Agenda Item B.6.e

handed out to Council mbrs.

Statement by the Makah Tribe

Pacific Fisheries Management Council, 11 April 2002

The following statement is in response to the Quileute Tribes proposal to the Pacific Fisheries Management Council during the April 2002 meeting. That proposal was for a Tribally-operated charter sport fishery where non-Treaty fishers will be utilizing a portion of the Treaty ocean troll coho and chinook salmon quotas. While we do not oppose the concept of a Tribally-operated charter sport fishery, we recognize that there is an appropriate legal process to initiate this new fishery. Prior logistical- and legal-related details must be worked out among Federal, Tribal, and State entities prior to the initiation of this new fishery, which we believe should then be presented to the Council for consideration at the beginning of the annual PFMC process. This did not occur prior to the 2002 management season. Consequently, in recognition of the work that has not been accomplished for this proposal to move forward, the Makah Tribe must go on record at this time that we cannot support any Tribal charter sport fishery proposal for the 2002 ocean salmon season.

Thank you for your time and consideration,

Gordon Smith
Chairman
Makah Tribal Council

Tribes in agreement with this statement are listed below:

Swinomish Tribe
Suquamish Tribe
Lower Elwah Tribe
Port Gamble Tribe
Jamestown S'Klallam Tribe
Nisqually Tribe

Agenda item B3.c
(Methodology Review)
April 2002

Recommendations to the SSC

The Tribes strongly support the recommendation for the SSC to review the chinook FRAM for mark-selective fisheries. The additional complexities introduced by a multi-age class model require careful review. Although the model may not be required to model fisheries under PFMC management, it could be used to model fisheries which supply important coded-wire tag information to the coast wide database.

The Tribes also support the recommendation to form Model Evaluation Sub-Committees for the FRAM models and are committed to providing personnel to participate in the processes.

Statement by Jim Harp
For Administrative Record

NORTH OF FALCON MOTION
For The Ocean Treaty Troll Fishery
(Thursday, April 11, 2002)

Mr. Chairman,

For the 2002 salmon fishery in the area from the U.S./Canada border to Cape Falcon, Oregon, I move the following management structure be adopted by the Council for the Treaty Indian ocean troll fisheries:

The Treaty Indian ocean troll fishery would have a quota of 60,000 chinook and 60,000 coho. The overall chinook quota would be divided into a 30,000 chinook sub-quota for May 1 through June 30, and a 30,000 chinook sub-quota for the all species fishery in the time period of July 1 through September 15.

If the chinook quota for the May-June fishery were not fully utilized, the remaining fish would not be rolled over into the all species fishery. The treaty troll fishery would close upon the projected attainment of either of the chinook or coho quota. Other applicable regulations are shown in Table ? of STT Report B.6.b

Administrative Record

STATEMENT BY JIM HARP TO THE PACIFIC FISHERY MANAGEMENT COUNCIL REGARDING THE 2002 OCEAN TREATY TROLL FISHERY
Thursday, April 11, 2002

Mr. Chairman,

As I indicated in my previous statements, the treaty tribes have been working on a package of fishery restrictions that meets resource constraints of this year's forecasted abundances and fairly distributes the burden of conservation.

- The fisheries that the tribes have proposed thus far are consistent with this year's resource conditions, and take into account the need for each tribe to have some fishing opportunity in its area.

- At the appropriate time, I will offer a motion for treaty troll quotas of 60,000 coho and 60,000 chinook.

- This year the tribes have put forth a proposal for treaty troll quotas that provide some reasonable opportunity for all of the affected parties and meet the conservation needs for coho and chinook. The treaty troll quotas represent a balance of the treaty rights of the coastal tribes, as well as the four Columbia River Tribes and the Puget Sound tribes given the conservation constraints of the many salmon stocks in 2002.

- The proposed quotas for the ocean treaty Indian troll fishery meets the ESA considerations for Snake River chinook, OCN coho, and Puget Sound Chinook.

- The quota meets the commitment by the ocean tribes to the Columbia River Tribes in 1988 to not increase impacts on stocks of concern.

- The quota levels also meet the coho management objectives for 2002 for the Washington coastal stocks.

- The proposed quotas also meet the commitments made under the Pacific Salmon Treaty.

- The impacts from the proposed treaty troll quotas are for the 2002 fishery and should not become a standard for future years.

- This proposal for the treaty troll fishery is part of an evolving, comprehensive package that includes Washington coastal in-river and Puget Sound fisheries.

- The ocean treaty troll fishery presents a constrictive opportunity to exercise our treaty rights in the ocean this year. One must remember, the treaty tribes must exercise their treaty rights in their established Usual & Accustomed (U&A's) fishing areas, so the treaty troll tribes cannot simply move their fisheries to alternative locations in order to reduce impacts.

Thank you.

Provided by Jim Harp

*Administrative Record

Agenda item: B.7.b
Supplemental
April 2002

Statement of the Washington Coastal Tribes on Mitchel Act Funding

- Columbia River Stocks are critical components of the Coastal Tribes ocean fisheries.

- The Mitchel Act represents a commitment for the Federal Government to mitigate for natural production lost due to construction of the Columbia River hydropower system. This mitigation responsibility does not go away as long as the dams are there.

- Mitchel Act Funding needs to be continuous and sufficient to meet the full mitigation responsibility.

- Mitchel Act Funds should be used to produce fish but should not be used to mass mark fish for selective fisheries.

For Administrative record

Agenda item B4.I (Tentative Adoption)

Statement of Jim Harp
On the Tentative Adoption of 2002 Management Measures
By the Pacific Fishery Management Council
April 9, 2002

Mr. Chairman, I would like to make a brief statement regarding the tentative adoption of a quota for the ocean treaty troll fishery.

- This year our coho stocks are down somewhat from last year and there are specific conservation concerns for OCN stocks and for Stillaguamish and Hood Canal coho.

- For chinook we have a difficult task of meeting the very low exploitation rate objectives defined in our comprehensive Chinook harvest plan for Puget Sound chinook. We are very close to meeting those objectives with the fisheries we are currently modeling and I am confident we will be able fully meet them with a few additional fishery adjustments.

- We also have to be aware of the impact from our fishery on Columbia River Chinook. We fully intend to continue to live up to the commitment that we made in 1988 to not increase our impacts on Columbia River chinook stocks of concern.

- We have been in the process of establishing, cooperatively with the Washington Department of Fish and Wildlife, a package of fisheries that will ensure acceptable levels of impact on natural stocks of concern as well as providing opportunity to harvest hatchery stocks. In many cases we have not yet reached agreement on specific 2002 management measures, but the tribes are continuing to work cooperatively with WDFW in hopes of finding successful outcomes.

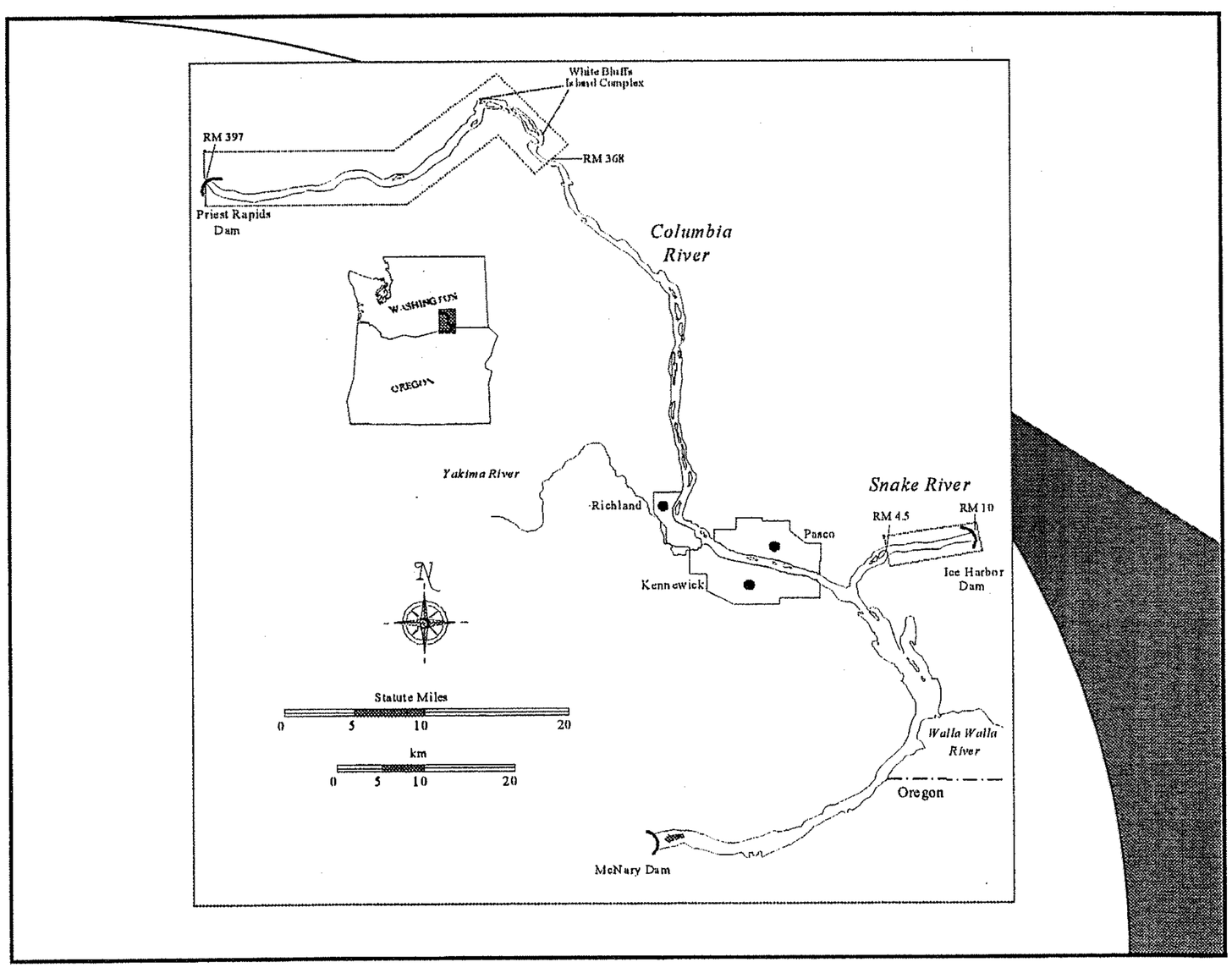
For the ocean treaty troll fishery, I would like to offer the following treaty troll management measures for tentative adoption and for analysis by the Salmon Technical Team:

A Treaty Troll Coho quota of 60,000, and a Chinook quota of 60,000.

This would consist of a May/June chinook only fishery and a July/August/September All Species fishery. Where the chinook will be split 50% into each fishery (30,000 in May/June and 30,000 in all species). Gear restrictions, size limits and other appropriate regulations would be as stated in previous Salmon Technical Team analysis.

Exhibit B.1.a.i
Supplemental Hnaford Reach Presentation
by Doug Anglin, USFWS
April 2002

Columbia River Bright Fall Chinook, the Hanford Reach, and Water Management



Water Management Issues
Adult Chinook Spawning

- Fall spawning period is October and November.
- Fall flows and chinook spawning are managed under the Vernita Bar Agreement. Vernita Bar represents only a fraction of the Hanford Reach spawning areas.
- Shaping of hourly and daily flows is conducted under the Agreement to limit spawning to areas that can be "maintained" through emergence.
- Spawning potential is intentionally limited under the Agreement and is managed as a function of water supply and anticipated power operations for the winter season.

