

North Pacific Fishery Management Council

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Certified By: *Paul H. Branson*

Date: 12/10/81

MINUTES

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL SCIENTIFIC AND STATISTICAL COMMITTEE

December 2-3, 1981
Anchorage, Alaska

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met in Anchorage on December 2-3, 1981. Members present were:

Donald Rosenberg, Chairman
Richard Marasco, Vice-Chairman
Al Millikan
William Aron
Bud Burgner
John Burns

E-1 Salmon FMP

WDF Salmon Model Workshop

The SSC reviewed a report from the salmon subcommittee on the workshop held October 20-21 in Seattle. The purpose of the workshop was to review and discuss the scientific validity and the application of the WDF Salmon Model. A copy of the workshop report is provided in Attachment 1.

Participants at the workshop reached the conclusion that the model is scientifically valid and that the basic concepts in the model are acceptable. There was discussion on certain parts of the model, specifically how the model handles transfer rates and in the mortality assumptions. It should also be noted that the model is data dependent, the better the input data the better the model's output.

Because of the steady state nature of the current model it was concluded that the model use on chinook stocks may be limited. It was noted that the model is being modified to take care of these limitations.

The workshop developed specific conclusions regarding the model and its future use. In summary these recommendations are:

- 1) that the documentation of the model and the data sources be completed;
- 2) that sensitivity analysis be undertaken on the model;

- 3) that pre-processors and post-processors be developed and documented for the model; and
- 4) that guidelines for update and maintenance of the model be established.

The SSC plans to continue our discussion on the model with the Pacific SSC in order to develop specific recommendations to our respective Councils regarding the implementation of the conclusions of the workshop.

Schedule for FMP Amendment Review

The SSC is concerned that the time frame for review of the proposed amendments and supporting data for the amendments to the Salmon FMP will be so short that we will be unable to provide a creditable review. The SSC has therefore requested that the Council staff make every effort to provide the committee with the amendments and reports by December 15th. Specifically we understand that the following should be available:

- 1) Salmon staff reports from ADF&G.
- 2) A salmon Technical report from NMFS.
- 3) Documentation for the WDF Salmon Model.

It is our understanding that the Salmon PMT will meet on January 3, 1982 to review these documents and to develop a team report on the amendments. The SSC plans on meeting with the team on Monday, January 4 and hopefully will be able to make recommendations to the Council by January 5.

PDT/PMT Membership

The SSC reviewed the concepts regarding the make up and duties of the PMT with specific reference to the salmon PMT. In summary, membership on the teams was to be from the primary agencies who had responsibility for fisheries management off Alaska. Those agencies for the Salmon FMP are the Alaska Department of Fish and Game and the National Marine Fisheries Service.

The SSC in its recommendation to the Council on salmon team membership also recommended that the various management agencies in the Washington and Oregon region also have one representative on the team. This was proposed so that the interests of those management agencies was represented. Those interests are currently being represented by a team member from the Washington Department of Fisheries.

The SSC recommends that the membership on the PMT remain small and be limited to that of the primary management agencies and that the team not be expanded to include another member.

The SSC also reviewed the status of the current PDT for salmon. This group is working on a rewrite of the Salmon FMP. As with the PMT, the SSC feels that this team should be kept as small as possible and therefore do not recommend any increase in membership.

The SSC did review the resume which has been submitted by the Columbia River Inter-tribal Fish Commission. Should the Council chose to add membership to either the Salmon PMT or PDT, the individual nominated appears to be suitable as a team member.

E-2 Herring FMP

The SSC reviewed the proposed changes to the text which the team has developed. These proposed changes address four issues. These are:

- 1) the handling of subsistence stocks,
- 2) what to do when spawning biomass data is not available,
- 3) the establishment of a maximum exploitation rate, and
- 4) the modification of the AIC formula.

