLAMATION BONDING.

ARTICLE 1. APPLICABILITY..

Section
100. Applicability

11 AAC 97.100. APPLICABILITY. (a) This chapter deals with the approval of reclamation plans, reclamation bonding, and enforcement of reclamation requirements under AS 27.19.

(b) AS 27.19.020 sets the minimum standard for mining reclamation in Alaska, without regard to land ownership. The commissioner has no authority under this chapter to require reclamation to a higher standard than that set by AS 27.19.020. Nor does the commissioner have any authority to waive the requirements of AS 27.19.020.

(c) Under its own regulatory or proprietary authority, a state or federal agency, state corporation, the University of Alaska, a municipality, or a private land owner may establish and enforce additional requirements or higher standards for reclamation. Compliance with this chapter does not waive or excuse compliance with those other applicable requirements or standards.

(d) This chapter does not apply to:

(1) chemical neutralization, detoxification, or clean-up of hazardous substances associated with mining operations;

(2) surface coal mining or related operations regulated under AS 27.21; or

(3) a previously mined area that was part of a mining operation activity occurring before October 15, 1991. However, mining activity that disturbs a previously mined area after October 14, 1991 must be reclaimed to the standards of AS 27.19 and this chapter. If only a portion of the previously mined area is disturbed, this chapter applies only to that disturbed portion. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.010
AS 27.19.100

ARTICLE 2. RECLAMATION STANDARD.

Section
200. Reclamation standard

11 AAC 97.200. RECLAMATION STANDARD. AS 27.19.020 sets the minimum standard[1] for mining reclamation in Alaska, without

[1] "A mining operation shall be conducted in a manner that prevents undue and unnecessary degradation of land and water resources and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition." "Stable condition" is defined by AS 27.19.100(7) to mean "the rehabilitation, where feasible, of the physical environment of the site to a condition that allows for the reestablishment of renewable resources on the site within a reasonable period of time by natural

regard to land ownership. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.010
AS 27.19.020
AS 27.19.100

ARTICLE 3. RECLAMATION PERFORMANCE STANDARDS.

Section
300. Land reclamation performance standards
310. Disposal of buildings, structures, and debris on state land
320. Underground mines
330. Heap leach operations
340. Sand, gravel, and other materials

11 AAC 97.300. LAND RECLAMATION PERFORMANCE STANDARDS. (a) The surface of reclaimed ground must be left in a condition that will promote natural revegetation. Measures taken to promote natural revegetation may include redistribution of topsoil or applications of fines, where available, if the natural composition, texture, or porosity of the surface materials is not conducive to natural revegetation. However,

(1) a pit wall is exempt from this requirement if the steepness of the wall makes it impractical or impossible to accomplish;

(2) topsoil and fines must not be redistributed or spread over an active floodplain.

(b) The surface contours of unconsolidated material after reclamation is complete must be generally consistent with adjacent terrain features. Measures taken to accomplish this result may include backfilling, contouring, and grading. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.020
AS 27.19.100

11 AAC 97.310. DISPOSAL OF BUILDINGS, STRUCTURES, AND DEBRIS ON STATE LAND. Buildings and structures constructed, used, or improved by the operator on state land must be removed, dismantled, or otherwise properly disposed of unless the land manager authorizes the buildings and structures to stay. All

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processes."

scrap iron, equipment, tools, piping, hardware, and general construction debris on state land must be removed or otherwise properly disposed of. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.020
AS 27.19.100

11 AAC 97.320. UNDERGROUND MINES. The openings of all shafts, adits, and air vents to underground mine workings must be stabilized and properly sealed at closure to ensure protection of the public, wildlife, and the environment. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.020
AS 27.19.100

11 AAC 97.330. HEAP LEACH OPERATIONS. Once neutralization of heaps, pads, ponds, and other such facilities has been approved by the appropriate permitting authority, the site must be reclaimed to the standards of AS 27.19 and this chapter. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.020
AS 27.19.100

11 AAC 97.340. SAND, GRAVEL, AND OTHER MATERIALS. (a) **Gravel used for logging.** This subsection applies to the reclamation of sand, gravel, or other material extraction sites used for a logging operation regulated under 11 AAC 95, Forest Resources and Practices.