Water Management Issues
Juvenile Chinook Rearing

- Spring rearing period is from April through June.
- Hydrosystem operations and shaping of hourly flows for power production can result in flow fluctuations ranging to 10 vertical feet in 12 hours and over 3 vertical feet per hour.
- Fluctuations cause stranding and entrapment of juveniles rearing in nearshore areas resulting in direct and delayed mortality.
- Benthic macroinvertebrates within the fluctuation zone are severely limited in density and biomass.

FWS Responsibilities

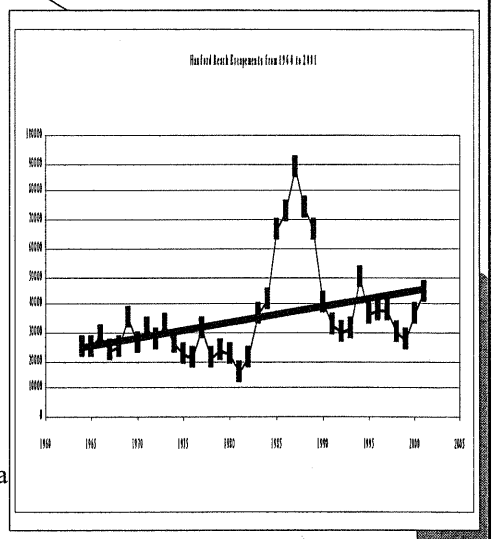
- Management of resource and ecological values of the Hanford Reach National Monument, including fall chinook salmon.
- Interim protection of the "outstandingly remarkable" values that make the Hanford Reach suitable for addition to the National Wild and Scenic Rivers System.
- Management of tribal treaty and public trust resources.
- Development of terms and conditions for incorporation into the new FERC license for Priest Rapids Hydroelectric Project (2005).

Fall Chinook Management Goals

- Develop a quantitative understanding of the effect of water management decisions on spawning habitat and productivity relative to Hanford Reach potential.
- Develop a quantitative understanding of the effect of water management and flow fluctuations on mortality of juveniles and invertebrate production.
- Optimize spawning habitat availability throughout the Hanford Reach within the framework of annual water supply conditions.
- Minimize the mortality of juveniles during the spring rearing period and preserve invertebrate food base production in rearing areas.

Upper Columbia River Bright (URBs) Fall Chinook

- Spawning typically extends from mid-October to late November.
- Emergence and rearing occur from April through June in near-shore shallow water habitats throughout the Hanford Reach.
- Juveniles out-migrate as sub-yearlings the spring/summer following the year of spawning.
- Spawning escapement has steadily increased since the early 1960s.
- Escapements peaked in the mid 1980s at over 100,000 spawners.
- URBs are a far north migrating stock caught primarily in SE Alaska and British Columbia ocean fisheries.

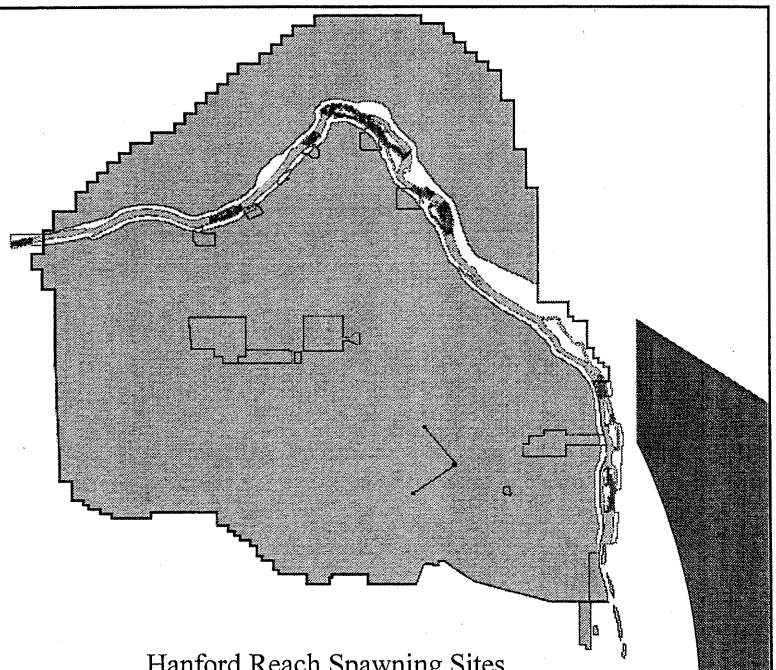


Factors Affecting Hanford Reach Fall Chinook Spawning Escapements

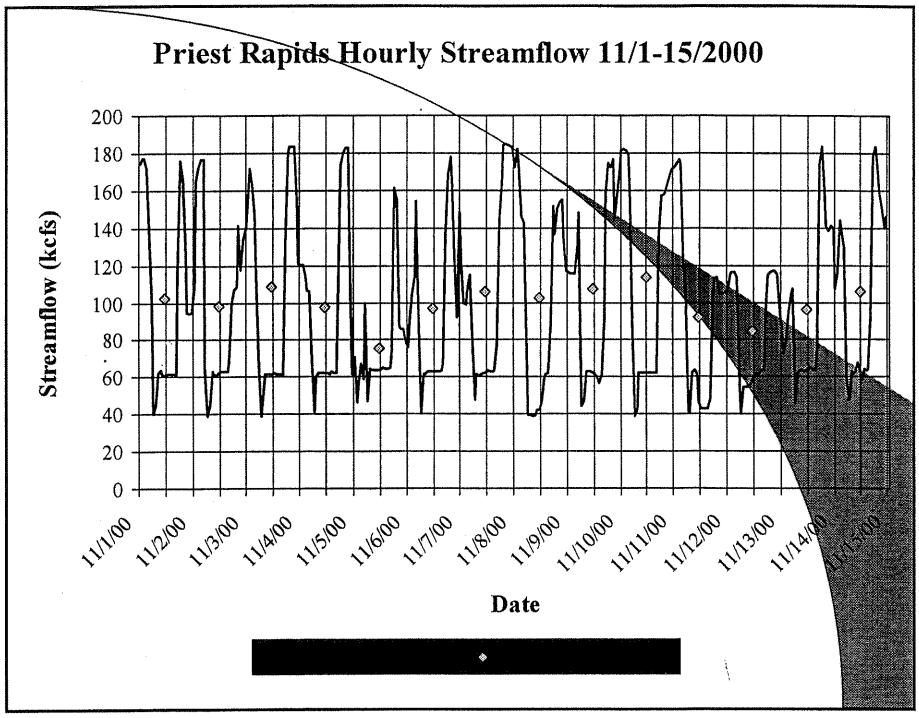
- Coastwide chinook harvest conservation program instituted through the Pacific Salmon Treaty in the mid 1980s.
- Reach population levels observed in the early 1980s were a driving force for reducing ocean exploitation rates for chinook salmon coastwide.
- During this period, inriver harvest restrictions were being implemented through US vs Oregon.
- Further harvest reductions were put in place in the mid 1990s when Snake River fall chinook were listed under the ESA (Figure 2).
- Increases in escapements may also be due to improvements in fish passage.

Fall Chinook Spawning

- Flow management is conducted under the Vernita Bar Agreement with no quantitative data regarding the effect on spawning habitat throughout the Reach, and without regard for expected escapement levels.
- Reverse load following is used to manage for lower daytime flows, shifting power production and higher flows to hours of darkness when spawning activity is thought to be minimal.
- The effect of any particular streamflow on spawning habitat is variable throughout the Reach as a result of the highly variable channel morphology that occurs in different areas.
- No quantitative assessment has been conducted to determine spawning habitat potential throughout the Reach.