The SSC heard presentation by team and various groups on these proposed changes. During these presentations various questions were raised regarding the changes. These questions have been provided the PMT for their consideration (Attachment 2). The SSC plans to make its final recommendation to the Council upon the receipt of the answers to these questions.

E-5 Gulf of Alaska Groundfish FMP

Amendment #11

The SSC reviewed the December 1, 1981 report of the Plan Maintenance Team on Amendment #11 to the Gulf of Alaska Fishery Management Plan. The SSC was impressed by the completeness of this report and the Committee commends both the team and all of the other individuals involved in providing the SSC with all of the various reports and summaries in a timely manner.

The December 1, 1981 team report provides a further refinement of the information provided in the October 2, 1981 proposed Amendment #11.

Contained in the PMT report is a summary of the current status of knowledge regarding the status of stocks, migration patterns and growth for the sablefish resource. The team also proposes with the report an objective for sablefish management based upon the management objectives in the FMP. The report then makes certain recommendations regarding the following:

- (1) sablefish OY;
- (2) percent allocation between management areas;
- (3) the opening of the Davidson Bank area to foreign fishing;
- (4) the creation of an exclusive longline fishery for sablefish;
- (5) the closure of the sablefish fishery during the winter;
- (6) the respecification of reporting requirements for fishery participants.

The SSC considered separately each of these issues.

Sablefish OY

The SSC reviewed the proposed Gulf-wide EY and the three alternatives for evaluation of OY. With regard to the appropriateness of the new estimates of EY for the resource, the SSC concluded that the proposed estimates are conservative, based upon the information available to the SSC. We note that a discrepancy exists in the results of the 1981 Japan-U.S. cooperative longline survey and the results of the U.S. pot survey for the Southeast regulatory area. The cooperative longline survey showed a significant increase in the

abundance of sablefish larger than 3 pounds, while the pot survey indicated a decrease. Data are not available at present to examine the performance of the cooperative survey in other areas of the Gulf in 1981. Because of the SSC's inability to determine the overall validity of the cooperative survey, it was agreed that a conservative approach should be taken in calculating the EY's. Since the PMT's method for determining EY's met this condition, it was concluded that the new estimated EY's are acceptable.

With regard to the proposed three alternatives for the evaluation of OY values, the SSC notes that the team attempted to provide an analysis to the Council which examines the extremes of the relevant range and the midpoints for OY. The SSC concurs with this approach to alternatives for OY but would like to recommend three additional alternatives, all of which represent a higher value for OY than provided by the team.

Specifically the SSC recommends the following:

Alternative 4

That the OY's for the various management areas be determined as follows:

(i) For the Western, Central, and Yakutat West of 140°W Management Areas

	<u>Western</u>	<u>Central</u>	<u>Y-w of 140°W</u>	<u>Total</u>
EY	2,225 mt	4,075 mt	2,240 mt	8,540 mt
ABC*	1,669 mt	3,056 mt	1,680 mt	6,405 mt
OY	1,669 mt	3,056 mt	1,680 mt	6,405 mt

*ABC = 75% of EY to (1) allow rebuilding of stocks and (2) take care of uncertainties associated with stock growth and migration.

(ii) For the Yakutat east of 140°W and Southeastern Management Areas

	<u>Y-e of 140°W</u>	<u>Southeast</u>	<u>Total</u>
EY	1,135 mt	1,290 mt	2,435 mt
ABC	1,135 mt	1,290 mt	2,435 mt

OY = DAH but not to exceed ABC.

It should be noted that the 25% reduction is a value taken from the original FMP and was the arbitrary reduction used to determine a Gulf-wide value of OY from a Gulf-wide value of EY.

This alternative adjusts the EY values to the new estimates provided by the team. It applies the criteria in accordance with the plan for determining OY values from EY for the Western, Central, and Yakutat area west of 140°W to determine new OY's for those areas. It recognizes that the area east of 140°W is a fully developed domestic fishery and thus sets OY equal to DAH but limits

the harvest to a maximum of ABC. The ABC values are based upon the new estimates of EY for that area.