(1) If the mining operation will disturb less than five acres and remove less than 50,000 cubic yards of materials,

(A) submission of a plan of operations under AS 41.17.090, or compliance with an adopted site-specific forest land use plan for an operation on state land, satisfies the requirement of AS 27.19.050(b) for a letter of intent;

(B) inspection under 11 AAC 95 satisfies the requirement of AS 27.19.050(c) for an annual reclamation statement; and

(C) compliance with 11 AAC 95.242[2] fulfills all other requirements of AS 27.19 and this chapter.

(2) If the mining operation will disturb five or more acres, or remove 50,000 cubic yards or more of materials, the miner must satisfy the bonding requirement of AS 27.19.040 in one of the ways set out in 11 AAC 97.500 -- 11 AAC 97.555. However,

(A) submission of a plan of operations under AS 41.17.090, or compliance with an adopted site-specific forest land use plan for an operation on state land, satisfies the requirement of AS 27.19.030 for a reclamation plan;

(B) this subparagraph constitutes the commissioner's prior approval of that plan; and

(C) compliance with 11 AAC 95.242 fulfills all other requirements of AS 27.19 and this chapter.

(b) **Gravel used for other mines.** If the primary use of the extracted materials is to assist another mining operation regulated under this chapter (such as gravel to build a road to a lode mine), the miner is encouraged to cover reclamation of the material operation in the letter of intent or reclamation plan for the primary mine so that no duplication of effort is necessary.

(c) **Excavations exempted.** If materials are extracted primarily to get them out of the way (such as when preparing a building site or road cut, dredging a channel, or drilling an access tunnel), the requirements of this chapter do not apply even if the materials are sold commercially or used as fill.

(d) **Stockpiles.** The requirements of this chapter do not apply to materials stockpiled at a location other than the mined area, nor to materials stockpiled at a mined area where no mining has taken place since October 14, 1991. For materials stockpiled at an active mine site, reclamation is not required until the

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[2]This citation is subject to change, as the draft Forest Practices Act regulations have not yet reached the public hearing stage. The standards in the current draft of the Forest Practices regulations for material extraction, soil disposal, and rehabilitation of the extraction site are more stringent than the requirements of 11 AAC 97. Thus compliance with the Forest Practices Act regulations (assuming that the final version is similar to the present draft) will be more than adequate to satisfy the reclamation standard in AS 27.19.020. However, some procedural requirements that would be mandatory under AS 27.19 (prior approval, bond) are absent. In most cases, a gravel pit used to build a logging road will be below the 50,000-cubic-yard threshold at which AS 27.19 requires an approval and a bond.

stockpile is used up. In the interim, such a stockpile must be located where it will not erode into a water body.

(e) **Continuous use; intermittent use of a material site.** If mining will occur continuously until a material site or one cell of a material site is exhausted or abandoned, reclamation as required by 11 AAC 97.300, 11 AAC 97.310, and this section must take place immediately after the material site or cell is mined. However, the commissioner will postpone the reclamation obligation if the landowner satisfies the commissioner that contemporaneous reclamation is impracticable, because the landowner plans to allow intermittent use of the material site by one or more miners over a several-year period. To make this showing, the landowner must submit a reclamation plan for the entire material site, including stockpiles, and must assume the obligation to comply with 11 AAC 97.300, 11 AAC 97.310, and this section immediately after the material site is ultimately exhausted or abandoned. In the meantime, each miner may recover his or her bond at the completion of that miner's operations by leaving the site in a condition that will prevent off-site environmental degradation. The landowner is not required to file a bond.[3]

(f) **Gravel bailing from riverbeds.** This subsection applies to the extraction of materials from the bed of a watercourse. The miner shall maintain or reestablish a stable bed and bank profile after the extraction. A stable bed and bank profile is one that will not alter river currents or change erosion and deposition patterns downstream. In reviewing a reclamation plan for such an operation, the commissioner will use hydrology information available to the department.

(g) **Gravel bailing from water bodies generally.** If the extraction site is a water body or the site is to be flooded after mining, the requirement of 11 AAC 97.300 to apply topsoil or other fine material as a growing medium applies only to the banks.

(h) **Peat and topsoil mines.** A reclamation plan for a mine that produces peat, topsoil, or similar materials must provide for at least two inches of a suitable growing medium to be left on the mined land. (Eff. / /91, Register)

Authority: Sec. 2, ch. 92, SLA 1991
AS 27.19.020
AS 27.19.100

ARTICLE 4. RECLAMATION PLAN.

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[3]It may not be possible to exempt the landowner fror. the bond requirement.