Hanford Reach Spawning Sites


Priest Rapids Hourly Streamflow 11/1-15/2000
Streamflow (kcfs)
200
180
160
140
120
100
80
60
40
20
0
11/1/00
11/2/00
11/3/00
11/4/00
11/5/00
11/6/00
11/7/00
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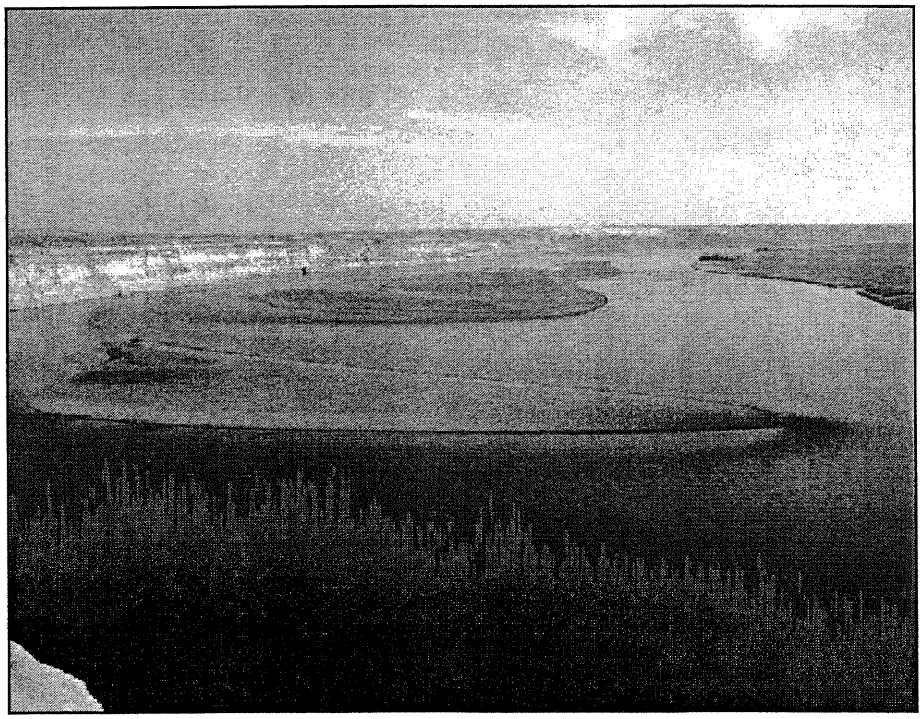
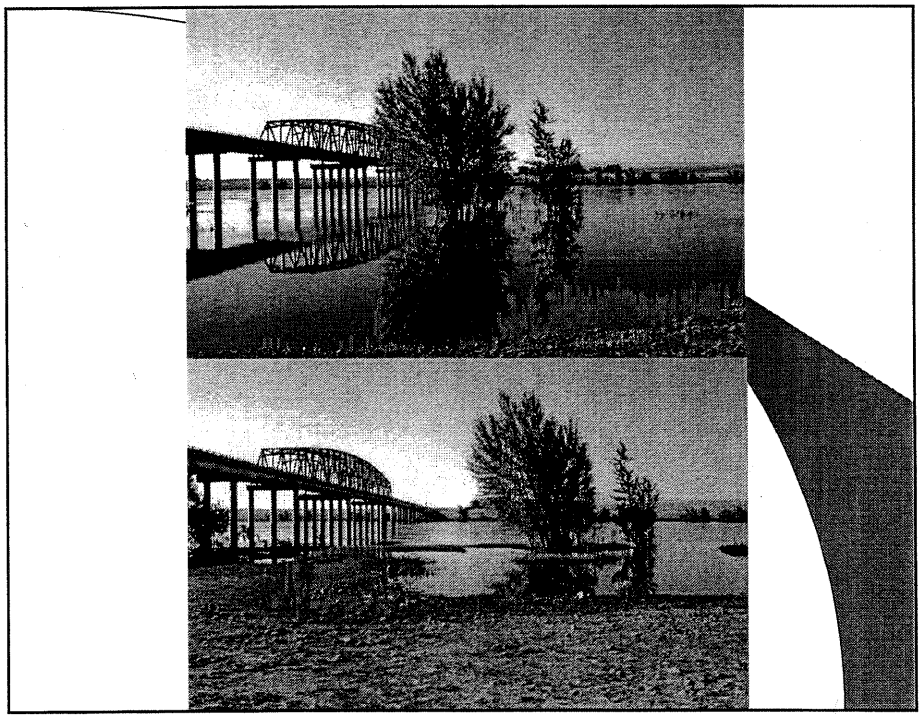
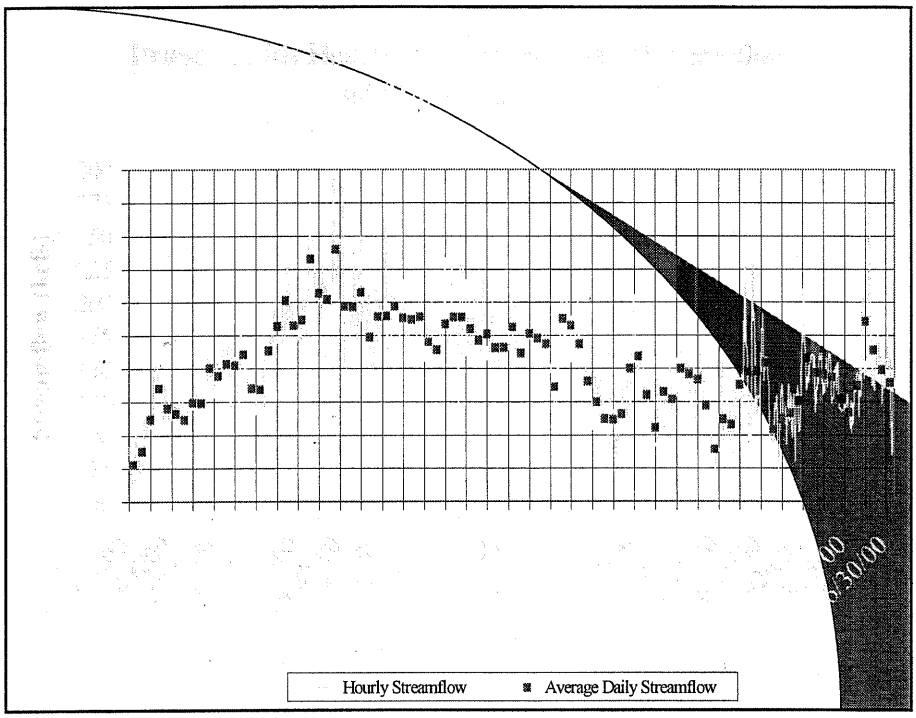
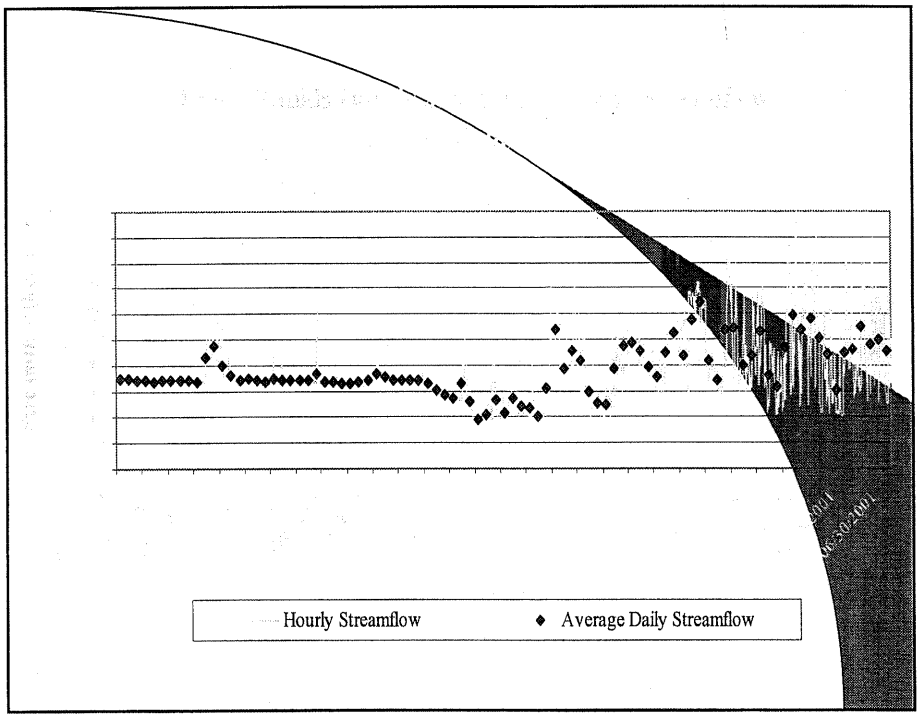


Fall Chinook Rearing

- Flow management is based partially on stranding studies funded by BPA on the effects of flow fluctuations for the middle 17 miles of the 51 mile Reach.
- System operators and fishery managers conduct technical and policy discussions each year to develop "protection" plans to "limit" juvenile chinook mortality. The primary subject of "protection" plans is the magnitude of flow fluctuations as a function of average daily flow.
- Actual operations and flow fluctuations are determined by the operators and power production needs.
- The effect of flow fluctuations on stranding, entrapment, and mortality of juvenile chinook is variable throughout the Reach as a result of the highly variable channel morphology and the amplitude and duration of flow changes.
- No spatially explicit, quantitative assessment has been conducted throughout the Reach for a full evaluation of the effect of flow fluctuations on juvenile mortality.




Hourly Streamflow
Average Daily Streamflow


Hourly Streamflow
Average Daily Streamflow

Estimated Direct Mortality of Juvenile Chinook for 17 Miles of the 51-Mile Hanford Reach 1999-2001

Year	Mortality
1999	125,695
2000	209,997
2001	1,628,878

Average Daily Flow (kcfs)	Technical Guidelines Flow Fluctuations (kcfs)			
	FWS	CRITFC	WDFW	GCPUD*
<80	10	10	10	20
80-110	10	10	20	30
110-140	10	20	30	40
140-170	20	20	40	60
>170	30	20	60	150 minimum with no fluctuation limit

*Implemented as targets for 2002

Flow Fluctuation Guidelines 2002

Conclusions

- A Reach-wide, geospatial, quantitative assessment is needed to determine production potential and the effect of flows and flow fluctuations on spawning habitat and juvenile mortality.
- Quantitative data is needed by 2003 to determine appropriate terms and conditions for the new Priest Rapids FERC License and to replace the expiring specifications of the Vernita Bar Agreement.
- Coordination is needed between upstream federal and PUD operators to manage flows through the Hanford Reach.
- Development of a quantitative tool will be useful to managers for determination of production potential, escapement goals, and for evaluation of the effect of flow management decisions on the fresh water productivity of bright fall chinook.

NATIONAL MARINE FISHERIES SERVICE REPORT ON SALMON MANAGEMENT

Situation: National Marine Fisheries Service (NMFS) will report on the status of regulatory and non-regulatory activities and issues affecting ocean salmon fishery management. In particular for this meeting, NMFS will provide a review of Columbia River flows in 2001 and the anticipated effects on juvenile outmigrant operations.

Council Task:

1. Receive information for discussion.

Reference Materials: None.

Agenda Order:

1. National Marine Fisheries Service Report on Salmon Management — Bill Robinson / Jim Ruff
   a. Columbia River Flow Issues
   b. Reports and Comments of Advisory Bodies
   c. Council Discussion

PFMC
03/26/02

Supplemental Reference Materials

1. Exhibit B.1a.i, Supplemental Hanford Reach Presentation by Doug Anglin, USFWS.

IDENTIFICATION OF STOCKS NOT MEETING ESCAPEMENT GOALS FOR THREE CONSECUTIVE YEARS

The Salmon Technical Team is responsible for identifying natural salmon stocks with conservation objectives that have failed to achieve their escapement objectives for the past 3 years. Amendment 14 identifies three exceptions to the application of the overfishing criteria: (1) Hatchery Stocks; (2) Natural stocks with low impacts from Council fisheries; and (3) Endangered Species Act (ESA) listed stocks. Hatchery stocks are excepted, because they generally do not need the protection of overfishing criteria and special Council rebuilding programs. Natural stocks with minimal Council impacts are excepted, because the Council=s ability to directly affect the escapements of these stocks through harvest restrictions is virtually nil. ESA listed stocks are exempted, because the Council considers the jeopardy standards and recovery plans developed by NMFS to be interim rebuilding plans. Table B-2 from Preseason Report I shows that 3 chinook stocks have not met their goals for 3 consecutive years. These stocks are:

Upper Columbia River summer Chinook
Grays Harbor fall Chinook
Queets spring/summer Chinook

These three stocks are exceptions under the second criteria. The STT believes that Council area fisheries continue to exert exploitation rates below 5%.

Possible causes for the failure of these stocks to meet escapement goals vary by stock.

For the Columbia Summer stock, the escapement goal of 80 to 90 thousand adults at Bonneville Dam has not been achieved since 1969. Inriver harvest has been limited to small ceremonial and subsistence fisheries since 1964. Spawning habitat of this stock has been severely reduced through dam construction (most of the historic spawning habitat was lost with the construction of Grand Coulee dam in the 1930s). Until upstream habitat is restored for this stock, the escapement goal may be reached once in several decades, but not on a continuous basis. The 2001 adult escapement of 76,200 at Bonneville dam is the closest to the escapement goal in 31 years, more than double the average escapement of 22,900 between 1970 and 2000. The forecast for 2002 is for a return and escapement similar to that observed in 2001.

For Grays Harbor fall Chinook, state and tribal managers are investigating abundance forecasts and terminal fishery management models for evidence of potential bias.

Production of Queets spring/summer chinook has been depressed in recent years; terminal run sizes have been below the escapement floor since 1997. The reason for the depressed production is not known at this time.

PFMC
04/09/02

IDENTIFICATION OF STOCKS NOT MEETING ESCAPEMENT GOALS FOR THREE CONSECUTIVE YEARS

Mr. Dell Simmons from the Salmon Technical Team (STT) reviewed the chinook and coho natural spawner escapement estimates for the Scientific and Statistical Committee (SSC). Most stocks met their escapement goals in 2001 and most are predicted to achieve their goals in 2002.

The following three stocks did not achieve their escapement goals in each of the past three years:

Upper Columbia River Summer Chinook
Grays Harbor Fall Chinook
Queets River Spring/Summer Chinook

Exploitation rates of Council managed fisheries on these stocks were less than 5% in the base period. Therefore, these stocks are exceptions under the overfishing criterion of Amendment 14.

Although these stocks are considered exceptions under Amendment 14, the SSC is concerned that these stocks have failed to meet their stated goals. The SSC recommends the cause for these failures be documented and reported by the co-managers to the Council.