Alternative 5

That the OY's for the various management areas be determined as follows:

(i) For the Western, Central, and Yakutat West of 140°W Management Areas

	<u>Western</u>	<u>Central</u>	<u>Y-w of 140°W</u>	<u>Total</u>
OY	2,100 mt	3,800 mt	2,100 mt	8,000 mt

(ii) For the Yakutat East of 140°W and Southeastern Management Areas

	<u>Yakutat East of 140°W</u>	<u>Southeastern</u>	<u>Total</u>
EY	1,135 mt	1,290 mt	2,435 mt
ABC	1,135 mt	1,290 mt	2,435 mt

OY = DAH but not to exceed ABC

This alternative maintains the OY's in the Western and Central management areas at their current values and provides an OY value for the Yakutat west of 140°W. This value is based upon the 1981 value of OY for the Yakutat management area. The alternative also recognizes the new values of EY for the areas east of 140°W and the fully developed domestic fishery.

Alternative 6

That the OY's for the various management areas be as follows:

	<u>Western</u>	<u>Central</u>	<u>Eastern</u>		<u>Total</u>
			<u>Yakutat</u>	<u>SE</u>	
OY	2,100 mt	3,800 mt	3,400 mt	3,700 mt	13,000 mt

This alternative represents the status quo with regard to the OY values for each of the existing management areas.

The SSC feels that alternatives 1 and 6 are the least viable of the alternatives proposed. Alternative 1 would result in closure of the trawl fishery and allow only a limited directed sablefish fishery. Alternative 6 could result in a conservation problem in the Eastern regulatory area if the new estimates of EY are not conservative.

In reviewing these alternatives the SSC noted that the 1980 reported catch of sablefish from each of the major regulatory areas was below the 1981 OY and the new estimate of EY. The exact distribution of 1980 reported catch as compared to the current OY in the Yakutat area is unknown because of problems of catch reporting. Likewise this data reporting does not allow us to evaluate the catch with the new estimated EY values for the areas east of 140°W.

Specifically the data is as follows:

	<u>Western</u>	<u>Central</u>	<u>Eastern</u>		<u>S/E</u>	<u>Total</u>
			<u>Yakutat</u>			
			<u>Y-w of 140°W</u>	<u>Y-e of 140°W</u>		
1980 Catch	1,455 mt	3,100 mt	1,853 mt		2,204 mt	8,612 mt
1981 OY	2,100 mt	3,800 mt		3,400 mt	3,700 mt	13,000 mt
New Est. EY	2,225 mt	4,075 mt	2,240 mt	1,135 mt	1,290 mt	10,965 mt

A comparison of the 1981 OY's with the estimated EY's for the management areas indicates that a conservation problem would not result from maintaining the status quo in the Western and Central regulatory areas. The SSC determined that not to be the case for the Eastern regulatory area. The estimated EY for the Southeastern portion of this area is 1,290 mt. The current OY is 3,700 mt. Maintaining status quo in the sub-area could allow the harvest to exceed the new estimated EY. The same possibility exists for the Yakutat sub-area. While the sum of the proposed EY's for the two sub-sub-areas is less than the current OY for the whole, no mechanism exists under the status quo to prevent the total OY from being taken from one of the sub-sub-areas. Therefore the SSC concluded that the maintenance of the status quo in the Eastern regulatory area could result in a conservation problem.

Percentage Allocation Between Management Areas

The SSC supports the team's recommendation that the current percentage allocation between areas be maintained when considering the allocation of the new estimate of EY.

Other Proposed Changes

With respect to the Davidson Bank, exclusive longline fishery, winter closure and reporting requirements issues, the SSC does not have a comment at this time. It is recommended that the Council request that individuals or agencies having information bearing on these issues make it available as soon as possible.

Proposed Delay in Final Action on the Amendment

The SSC concurs with the team's recommendation regarding extending the public review period. The SSC believes that the public should be allowed sufficient time to review and comment on the various alternatives proposed by both the team and the SSC.

In considering this recommendation on an extension of the review period, the SSC attempted to determine whether such an extension could produce a conservation problem. After examining the 1980 catches, the 1981 OY's, and the new estimates for EY, the SSC concluded that a potential exists for creating a conservation problem only in the Eastern regulatory area. Thus, if the Council does extend the review period, the SSC recommends that the Council

request that the Regional Director take the necessary steps to insure that the 1982 harvest in the Eastern regulatory area does not exceed the new estimates for EY as provided by the team.

Gulf of Alaska DAH

The SSC reviewed the values of DAH which are being proposed for the 1982 season. These values are the same as used for the 1981 season. The SSC would like to bring to the attention of the Council our recommendation made at the December 1980 Council meeting. At that meeting the SSC recommended the following:

That the following DAH and reserve mechanism be examined for the possibility of inclusion in the current Gulf of Alaska and Bering Sea/Aleutian Island amendment packages.

- (1) "The DAH for a fishing year will be set equal to the domestic catch taken during the 12-month period ending the preceding September 30. DAH may not exceed OY."

- (2) "The reserves will be set to accommodate the difference between the domestic catch forecast from the NMFS survey and DAH as set above. The NMFS survey will be conducted annually by the NMFS Regional Office to compile expected harvest figures from fishermen and processors."

To the knowledge of the SSC, this recommendation has not been evaluated. The concern which caused the SSC to make this recommendation to the Council still exists: that of having estimates of DAH which far exceed the actual performance of the domestic industry. It is still the recommendation of the SSC that the correct means to accommodate these estimates of additional performance is through the reserve system, not DAH. We again recommend that the Council request such an evaluation in the next proposed modification to either of the groundfish plans.

Rewrite of FMP

The SSC recommends that the Northwest and Alaska Fisheries Center of the NMFS be the lead agency for the rewrite of the FMP. We believe that the Center should be contacted and asks to recommend the individual to head up the effort.

E-6 Bering Sea/Aleutian Islands Groundfish FMP

The SSC reviewed the status of Amendment #1 with the Council staff. The SSC recommends that the staff meet with the individuals who originally developed the amendment to assist in correction of the identified problem.

The SSC reviewed the proposed 1982 DAH. Our comments regarding DAH have already been expressed under the Gulf of Alaska FMP review. In the Bering Sea/Aleutian Islands area the problem could be considered even greater. For example, the total proposed DAH for sablefish in the Bering Sea is 700 mt with an additional 350 mt in the reserve. The domestic catch through October 31, 1981 was 24.1 mt. The SSC feels it would be much more realistic to have the DAH at the actual harvest and place the projected increase in the reserves.

F-1 Contracts and RFP's

The SSC reviewed the status of Contract 80-4, a contract with ADF&G to expand and enhance the domestic commercial fishery catch data reporting system off Alaska. The SSC finds that the conditions of the contract have been met, but requests no final action on this contract until our subcommittee has an opportunity to see that system in operation during our January meeting. The SSC will make a final recommendation to the Council at that time.

The SSC also reviewed the status of the other three contracts. The SSC has appointed an SSC contract review workgroup for Contract 81-5, "Determination of Stock Origin of Chinook Salmon Incidentally Caught in Foreign Trawls in the Alaska FCZ". Members are Al Millikan, Steve Langdon, and John Clark.

The SSC reviewed the status of development of RFP's for the 1982 proposed programmatic funds. The SSC noted that the RFP on halibut limited entry is nearing completion. Additionally we agreed to attempt to have the draft RFP's for the following studies ready for SSC review by our January meeting: "Feasibility of Using Scale Analysis to Identify Bering Sea Herring Stocks"; "High Seas Tagging of Salmon"; and "Analysis of Southeastern Salmon Scale Patterns".