PFMC
04/09/02

TABLE B-2. Achievement of **conservation objectives** for natural stocks listed in Table 3-1 of Amendment 14. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 1 of 3)

Stock and Conservation Objective (thousands of spawners; spawners per mile; impact or replacement rate)	**Observed or Projected Conservation Achievement** (postseason estimates of thousands of spawners or spawners per mile; pre- or postseason impact or replacement rate)							**Overfishing Criteria**		
	1996	1997	1998	1999	2000	2001[a/]	2002[b/]	Alert[c/]	Concern[d/]	Exception[e/]
CHINOOK										
Sacramento River Fall 122.0 - 180.0 hatchery and natural spawners	244.4	323.9	237.5	273.3	413.6	537.1	>180.0	No	No	
Klamath River Fall - no less than 35.0 adult natural spawners	81.3	46.1	42.5	**18.5**	82.7	78.1	>35.0	No	No	
Southern, Central and Northern Oregon Coast Spring and Fall No less than 60 adult spawners/mile.[f/]	133.9	93.9	88.2	105.4	76.8	168.0	>60.0	No	No	
Upper Columbia River Bright Fall 43.5 adults over McNary Dam Council area base period impacts <4%.	73.9	67.1	63.8	78.4	78.7	110.5	>43.5	No	No	✓
Upper Columbia River Summer 80.0 to 90.0 adults over Bonneville Dam. Council area base period impacts <2%. Long history of dam passage and habitat losses.	**12.3**	**19.8**	**15.2**	**22.1**	**25.3**	**55.9**	**<80.0**	Limited[e/]	Limited[e/]	✓
Grays Harbor Fall - 14.6 adult spawners (MSP)	20.2	18.2	**12.5**	**7.8**	**4.9**	**9.5**	NA[g/]	Limited[e/]	Limited[e/]	✓
Grays Harbor Spring - 1.4 adult spawners	4.5	4.5	2.3	2.9	2.9	2.9	NA[g/]	NA[g/]	No	✓
Queets Fall - no less than 2.5 adult spawners (MSY)	3.4	2.5	4.0	**1.9**	3.6	**2.1**	NA[g/]	NA[g/]	No	✓
Queets Spring/Summer - no less than 0.7 adult spawners	0.78	**0.54**	**0.49**	**0.37**	**0.25**	**0.54**	NA[g/]	Limited[e/]	Limited[e/]	✓
Hoh Fall - no less than 1.2 adult spawners (MSY)	3.0	1.8	4.3	1.9	1.7	1.9	NA[g/]	NA[g/]	No	✓
Hoh Spring/Summer - no less than 0.9 adult spawners	1.4	1.8	1.3	1.0	**0.5**	1.2	NA[g/]	NA[g/]	No	✓
Quillayute Fall - no less than 3.0 adult spawners (MSY)	7.3	5.4	6.7	3.3	3.7	3.8	NA[g/]	NA[g/]	No	✓
Quillayute Spring/Summer - 1.2 adult spawners (MSY)	1.2	**0.9**	1.6	**0.7**	**1.0**	1.2	NA[g/]	NA[g/]	No	✓

TABLE B-2. Achievement of **conservation objectives** for natural stocks listed in Table 3-1 of Amendment 14. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 2 of 3)

Stock and Conservation Objective (thousands of spawners; spawners per mile; impact or replacement rate)	Observed or Projected Conservation Achievement (postseason estimates of thousands of spawners or spawners per mile; pre- or postseason impact or replacement rate)							Overfishing Criteria		
	1996	1997	1998	1999	2000	2001[a/]	2002[b/]	Alert[c/]	Concern[d/]	Exception[e/]
COHO										
Grays Harbor - 35.4 adult spawners (MSP)	63.6	**22.5**	35.6	**29.4**	67.0	NA	>35.4	No	No	
Queets - 5.8 to 14.5 adult spawners (MSY range) Includes supplemental adults.	12.6	**1.9**	**5.5**	**5.3**	8.6	22.4	>5.8	No	No	
Hoh - 2.0 to 5.0 adult spawners (MSY range)	4.9	**1.4**	4.4	4.6	6.8	6.7	>2.0	No	No	
Quillayute Fall - 6.3 to 15.8 adult spawners (MSY range)	11.0	**4.6**	13.9	9.4	13.3	15.0	>6.3	No	No	
Western Strait of Juan de Fuca - 11.9 adult spawners	**3.7**	**4.1**	15.1	**8.0**	16.9	NA	>11.9	No	No	
Eastern Strait of Juan de Fuca - 0.95 adult spawners	1.89	1.30	1.94	1.36	2.11	NA	>0.95	No	No	
Hood Canal - 21.5 adult spawners (MSP)	37.1	96.4	90.4	**14.8**	23.4	NA	>21.5	No	No	
Skagit - 30.0 adult spawners (MSP)	**8.3**	32.6	56.0	**23.5**	58.1	NA	>30.0	No	No	
Stillaguamish - 17.0 adult spawners (MSP)	**10.4**	**10.9**	27.3	**7.0**	28.3	73.6	>17.0	No	No	
Snohomish - 70.0 adult spawners (MSP)	**53.1**	**58.2**	150.1	**61.3**	94.2	261.8	>70.0	No	No	

a/ Preliminary estimates.

b/ Preliminary approximations based on preseason abundance projections and last year's regulations or season structures.

c/ **Conservation Alert** - triggered during the annual preseason process if a natural stock or stock complex, listed in Table 3-1 of the salmon FMP, is projected to fall short of its conservation objective (MSY, MSY proxy, MSP, or floor in the case of some harvest rate objectives [e.g., 35,000 natural Klamath River fall chinook spawners]).
Actions for Stocks that are not Exceptions (beginning in 2001) - The Council will close salmon fisheries within its jurisdiction which impact the stocks, except in the case of Washington coastal and Puget Sound salmon stocks and fisheries managed under U.S. District Court orders. In these cases, the Council may allow fisheries which meet annual spawner targets developed through relevant U.S. v. Washington, Hoh v. Baldrige, and subsequent U.S. District Court ordered processes and plans, which may vary from the MSY or MSP conservation objectives. For all natural stocks which meet the conservation alert criteria, the Council will notify pertinent fishery and habitat managers, advising that the stock may be temporarily depressed or approaching an overfishing concern (depending on its recent conservation status), and request that state and tribal fishery managers identify the probable causes, if known. If the stock in question has not met its conservation objective in the previous two years, the Council will request the pertinent state and tribal managers to do a formal assessment of the primary factors leading to the shortfalls and report their conclusions and recommendations to the Council no later than the March meeting prior to the next salmon season.

d/ **Overfishing concern** - triggered if, in three consecutive years, the postseason estimates indicate a natural stock, listed in Table 3-1 of the salmon FMP, has fallen short of its conservation objective (MSY, MSP, or spawner floor as noted for some harvest rate objectives).
Actions required for Stocks that are not Exceptions - Within one year, the STT to recommend and the Council to adopt management measures to end the overfishing concern and recover the stock in as short a time as possible, preferably within ten years or less. The HSG to provide recommendations for habitat restoration and enhancement measures within a suitable time frame.

e/ **Exception** - strict application of the conservation alert and overfishing criteria and subsequent Council actions do not apply for (1) hatchery stocks, (2) natural stocks with a cumulative adult equivalent exploitation rate limited to less than 5% in ocean fisheries under Council jurisdiction during the FRAM base periods, and (3) stocks listed under the ESA.
Conservation Alert and Overfishing Concern Actions for Natural Stocks that are Exceptions (those with exploitation rates limited to less than 5% in base period Council-area ocean fisheries) - Use the expertise of STT and HSG to confirm negligible impacts of proposed Council fisheries, identify factors which have led to the decline or low abundance (e.g., fishery impacts outside Council jurisdiction, or degradation or loss of essential fish habitat) and monitor abundance trends and total harvest impact levels. Council action will focus on advocating measures to improve stock productivity, such as reduced interceptions in non-Council managed fisheries, and improvements in spawning and rearing habitat, fish passage, flows, and other factors affecting overall stock survival.

TABLE I-3. Achievement of conservation objectives for natural stocks listed in Table 3-1 of Amendment 14. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 3 of 3)

f/ Based on the sum of south/local and north migrating spawners per mile weighted by the total number of miles surveyed for each of the two components (2.2 miles for south/local and 9.2 miles for northern stocks).

g/ Preseason forecasts are not made for Washington coastal chinook stocks.

IDENTIFICATION OF STOCKS NOT MEETING ESCAPEMENT GOALS FOR THREE CONSECUTIVE YEARS

Situation: Each year, exclusive of stocks listed under the Endangered Species Act (ESA), the Salmon Technical Team (STT) must identify any of the natural salmon stocks with conservation objectives in Table 3-1 of Amendment 14 that have failed to meet their spawner escapement objective in each of the past three years (Table 3-1 is also reproduced in Appendix A of *Preseason Report I*). For any stock so identified which is not an exception to the overfishing concern, Amendment 14 requires the STT and Habitat Committee (HC) to work with state and tribal fishery managers to complete an assessment of the cause of the conservation shortfalls and provide recommendations to the Council for stock recovery. Based on those recommendations, the Council must take actions within one year of an identified concern to prevent overfishing and begin rebuilding the stock.

In the case of natural stocks which have failed to achieve their spawner objective in each of the past three years, but are exceptions under the overfishing criteria of Amendment 14, the STT, HC, and Council should: (1) confirm that harvest impacts in Council fisheries continue to be less than five percent, (2) identify the probable cause of the current stock depression, (3) continue to monitor the status of the stocks, and (4)HSP advocate measures to improve stock productivity.

Table B-2 in Attachment 1 has been extracted from the STT's Preseason Report I. It indicates the following stocks have not achieved their natural spawner escapement objectives in each of the three most recent years.

1. Upper Columbia River summer chinook
2. Grays Harbor fall chinook
3. Queets spring/summer chinook

All three of these stocks are **exceptions** under the overfishing concern criteria of Amendment 14 by virtue of historical harvest impacts of less than five percent in Council-managed ocean salmon fisheries.

Council Action:

1. **Identify naturally spawning stocks failing to meet their spawner escapement objectives in each of the past three years (exclusive of stocks listed under the ESA).**
2. **Confirm implementation of the actions required by the Council's overfishing concern procedures in Amendment 14. (For stocks that are exceptions to the overfishing concerns, these actions involve confirming continued low impacts by Council fisheries, identifying the probable cause of the depression, monitoring the status of the stocks, and advocating measures to improve stock productivity.)**

Reference Materials:

1. Table B.2 (Exhibit B.2, Attachment 1).

Agenda Order:

a. Agendum Overview — Chuck Tracy
b. Report of the Salmon Technical Team (STT) — Dell Simmons
c. Reports and Comments of Advisory Bodies
d. Public Comments
e. **Council Action:** Identify any actions necessary under the Council's Overfishing Review Procedure

over →

PFMC
03/26/02

Supplemental Reference Materials

2. Exhibit B.2.c, Supplemental SSC Report.
3. Exhibit B.2.b, Supplemental STT Report.

METHODOLOGY REVIEW PROCESS FOR 2002

The Scientific and Statistical Committee (SSC) met with Mr. Dell Simmons of the Salmon Technical Team (STT) to identify and prioritize potential methodology review issues for 2002. Mr. Simmons presented a list of eight items which the STT is scoping for possible review:

1. Klamath Ocean Harvest Model (KOHM) Effort Estimates for Ft. Bragg Area: A review of the KOHM effort submodel is needed to examine commercial fishing effort estimates, which are apparently high and unrealistic for the Ft. Bragg cell. The SSC will not have time to address this matter for the current management season, but will place priority on reviewing the problem during 2002.

2. Coho Impact Model (CIM) for California: Coho encounters modeled for California are not scaled to Oregon Production Index coho abundance as they are for fisheries north of the Klamath Management Zone.

3. Oregon Coastal Natural (OCN) Coho Prediction Methodology: The OCN coho prediction methodology has performed poorly in the past several years. The SSC views this item as important, but not one which may be easily addressed in short order. OCN predictor modifications should not take priority over other more pressing matters.

4. Oregon Department of Fish and Wildlife (ODFW) Management Plan for Lower Columbia River Coho: ODFW is developing a fishery management plan for Lower Columbia River (LCR) coho and has requested SSC review of the document. ODFW's LCR Recovery Plan includes an exploitation rate matrix which may constrain Council-managed ocean fisheries. The SSC will review the plan, including the exploitation rate matrix, when materials are made available.

5. Fishery Regulation Assessment Model (FRAM) Models for Mark-Selective Fisheries: The chinook FRAM has reportedly been modified by Mr. Jim Packer to accommodate mark-selective fisheries using methodologies similar to that of the coho FRAM. In addition to modeling harvest impacts, effects of mark-selective fisheries on the coast-wide coded-wire tag database are of concern. The SSC places high priority on this review.