The SSC feels that if funds are available the Council should be able to release the RFP's soon after the March Council meeting.

B-6 Non-Agenda Items

At the request of the Council staff the SSC reviewed the operation of the PMT concept. Extensive discussion which resulted during this review between the Council staff, members of PMT's, and the SSC lead the SSC to conclude that confusion does exist regarding the role and duties of these teams. Therefore the SSC recommends that the Council appoint a subcommittee to review the status of and recommend changes to the makeup and charge of these teams. This subcommittee should be composed of representatives of the Council, the staff, the SSC, the AP, and the teams. The SSC recommends Bill Aron, Al Millikan, and Don Rosenberg from the SSC.

The SSC recommends that the Council staff provide a draft document which the subcommittee could review during the January meeting. This would allow the Council and its advisory committees to make final review during the March meeting, allowing implementation of any changes by April.

ATTACHMENT 1

WDF Salmon Model Workshop

Introduction

The WDF Salmon Model Workshop was held October 20 and 21, 1981, at the North Pacific Regional Offices of the National Marine Fisheries Service. The purpose of the meeting was to review and discuss the concept behind and the application of the model for Salmon Fishing Regulation Analysis which is being used by the Washington Department of Fisheries in making recommendations to the Pacific and North Pacific Fishery Management Councils. A list of attendees for the two days is provided in Attachment A.

The meeting was chaired by Dr. Don Bevan. The first item of business was a detailed presentation by the model author, Mr. Frederick Johnson of the National Bureau of Standards, on the model and its potential application. This was followed by a presentation with discussion by the Washington Department of Fisheries personnel on various aspects of the model and its application. The two-day workshop was concluded by a discussion by participants on the acceptable uses for the model.

General Conclusions

It was concluded that the basic concepts in the model are acceptable, understanding that the model is data driven and that the better the data, the better the model will respond. It should be understood that the model is a tool to be used in the evaluation of the impact that management changes will have on the fishery. The workshop noted that the two areas of concern, how the model handles the transfer rates and in the mortality assumptions. Additionally, it was noted that because of the steady state nature of the model, its use on chinook stocks may be somewhat limited.

Specific Conclusions

- 1) That the documentation of the model and the data sources and assumptions relative to the calibration data be completed. This documentation and data should be reviewed by the various management groups and any discrepancies resolved.
- 2) That a sensitivity analysis be undertaken. This process should lead to the model being partitioned so individual components can easily be checked. The question of future validation of the model should be examined.
- 3) That pre-processors and post-processors be developed and documented for the model to simplify the process of data input and output.
- 4) So that the model can gain broader acceptance and be used by the various management groups, guidelines for maintenance of the model should be established. These guidelines should be structured to allow for agreement of calibration of the model and to allow access to the model by other groups for testing management options.

ATTENDANCE - MODEL WORKSHOP

Attachment A
10/20/81

Terry Wright	NWIFC
Mike Grayum	PFMC-SSC
David Allan Fitch	NOAA General Counsel
Jim Glock	NPFMC
Mark Hunter	WDF
Patrich Pattillo	WDF
Bill Robinson	NMFS, Alaska
Mel Seibel	ADF&G, Juneau
Mike Fraidenburg	WDF
K. Reidinger	WDF
Rich Lincoln	WDF
J. Pella	NMFS ABD
Lars Mobrand	WDF
Chuck Woelke	WDF (PFMC-SSC)
Earl Krygier	Alaska Trollers Assoc.
Donald Rosenberg	NPFMC-SSC
Al Millikan	WDF (NPFMC-SSC)
Murray Hayes	NMFS (PC-SSC)
Thomas Cooney	Quinault Dept. of Natrl Rcs Fish.
Gary Morishima	Coastal Tribes
Joe Swierzbinski	Dept. of Econ., U.W.
Gardner Brown	Dept. of Econ., U.W.
Bob Rinoo	FWS
Phil Roger	CRITFC
Stacy Hall	PFMC