6. Columbia River Fall Chinook Abundance Predictors: The current Columbia River fall chinook predictor is based on inriver run size. A more useful predictor for the purpose of fishery modeling would account for ocean abundance. The SSC will review an ocean abundance predictor for these stocks if the appropriate material is provided.

7. Coho FRAM Terminal Fisheries: The coho FRAM may need to be revised in the way it handles terminal fisheries in the final time step.

8. Protocol for Boundary Changes: The STT raised a concern that there is no standard methodology for evaluating impacts of changing management boundaries for salmon stocks. At this point, it is unclear whether this is a technical issue for further consideration by the SSC.

In March 2002, the SSC recommended formation of Model Evaluation Subgroups for both the coho and chinook FRAM models. The Model Evaluation Subgroups would serve to increase the number of people who understand the models, validate and document the current models, review changes to the models, conduct postseason evaluations, conduct sensitivity analyses to model inputs, and implement methods to quantify uncertainty of model predictions. For example, the subgroups could serve to address FRAM models for mark selective fisheries (Item 5) and coho FRAM terminal fisheries (Item 7) for the 2002 review.

The SSC requires good documentation and ample review time to make efficient use of the SSC Salmon Subcommittee's time. Agencies should be responsible for ensuring materials submitted to the SSC are technically sound, comprehensive, clearly documented, and identified by author. Materials must be received at the Council office at least three weeks prior to the review meetings, which are tentatively scheduled for October 2002.

METHODOLOGY REVIEW PROCESS FOR 2002

The Salmon Advisory Subpanel supports further work on the Fishery Regulation and Assessment Model coho model that will more accurately depict effort and encounter rates South of Humbug Mountain along with all of the other issues as outlined by the Scientific and Statistical Committee.

PFMC
04/10/02

METHODOLOGY REVIEW PROCESS FOR 2002

Situation: Each year, the Scientific and Statistical Committee (SSC) completes a methodology review to help assure new or significantly modified methodologies employed to estimate impacts of the Council's salmon management use the best available science. This review is preparatory to the Council's adoption, at the November meeting, of all proposed changes to be implemented in the coming season or, in certain limited cases, providing directions for handling any unresolved methodology problems prior to the formulation of salmon management options in March. Because there is insufficient time to review new or modified methods at the March meeting, the Council may reject their use if they have not been approved the preceding November.

In 2001, the SSC reviewed development of:

1. A revised Klamath Ocean Harvest Model (KOHM).
2. A revised coho cohort analysis for the coho Fishery Regulation Assessment Model (FRAM).

Both of these revisions were given tentative Council approval at the November meeting, and final approval at the March meeting.

The SSC will receive input from the Salmon Technical Team and provide recommendations for methodologies to be reviewed in 2002. A draft review schedule is included in Exhibit B.3.a, supplemental SSC report.

Council Action:

1. **Provide guidance to the SSC regarding priorities for methodologies to be reviewed.**
2. **Request affected agencies develop and provide needed materials to the SSC, as appropriate.**

Reference Materials:

1. Scientific and Statistical Committee Report on Methodology Reviews for 2002 (Exhibit B.3.~~a~~ b, Supplemental SSC Report). Received 4-9-02

Agenda Order:

Chuck Tracy
Pete Lawson

a. Agendum Overview
b. Report of the Scientific and Statistical Committee
c. Recommendations of the States, Tribes, and Federal Agencies
d. Reports and Comments of Advisory Bodies
e. Public Comment
f. **Council Action:** Establish 2002 Schedule and Methodologies To Be Reviewed.

PFMC
03/27/02

Supplemental Reference Materials
2. ~~Exhibit B.3.d Supplemental STT Report~~
2. SAS Supplemental Report.

SALMON MANAGEMENT OPTION HEARING SUMMARY

Date:	April 1, 2002	Hearing Officer:	Mr. Jim Lone
Location:	Chateau Westport Westport, WA	Other Council Members:	Mr. Phil Anderson Mr. Jim Harp
		NMFS:	~~Mr. Bill Robinson~~ Mr. Bob Iverson Mr. Peter Dygert
Attendance:	11	Coast Guard:	LT Brian Corrigan
Testifying:	7	Salmon Team Member:	Mr. Doug Milward
		Council Staff:	Ms. Jennifer Gilden

Organizations Represented:

Westport Charter Association, Washington Trollers Association, Grays Harbor Gillnetters Association, Willapa Bay Gillnetters Association.

Synopsis of Testimony

Of the seven people testifying:

- Three commented primarily on the commercial troll fishery.
- Two commented primarily on the recreational (charter) fishery.
- Two commented primarily on gillnet fisheries.

Special Opening Remarks

Mr. Jim Lone reported that an unusual combination of high chinook and low coho populations has resulted in increased chinook opportunity in May and June and more conservative coho opportunities during the summer months. Mr. Doug Milward (Washington Dept. of Fish and Wildlife) described the impact of the salmon management options on the fisheries in the area. He also explained the reason for the correction made to the Preseason Report II.

Commercial Troll Comments

A representative of the Washington Trollers Association reported on meetings involving Westport and Seattle trollers. He indicated that most trollers want a chinook fishery for the entire summer, and some would like to harvest coho off Area 1. However, their main concern is incidental catch of halibut. Most trollers prefer last year's Option 1, which allowed one halibut per three salmon, plus one additional halibut, with a 35-halibut cap. He noted that trollers were strongly opposed to Option 3's closure in Area 3 from 48°00" N to 48°15" N when halibut are available. The area to be closed is a very productive harvest area, particularly for chinook.

He felt the recreational fishery had a gerater impact on yelloweye rockfish than the commercial troll fishery, and trollers targeting salmon and halibut in the "hot spot" area being closed encounter almost no yelloweye because of the gear used. He noted the additional 15 miles of closure, particularly inside 50 fathoms, is an excellent chinook harvest area in May, June, and July. He also emphasized that trollers had voluntarily offered the mushroom closure (Cape Flattery Control Zone) to avoid migrating Puget Sound stocks. This also closes most of the area shown by the recreational fishery to have a high abundance of yelloweye. Another troller felt the Council should revise the wording on the halibut hotspot regulation in order to clarify what actions are prohibited in the area. He added that he would like to see an option that extends the chinook season until September 30, when there is good chinook fishing on the "prairie."

Recreational Comments

All recreational fishers present supported Option 1 north of Cape Falcon, and supported the 2 chinook limit throughout the season and a 7-day week during the May 25-June 16 chinook-only fishery. They also supported a June 30 opening for the all-species fishery. However, their highest priority is to be able to fish the entire time period and avoid an inseason closure, which requires assigning enough chinook to the fishery to ensure the full 23 days. They felt the 20,000 chinook assigned in Option 1 should be sufficient for this purpose. The recreational fishers were also concerned about opening the July-August fishery 7 days per week on August 16. In order to increase the likelihood of having the fishery open on Labor Day, they would prefer to have the 7-day week timeframe begin on August 30 rather than August 16. There was also support for a trade with the troll fishery to maximize the amount of coho available to the recreational fishery above Cape Falcon, with an exchange ratio of 4 coho per chinook.

Gillnetter Comments

The gillnetters present called for the Council to consider:

- The 2,000-chinook guideline for the traditional summer dip-in fishery, and the fact the **dip-in fishery** was proposed only for Willapa Bay. Grays Harbor gillnetters would like to have the dip-in fishery extended to Grays Harbor. One gillnetter noted that gillnetters lost their summer dip-in fishery to create the Buoy 10 fishery. One gillnetter felt the estimate of 25% of the catch from Willapa Bay stocks was inflated, based on a tag survey conducted in the early 1980s.

- Consider recent research on the beneficial effects of using **revival boxes** to reduce mortality, and possibly require trollers to test the boxes in order to see if mortality can be reduced. Gillnetters noted that revival boxes have proved to be effective in reviving spring chinook in the Columbia River tanglenet fishery, and might reduce waste of coho and other stocks in the ocean fishery.

- Consider measures to **protect Humptulips wild chinook and coho**. These populations have dropped, presumably as a result of logging. A gillnetter called for increased cooperation between the Quinault Indian Nation and the state, because the Quinaults catch a large portion of these fish.

Written Statements

1. Washington Trollers Association letter of April 1, 2002.
2. Washington Charter Association letter of April 1, 2002.

PFMC
04/08/02

SALMON MANAGEMENT OPTION HEARING SUMMARY

Date:	April 2, 2002	Hearing Officer:	Mr. Burnie Bohn
Location:	Port Office Tillamook, OR	Other Council Members:	None
		NMFS:	Mr. Chris Wright
Attendance:	18	Coast Guard:	LT Brian Corrigan
Testifying:	5	Salmon Team Member:	Mr. Mike Burner
The Oregon Department of Fish and Wildlife conducted this hearing in conjunction with the April 1st public hearing conducted by the Pacific Fishery Management Council in Coos Bay, Oregon.			
Organizations Represented: Tillamook Anglers Association, Garibaldi Marina, Salmon-Trout Enhancement Program Advisory Committee.			

Synopsis of Testimony

Of the five people testifying:

- None commented on the commercial troll fishery.
- One commented primarily on the recreational fishery.
- Four commented on Oregon inland regulations.

Special Opening Remarks

In addition to Council ocean salmon fishery options, the opening remarks included an Oregon Department of Fish and Wildlife presentation pertaining to proposed regulations for rivers and bays on the Oregon coast. Several questions concerning ocean salmon fishery modeling and relationships between ocean and inland salmon fisheries were discussed. Public testimony regarding Oregon inland regulations will be conveyed to the Oregon Fish and Wildlife Commission (OFWC). The OFWC is scheduled to adopt Oregon state-water and inland regulations for 2002 at their April 12, 2002 meeting in Portland, Oregon.

Recreational Comments

One person testified in favor of Option III for the selective coho fishery proposed between Cape Falcon, Oregon and Humbug Mt, Oregon. The later season in this option was preferred as catch rates on the North Coast can improve in late July and early August. Interest was expressed for a concurrent opening date for future recreational and commercial chinook-directed fisheries in this area. In 2002, the commercial fishery opened March 20, and the recreational fishery opened April 1.

Written Statements

None.

PFMC
04/09/02

SALMON MANAGEMENT OPTION HEARING SUMMARY

Date:	April 1, 2002	Hearing Officer:	Mr. Burnie Bohn
Location:	Red Lion Hotel Coos Bay, OR	Other Council Members:	Dr. Hans Radtke Mr. Ralph Brown
		NMFS:	Mr. Chris Wright
Attendance:	40	Coast Guard:	CMDR Jeff Jackson, Mr. Jeff Close
Testifying:	11	Salmon Team Member:	Mr. Mike Burner
		Council Staff:	Mr. Chuck Tracy

Organizations Represented:

Brookings Harbor Chamber of Commerce, Port of Brookings Harbor, Klamath Fishery Management Council, Curry County Commission, Klamath Ports Coalition.

Synopsis of Testimony

Of the 11 people testifying:

- One commented primarily on the commercial troll fishery.
- Eight commented primarily on the recreational fishery.
- Two commented on the beneficial economic aspects of both the troll and recreational fisheries.

Commercial Troll Comments

All those testifying preferred Option II for the Klamath Management Zone, and requested the following modifications:

- Increase the June quota from 1,500 to 3,000.
- Increase the July quota from 3,000 to 3,500.
- Change the landing limit from 30 per day to 30 per day or 60 per trip.

Recreational Comments

All those commenting on the central Oregon selective fishery requested the fishery remain open seven days per week, with no retention of coho on Friday and Saturday. The charter operators indicated this would keep pressure off depressed groundfish stocks, since they would be fishing for salmon on those two days instead. Some stated the wind effectively keeps the ocean closed at least two days a week anyway. Most requested the early chinook only recreational opening coincide with the commercial opening in 2003. There was no consensus on a preferred option.

Most people commenting on the Klamath Management Zone (KMZ) fishery did not support any of the three options and indicated they were not what the Klamath coalition presented to the Council in March. All requested a landing restriction of six fish in seven days. Most felt that 1,000 Klamath chinook were redistributed to river fisheries during modeling exercises that eliminated time in July and requested that they be returned to the KMZ fishery in the form of additional days in July.

Written Statements

1. Brookings Harbor Chamber of Commerce letter dated April 1, 2002.
2. Ralph Dairy letter dated April 1, 2002.

PFMC
04/09/02

SALMON MANAGEMENT OPTION HEARING SUMMARY

Date:	April 2, 2002	Hearing Officer:	Mr. Jim Caito
Location:	Red Lion Hotel Eureka, CA	Other Council Members:	None
		NMFS:	Mr. Dan Viele
Attendance:	25	Coast Guard:	Mr. Phil Duryea
Testifying:	10	Salmon Team Member:	Mr. Scott Barrow
		Council Staff:	Mr. Chuck Tracy

Organizations Represented:

Klamath Fishery Management Council, Klamath Ports Coalition, Salmon Troller Marketing Association of Ft. Bragg, Humboldt Fishermen's Marketing Association, Pacific Coast Federation of Fishermen's Association.

Synopsis of Testimony

Of the 10 people testifying:

- Four commented primarily on the commercial troll fishery.
- Six commented primarily on the recreational fishery.

Commercial Troll Comments

Of those testifying regarding the Ft. Bragg area, one requested Option I, and preferred to give up time in May rather than August if necessary to meet constraints. Most fishers requested removal of the landing restriction requiring all fish caught in the area to be landed in the area. Eureka fishers considered it a hardship to run from the Shelter Cove area 12 hours to Ft. Bragg (the only buyer in the area) rather than 8 hours to their home port of Eureka. One person requested use of on-board observers to estimate coho encounters and use that as a basis for inseason management of the May fishery, rather than the Klamath Ocean Harvest Model results, which are problematic.

One person testifying regarding the Klamath Management Zone (KMZ) fishery requested an increased landing limit of 50 fish per day to allow access to the expanded quota. Another person requested opening the California portion of the KMZ through May 31, similar to the Oregon portion.

One person was opposed to Option II for the San Francisco area, because he felt it could concentrate the fleet in the Monterey area early in the season.

Recreational Comments

One person requested the Ft. Bragg recreational fishery be continuous, with no closure in July.

All those testifying regarding the KMZ fishery requested the early portion of the fishery run through July 4. Most preferred Option III, although one preferred Option I. Most also preferred the six fish in seven days landing restriction for the entire season.

Written Statements

1. Benn Platt letter dated April 1, 2002.

PFMC
04/09/02

SALMON MANAGEMENT OPTION HEARING SUMMARY

Date:	April 3, 2002	Hearing Officer:	Mr. LB Boydstun
Location:	Community Center Moss Landing, CA	Other Council Members:	Mr. Roger Thomas
		NMFS:	Mr. Dan Viele
Attendance:	14	Coast Guard:	None
Testifying:	3	Salmon Team Member:	Mr. Allen Grover
The California Department of Fish and Game conducted this hearing in conjunction with the April 2nd public hearing conducted by the Pacific Fishery Management Council in Eureka, California.			
Organizations Represented: Small Boat Commercial Salmon Fishermen's Association (SBCSFA), Fishermen's Association of Moss Landing (FAML) and Pacific Coast Federation of Fishermen's Association (PCFFA).			

Synopsis of Testimony

Of the 5 people testifying:

- Five commented primarily on the commercial troll fishery.
- None commented primarily on the recreational fishery.

Special Opening Remarks

None

Commercial Troll Comments

One person supported Option II for the Fall Area Target Zone fishery in October inside 3 miles and requested it be extended 2 additional weeks. One person requested a 20,000 chinook quota fishery in August for the Fort Bragg area, and a 10,000 chinook quota in August for the Klamath Management Zone. He requested the quotas be adjusted to meet coho impact constraints. He also proposed a July 1-4 fishery for the Fort Bragg area to coincide with the July 4 barbeque. One person supported Option I for Ft. Bragg and requested better information on the public hearings. One person commented that new troll permits should be issued to bring younger fishers in the fishery. One charter operator requested that the commercial Fall Area Target Fishery in October between Pt. Reyes and Pt. San Pedro should be open weekdays only.

Recreational Comments

None.

Written Statements

None.

PFMC
04/09/02

PSC Manager-to-Manager Meeting

The Pacific Salmon Commission Southern Panel bilateral manager-to-manager meeting was held on March 27th in Richmond, British Columbia. The Canadian delegation was comprised of several regional management staff from DFO and their PSC Southern Panel representatives. The U.S. delegation had PSC Southern Panel members, technical staff and some of the Fraser Panel representatives that met the previous day.

The meeting began with a summary of the technical committee schedule, followed by presentations of abundance forecasts, status determinations, and fishery structure.

Both Parties emphasized that this was a *"transition phase"* of the new PST coho agreement. It is anticipated that both countries will soon ratify this agreement and it will be fully implemented in the very near future.

The coho technical committee met the previous day and reviewed the new coho FRAM model, abundance forecasts, status determinations, and fishery structure for the 2002 seasons.

The coho technical committee reported that a bilateral work plan is in the early planning stage. The coho technical committee co-chairs indicated that it would be important to establish regular communications with the PSC Southern Panel regarding task priorities and progress.

The coho technical committee's primary focus will initially be on the development of a Regional Planning Model. It will likely incorporate much of the U.S. coho FRAM model.

The Canadian Dept. of Fisheries and Oceans (DFO) personnel presented their review of the status of four coho management units: Interior Fraser (including Thompson); Georgia Basin; West Coast Vancouver Island; and the South-Central Coast. The Interior Fraser management unit is considered to be in low status and will be again limiting Canadian fishery opportunity in 2002. They indicated some uncertainty on the level of marine survival that the Interior Fraser coho will exhibit. They mentioned that last year the Thompson coho had good marine survival and the spawning escapement was about 2.5 times the forecast. However, they feel that as a precaution, poor marine survival is the approach to utilize in forecasting this year's abundance. DFO technical staff stressed the importance of the long-term rebuilding rate for this stock.

For the Georgia Basin and West Coast Vancouver Island, DFO staff indicated that their overall status is moderate with caution being extended to the fishery forecast.

The South Coast coho is considered to be in the low category. This is primary due to the marine survival appearing to continue to be low.

The DFO personnel indicated that this meeting was about three weeks early for having hard copies of their final forecasts for review. They indicated that they are just beginning their normal informal consultation process for the development of the upcoming season. The target date for plan development is mid-April. The U.S. representatives encouraged Canada to develop a more formal consultation process with an earlier timing in the near future.

Canada indicated that the Canadian fishery structure would be similar to last year (2001), again driven by the Interior Fraser coho and West Coast Vancouver Island (WCVI) Chinook. DFO indicated that effort would be taken to constrain exploitation rates to 3% on Interior Fraser and 15% on WCVI Chinook.

The U.S. presented an overview of general forecast methodology and stock status for Puget Sound and Washington coastal management units for coho. Information was given that all Puget Sound management units were in moderate status, except Skagit, which was abundant. The Washington coastal management units were all in the abundant category except for Grays Harbor, which was moderate.

Questions from the Canadian delegation centered on marine survival forecast methodology, forecast error, and mass-marking rates for hatchery stocks.

The U.S. managers provided information on the current fishery options adopted by PFMC in March and stressed that these options were still under discussion within the North of Falcon process. Emphasis was given that the U.S. management objectives are expressed in total fishing mortality rates and that the comprehensive package of fisheries were still under development.

Questions from Canada focused on Endangered Species Act (ESA) constraints and their deviation, methodology for estimating coho bycatch in sockeye and chum fisheries, whether coho bycatch are ceilings, and whether DNA sampling of coho bycatch occurs.

PFMC
April 9, 2002

NORTH OF CAPE FALCON

The initial 2002 North of Falcon (NCF) meeting was held at the Portland Airport Sheraton Hotel on March 20th & 21st. Then, the second meeting was held at the SeaTac Holiday Inn on April 2nd through 4th.

The primary purpose of the NCF meetings are to review the range of salmon options adopted during the PFMC March meetings, to begin to incorporate proposed terminal area fisheries, and to develop a package of ocean and terminal area fisheries for consideration at the April PFMC meeting.

The initial NCF meeting was well attended by the various fisheries interest groups from Washington, Oregon, Idaho, and the Treaty tribes. The NCF process is comprised of the states, tribes, federal fishery management entities and also the recreational and commercial fishing interest groups. The meeting is an open public forum, except for the Tribal/State government negotiations.

The three ocean options adopted by PFMC were the results of the preseason forecasts for the Oregon Coastal Natural (OCN) coho and the constraints of the Snake R. fall chinook. Other stocks of concern are the forecasts for the Hood Canal and Stillaguamish coho and Puget Sound Chinook.

The range of options adopted by PFMC for the ocean fisheries establish the "sideboards" for quotas to be considered following public review. The options above are from the most "liberal" to the most "conservative" for the ocean fisheries for the 2002 season. The most conservative option must meet the conservation constraints for the "weakest" stocks of coho and chinook.

The first North of Falcon meeting focused on narrowing the options for the ocean troll and sport fisheries and defining terminal fishing measures that would meet the management objectives for NCF management units. The first NCF meeting concluded with joint Tribal/State input for the second model run assignment to the technical staff. This model run was available to all participants prior to the second NCF meeting.

The second NCF session focused on the Puget Sound management objectives, chinook model runs, and resolution of some of the shaping of fisheries to meet Puget Sound coho stock exploitation rate objectives for 2002, i.e. Hood Canal and Stillaguamish.

Following the second NCF meeting, the options for the 2002 ocean fisheries were narrowed to Option I for the non-Indian recreational and commercial fisheries for both chinook and coho. The Treaty ocean troll fisheries options for 2002 are Option I for chinook and Option II for coho and for the 2002 treaty ocean troll fisheries, Option I for chinook and Option II for coho.

We have spent considerable time in the NCF process defining specific fishing strategies to address conservation concerns for some Puget Sound coho and chinook stocks. We can report considerable success in development of fishing plans for 2002. We are continuing to meet this week and work out some final details and are optimistic a comprehensive set of fisheries both in the ocean and inside areas will fully meet our management objectives.

Briefly summarized by Jim Harp.
not read into the record.

Exhibit B.4.f
Supplemental KFMC Report
April 9, 2002

KLAMATH FISHERY MANAGEMENT COUNCIL
REPORT and RECOMMENDATIONS
to the
PACIFIC FISHERY MANAGEMENT COUNCIL

1) The KFMC discussed the coho situation regarding Oregon Coastal Naturals and Rogue/Klamath impacts and its effects on fisheries for Klamath River fall chinook.

2) The KFMC recommends using chinook quotas in the Fort Bragg troll fishery under Option 1 prior to August 1st, to achieve coho impact ceilings as determined by the PFMC.

3) The harvest sharing of Klamath fall chinook between Oregon and California under this option is not intended to be a long-term allocation, but is in response to coho concerns.

4) Reductions in the allowable ocean harvest of Klamath River fall chinook will result in a reduction in the total allowable harvest, thereby reducing the Tribal allocation.

5) The KFMC recommends full utilization of the harvestable surplus of Klamath River fall chinook. However, other FMP conservation objectives and ESA requirements may constrain seasons more than the objective for Klamath River fall chinook. If, as a result, the set-aside for ocean fisheries outside the KMZ sport fishery cannot be met, the fish should be utilized in the following order: (1) fisheries within the KMZ, (2) a full Klamath River sport fishery, and if additional harvestable fish remain, (3) Klamath River Tribal fisheries. Any such transfer has no effect on any party's share, entitlement, or allocation in any future year.