Tim Roth	FWS
Ken Pitre	Canada DFO
Brian Riddell	Canada DFO
Fred Wong	Canada DFO
Bud Burgner	Fish. Rcs Institute U.W.
Fritz Funk	ADF&G
Paul Starr	Canada DFO
Clarence Pautzke	NPFMC
Fred Olney	USFWS Olympia
Pat O'Brien	CDF&G Sacramento
Steve Lewis	ODFW Newport
Ken Henry	NMFS Seattle
Don Bevan	SSC Pacific Council
Fred Johnson	NBS

ATTENDANCE - WDF/NBS Workshop

10/21/81

Terry Wright	NWIFC
Mike Grayum	PFMC-SSC
Clarence Pautzke	NPFMC
Jim Glock	NPFMC
Bill Robinson	NMFS, Juneau
Mel Seiber	ADF&G, Juneau
Kurt Railinger	WDF
Rich Lincoln	WDF
Jerry Pullas	NMFS
Earl Krygler	Alaska Trollers Assoc.
Chuck Woelke	SSC-PFMC
Don Rosenberg	SSC-NPFMC
Bud Burgner	SSC-NPFMC
Al Millikan	SSC-NPFMC
Murray Hayes	NMFS, PC-SSC
Gary Morishima	Coastal Tribes
Tom Cooney	Quinault Dept Ntrl Rcs Fish
Stacy Hall	PFMC Staff
Tim Roth	FWS Salmon Team PFMC
Dell Simmons	USFWS
Phil Roger	CRITFC
Lars Mobernd	WDF
Ron	UW
Fred Wong	DFO Canada
Ken Pitre	DFO Canada

Brian Riddel

DFO Canada

Paul Starr

DFO Canada

Ken Henry

NMFS Seattle

Don Bevan

SSC-PC

Fred Johnson

NBS

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Attachment 2

M E M O R A N D U M

TO: Herring PMT

FROM: Don Rosenberg, Chairman
Scientific and Statistical Committee

DATE: December 7, 1981

SUBJECT: Proposed Plan Revision

In accordance with the discussion below are the questions and comments the SSC would like to have the team address. It is the SSC plan to review your answer at our January meeting and to make our final recommendation to the Council at that time.

Subsistence Stocks

1. The proposal to deal with subsistence stocks and subsistence catches in the draft is not desirable.

"Subsistence stocks" should be included in biomass estimates. ABC levels should include potential yield from the subsistence stocks. However, subsistence stocks can be reserved for subsistence use and when deriving an allowable commercial harvest.

The SSC would like to have the team examine other alternatives for handling these stocks.

2. If the team feels that the procedure proposed is the only possible approach, please provide discussion on how these stocks will be monitored and what action will be taken should the biomass estimates of the stocks start to decrease.
3. As a point of clarification, please prepare examples of how excluding subsistence fisheries from calculation of OY will affect overall exploitation rates.

Spawning Biomass

1. Please provide the SSC with a discussion of alternative stock assessment procedures which could be used if aerial surveys data are not available.

Maximum Exploitation Rate

1. Please provide justification why the exploitation rate should be allowed to exceed 20 to 25%.

AIC Formula

1. Please discuss why the range 1500 to 3000 mt was selected. Why is the lower end not zero.
2. Please evaluate the possibility of simply setting AIC by applying an annual rate (perhaps the mean of years 79-81) to the total groundfish TALFF.
3. Does the stated AIC include both the domestic and foreign catch. If so, it should be stated.

Other

1. What is the reality of the assertion that the "Use or Lose" approach in the FMP may result in an economic disadvantage to the western Alaska fishermen?
2. If the above question is answered in the affirmative - what changes could be made in the FMP to provide appropriate protection to these fishermen?

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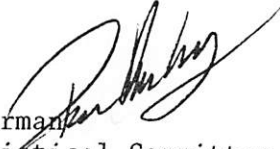
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