6) The California Department of Fish and Game re-commits to monitor the river recreational fishery real-time, and to make projections of season catch available to the KFMC to facilitate the river fisheries' fully accessing any unused harvestable surplus.

Read by
Dan Viele

SALMON TECHNICAL TEAM REPORT ON TENTATIVE ADOPTION OF 2002 OCEAN SALMON MANAGEMENT MEASURES FOR ANALYSIS

UPDATE ON ESTIMATED IMPACTS OF MARCH OPTIONS

There was a reporting error in the Coho Fishery Regulation Assessment Model (FRAM) the Salmon Technical Team (STT) used during the March meeting. The error was in the reporting of stock specific total mortality outputs. Dropoff mortality, a part of non landed catch mortality, was not included in the total mortality computations. This error was discovered too late too late to make corrections to Preseason report II , but was documented and corrected in a memo from the Team that accompanied the Pre II mailout. The tables in Pre II effected by this error are table 4 (page 24) and table 6 (page 27).

Under Council direction, the STT reviewed the Fort Bragg effort predictor for 2002. The predictor used for this area in evaluating the March Options was based on 1986—1990 observed levels of effort, and was in addition to the effort expected in the San Francisco and Monterey areas. The STT believes that in 2002 the boats that would participate in a Fort Bragg fishery would come out of the fleet currently operating off San Francisco and Monterey, and the question is what proportion of the fleet will transfer to Fort Bragg. If all three areas are open, we will assume that the current fleet will distribute itself as it did in the 1986—1990 period, the most recent five-year period when all three areas were simultaneously open. We believe this approach may overestimate effort off Fort Bragg due to the loss of fleet infrastructure in that port, and if so there will be a corresponding underestimate of effort off San Francisco. If the Fort Bragg effort predictor is biased high it will result in a conservative estimate of both OCN coho and Klamath Fall chinook impacts, and an overestimate of Sacramento Fall chinook escapement but this is not a concern for 2002 where Sacramento Fall chinook escapement is expected to be far above the escapement goal range. For 2003, the STT and SSC will review the Fort Bragg predictor.

SALMON ADVISORY SUBPANEL

PROPOSED
OCEAN SALMON MANAGEMENT MEASURES
FOR TENTATIVE ADOPTION
2002

April 9, 2002

TABLE 1. SAS proposed tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002.
(Page 1 of 4) **04/09/02 0856**

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 150,000 coho.
   Trade: 10,000 coho to recreational fishery for 2,500 chinook.
2. Non-Indian Troll TAC: 82,500 chinook and 27,500 coho.
3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in Jul. through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.

U.S.-Canada Border to Cape Falcon

May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). See gear restrictions (C.2). Cape Flattery and Columbia River Control Zone closed (C.4). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery; State regulations require that fishers fishing within this area and intending to land salmon south of Cape Falcon notify ODFW before they leave the area. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

July 1 through earliest of Sept. 30 or 32,500 chinook quota (C.7). Cape Flattery Control Zone closed (C.4). Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7).

- U.S.-Canada Border to Leadbetter Point subarea - All salmon except coho. Gear restricted to plugs 6 inches or longer (C.2).
- Leadbetter Point to Cape Falcon subarea - All salmon. Sub area quota of ~~7,500~~ 7,000 marked coho (all retained coho must have a healed adipose fin clip). No more than four spreads per line (C.2). Columbia River Control Zone closed (C.4). State regulations require fishers fishing within this subarea to land **coho** south of Leadbetter Point. State regulations require that fishers fishing within this subarea and intending to land **chinook or coho** south of this subarea notify ODFW before they leave the subarea.

South of Cape Falcon

Cape Falcon to Florence South Jetty

March 20 through July 21; Aug. 1 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. [**Note:** Incidental retention of halibut is not allowed until May 1.]

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Florence South Jetty to Humbug Mt.

March 20 through June 30; July 11 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2).

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Humbug Mt. to OR-CA Border

March 20 through May 31. All salmon except coho. See gear restrictions (C.2).

June 1 through earlier of June 30 or 3,000 chinook quota; July 1 through earlier of July 31 or 1,500 chinook quota; Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 60 fish per trip. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

A. SEASON DESCRIPTION (Continued)

OR-CA Border to Humboldt South Jetty

Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of ~~20~~ fish per day. See gear restrictions (C.2). ~~State regulations require that fishers fishing within this area and intending to land salmon south of this subarea notify CDFG before they leave the area.~~ When the fishery is closed between the OR-CA border and Humbug Mt. and open to the south, Oregon State regulations provide for the following action: Vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival. Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Klamath Control Zone closed (C.4.).

Horse Mt. to Pt. Arena (Fort Bragg)

July 22 through earlier of July 31 or 10,000 chinook quota; Aug. 1 through Sept. 30. All salmon except coho. All fish caught in this area must be landed within the area. See gear restrictions (C.2).

Pt. Arena to Pigeon Point (San Francisco)

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

Oct. 1 through Oct. ~~18~~, Monday through Friday. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

Pigeon Pt. to U.S.-Mexico Border

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions in C.2.

~~For 2003, Council to consider opening an experimental fishery from April 15 through April 30 south of Pt. Sur (C.7.c).~~

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *U.S. Canada Border to Leadbetter Point, July 1 to September 8:* Gear restricted to plugs six inches or larger.

c. *Leadbetter Point to Cape Falcon, July 1 to September 8*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

d. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

d. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: **Options I and II** - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;
Option III - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°15'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 20,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 20,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 20,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

a. At the March 2002 meeting, the Council will consider inseason recommendations to: (1) open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon, and (2) identify the areas, season, quota, and special regulations for any experimental April fisheries (proposals must meet Council protocol and be received by November 2002).

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 150,000 coho.
   Trade: 2,500 chinook to non-Indian troll for 10,000 coho.
2. Recreational TAC: 67,500 chinook and 122,500 marked hatchery coho.
3. No Area 4B add-on fishery.
4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of about 20,000 coho. All retained coho must have a healed adipose fin clip.

.....

U.S.-Canada Border to Cape Falcon

May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week) (C.4.a). Chinook salmon only; 2 fish per day. ~~Columbia Control Zone closed (C.3.a).~~

U.S.-Canada Border to Cape Alava (Neah Bay Area)

July 7 through earlier of Sept. 8 or 12,560 coho subarea quota, 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during Council managed ocean fishery. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,600 chinook.

Cape Alava to Queets River (La Push Area)

July 7 through earlier of Sept. 8 or 2,960 coho subarea quota; Sept. 21 through earlier of Oct. 6 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook.

Queets River to Leadbetter Pt. (Westport Area)

June 30 through earlier of Sept. 8 or 42,060 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 32,000 chinook.

Leadbetter Pt. to Cape Falcon (Columbia River Area)

July 7 through earlier of Sept. 30 or 59,450 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 11,200 chinook.

.....

South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting.

Selective fishery for marked hatchery coho:

July 7 through earlier of Aug. 4 or a landed catch of 25,000 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon (Continued)

Humbug Mt. to Horse Mt. (Klamath Management Zone)
May 15 through June 30 and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).

Horse Mt. to Pt. Arena (Fort Bragg)
Feb. 16 through July 17 and Aug. 1 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pt. Arena to Pigeon Pt. (San Francisco)
Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pigeon Pt. to U.S.-Mexico Border
Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Between Cape Falcon , Oregon and Point Conception, California*: Anglers must use no more than 2 single point, single shank, barbless hooks.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Off California between Horse Mt. and Pt. Conception*: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: **Options I and II** - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;
Option III - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

In addition, the following guidance is provided to NMFS:

a. In the overall recreational chinook quota north of Cape Falcon, 10,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 10,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 10,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

Dr. Don McIsaac, Executive Director
Pacific Fishery Management Council

State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME
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GRAY DAVIS, Governor

March 26, 2002

MAR 27 2002

VIA FACSIMILE / U.S. MAIL

Dr. Don McIsaac, Executive Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, Oregon 97220-1384

Re: California Concerns Regarding Estimated Coho Impacts off California

Dear Mr. McIssac:

I would appreciate your distributing this letter to the Council Members for discussion at our April Meeting. This is in follow-up the concerns that I expressed at the March meeting. In the following I would like to address this subject and provide a recommendation about how to proceed with adopting commercial fishing regulations off California for 2002.

My concerns relate to 1) the commercial fishing effort estimates generated by the Klamath Ocean Harvest Model (KOHM); 2) the lack of stock scaling in the model used by the Salmon Technical Team (STT) to estimate coho encounters in California fisheries; and 3) the analysis of impacts within the Coho FRAM.

KOHM: The model is primarily used to estimate fishery impacts on Klamath River fall chinook. However, one of the model's outputs is the estimated amount of fishing effort that will occur in each time/area/fishery stratum under a given regulation option. For the Fort Bragg area (and other areas as well) historic data (pre-1990s) are used to estimate fishing effort due to the lack of 1991 forward data. For example, when a full month of fishing is modeled for the 2002 troll season in the Fort Bragg area, the model estimates about 4,000 days of commercial effort. At the same time, the estimates for the San Francisco and Monterey areas are about 2,000 and 4,000 days, respectively. It is unlikely that for the month of May there will be a total of 10,000 days fished south of Horse Mountain if all areas are open; the estimate is 6,000 days if Fort Bragg remains closed. In order for 4,000 days to be generated in the Fort Bragg area, local boats will

We understand that the CIM, as it applies to California fisheries, has been reviewed and endorsed by the STT in recent years. However, we are not aware that they have discussed it in the context of stock scaling that takes place within the Coho FRAM.

In conclusion, we believe there are two problems in the modeling of coho impacts off California this year: 1) an exaggerated estimate of fishing effort in the Fort Bragg cells under a seasonal management approach, and 2) the lack of stock scaling in the CIM as it applies to California fisheries. We do not perceive a problem in the Coho FRAM, except that stock scaling in the FRAM combined with the lack of stock scaling in the CIM results in exaggerated impacts of OCN and Rogue-Klamath coho stocks in years of low hatchery coho abundance.

Recommendation: Our primary concern for 2002 management of our commercial fishery is to provide for 1) a full season of fishing south of Point Arena and 2) greater commercial fishing opportunity in the Fort Bragg area than in the recent past. Both fisheries have been documented to target Central Valley fall chinook, a stock that has been exceeding its goal range by very large amounts in recent years (see attached graph). There is also an abundance of Klamath River fall chinook remaining in all of our options for harvest in ocean fisheries. In fact, the estimated coho impacts off California are resulting in a major shift of Klamath River fall chinook catch to Oregon fisheries under either options 2 or 3 due to coho constraints (see Pre-season Report No. 2).

The seasonal management option for the Fort Bragg area, with 31 days of unrestricted fishing during the month of May, results in an estimated harvest rate for OCN coho of 2.0% (which, if true, represents the single largest impact on the stock on the entire west coast). We propose to control the amount of effort that will occur in that fishery by applying a chinook quota, a constrained season structure (e.g., application of daily or weekly trip limits), or a reduced season length that will result in OCN and Rogue-Klamath impacts that are slightly above those that we agreed to as a ceiling in our March meeting. We do not propose to modify the CIM until further analysis can be conducted of the model and the input data. This analysis should include the basis of the early season coho encounter rate estimates for the California troll fishery, which was closed to May coho fishing starting in 1983. We agree that the final regulations should keep us well under the 15% OCN and 13% Rogue-Klamath ceilings approved for ESA

purposes. Before next November, we would like to have CDFG staff work with ODFW staff in reviewing and updating the CIM as it applies to California fisheries and bring the results of that analysis back to the SSC and Council for use in modeling 2003 fisheries.

Thank you all for considering our request.

Sincerely,

LB Boydstun, Representative
Intergovernmental Affairs Office

Enclosure

Predicted Coho Encounters in Troll Fisheries

$$D_{xz} = (V_{xz})(C_{xz})(M_T)$$

$$C_{xz} = (R_{xz})(T)(G)$$

Where

C_{xz} = predicted coho per vessel day for time period x and catch area z

R_{xz} = mean observed coho per vessel day during 1986-92 coho fisheries *(scaled to OPI abundance north of the KMZ)*

T = chinook targeting credit (25% reduction)

G = four-spread gear reduction credit (*Oregon troll fisheries*)

CTM

Mortality Rate in Troll Fisheries

$$D_{x,z} = (V_{x,z})(C_{y,x,z})(M_T)$$

$$M_T = M_h + M_{do}$$

Where

M_T = mortality rate - 31%
M_h = hooking mortality rate - 26%
M_{do} = drop-off mortality - 5%

CIM

FRAM Catch Estimates by Stock and Fishery

$$C_{s,f} = BPER_{s,f} * N_s * S_f$$

Where:

$C_{s,f}$ Catch of stock ***s*** in fishery ***f***.

$BPER_{s,f}$ Base Period Exploitation Rate for stock ***s*** in fishery ***f***. 1986-91

N_s Number of fish in the cohort for stock ***s***.

S_f Impact scalar for fishery ***f*** relative to the base period.

Impact Scalar - *S*

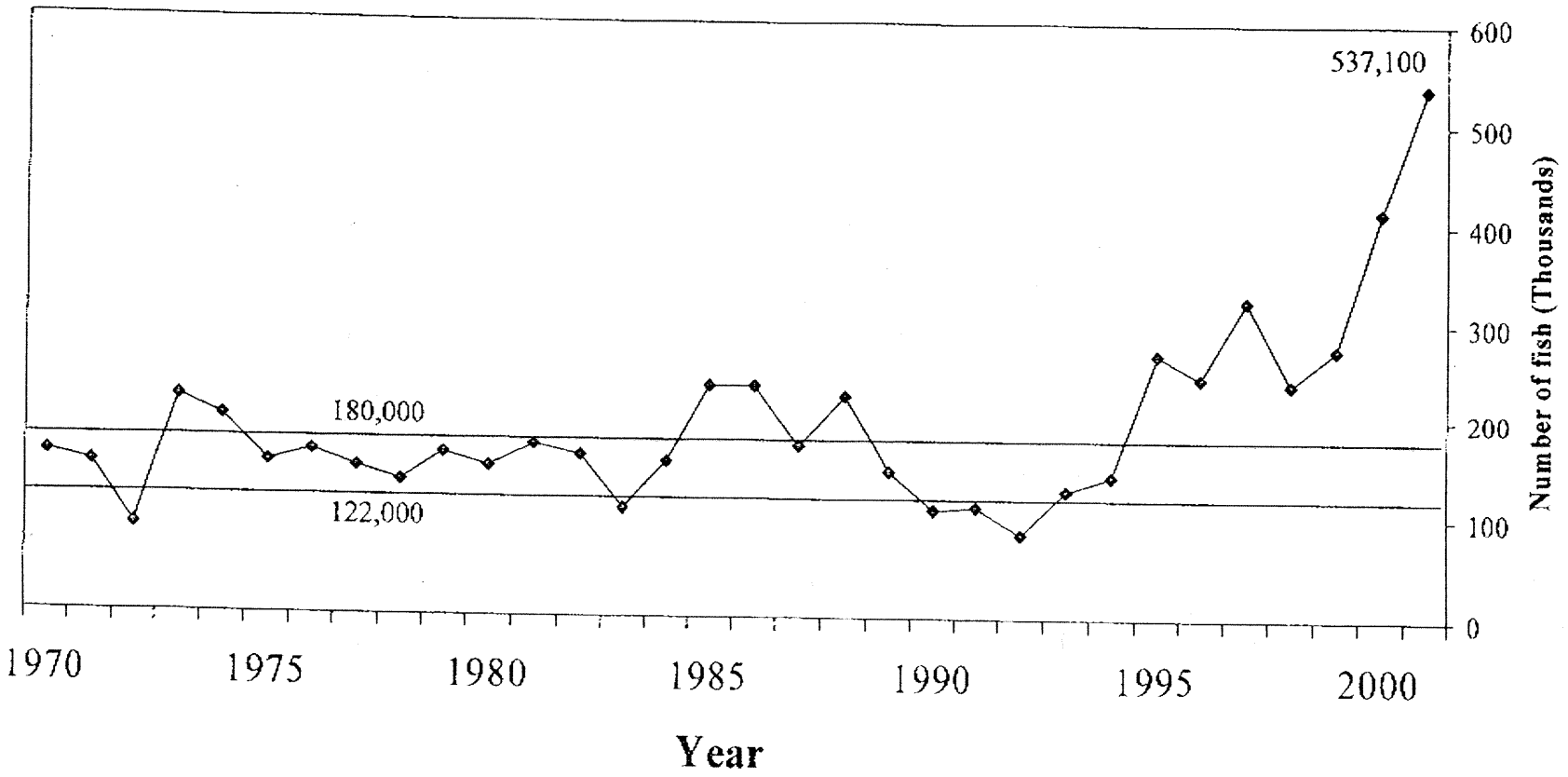
Effort-based fisheries: *S* calculated by modeler and is based on projected effort versus based period effort.

Catch-based fisheries: *S* calculated by FRAM as follows. Applies to quota and non-retention fishery mortality.

$$S_f = \frac{Quota_f}{\sum_s C_{s,f}}$$

Where: $C_{s,f}$ = Catch of stock *s* in fishery *f* during the base period.

Spawning escapements of adult Sacramento River fall chinook



B.4.j.
Supplemental CDFG Overhead
April 2002

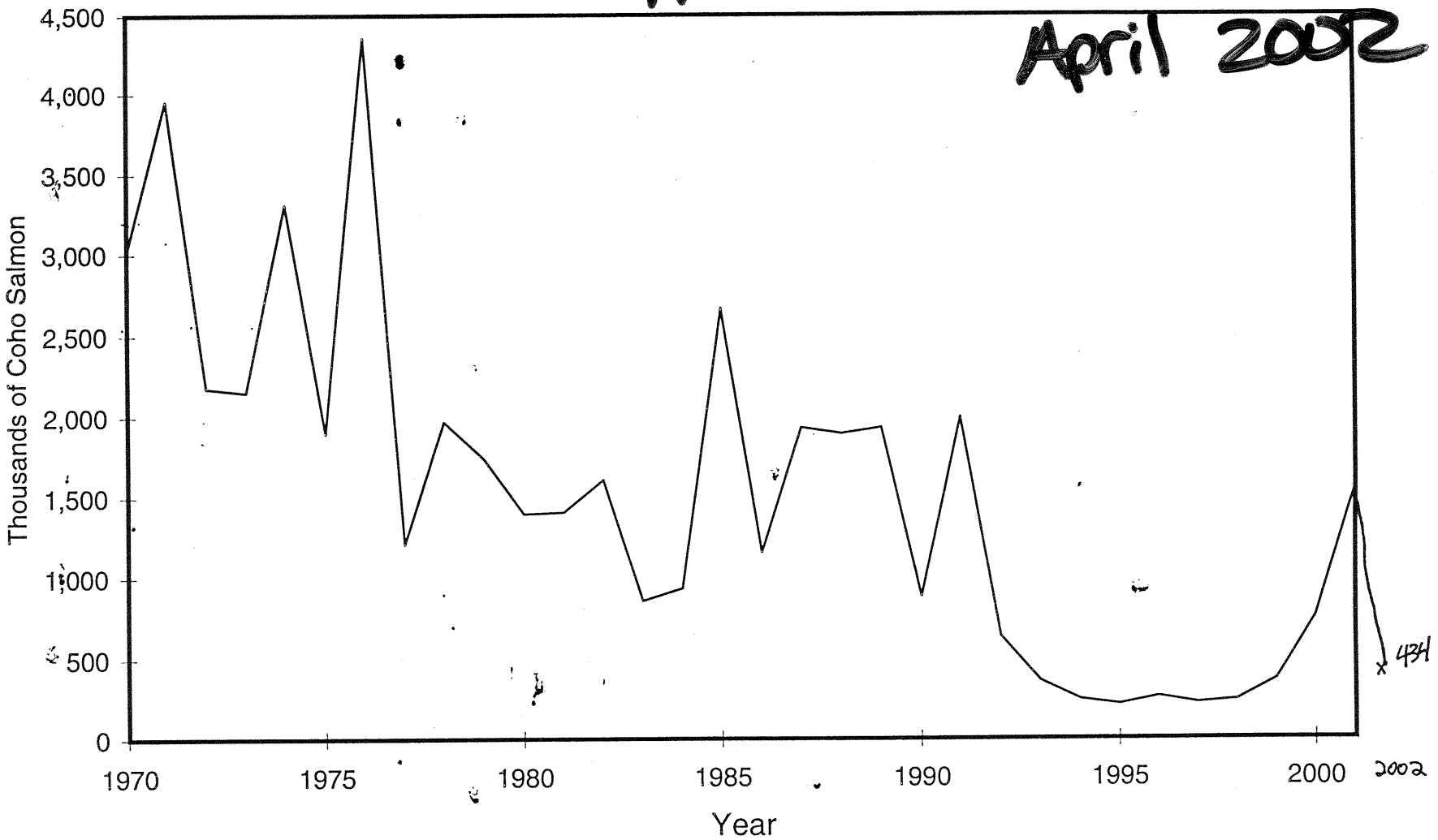


Figure III-1. Oregon production area coho salmon abundance estimates by stratified random survey (SRS) accounting methods, 1970-2001.

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I would appreciate your distributing this letter to the Council Members for discussion at our April Meeting. This is in follow-up the concerns that I expressed at the March meeting. In the following I would like to address this subject and provide a recommendation about how to proceed with adopting commercial fishing regulations off California for 2002.

My concerns relate to 1) the commercial fishing effort estimates generated by the Klamath Ocean Harvest Model (KOHM); 2) the lack of stock scaling in the model used by the Salmon Technical Team (STT) to estimate coho encounters in California fisheries; and 3) the analysis of impacts within the Coho FRAM.

KOHM: The model is primarily used to estimate fishery impacts on Klamath River fall chinook. However, one of the model's outputs is the estimated amount of fishing effort that will occur in each time/area/fishery stratum under a given regulation option. For the Fort Bragg area (and other areas as well) historic data (pre-1990s) are used to estimate fishing effort due to the lack of 1991 forward data. For example, when a full month of fishing is modeled for the 2002 troll season in the Fort Bragg area, the model estimates about 4,000 days of commercial effort. At the same time, the estimates for the San Francisco and Monterey areas are about 2,000 and 4,000 days, respectively. It is unlikely that for the month of May there will be a total of 10,000 days fished south of Horse Mountain if all areas are open; the estimate is 6,000 days if Fort Bragg remains closed. In order for 4,000 days to be generated in the Fort Bragg area, local boats will

have to come out of retirement and additional boats shift northward from the more southern areas or southward from more northern areas (with a corresponding decrease in effort in the southern and northern areas). Some effort shift is likely to occur, particularly among local boats that have been forced to fish in more southern or northern areas in recent years. The model does not presently attempt to estimate any effort shifts and uses just the historical average observed per day open. This is an example of one of the problems of our past management practice of closing fisheries where seasonal management has been the norm; it precludes the generation of data that can be used to re-open them.

Coho Impact Model (CIM): The STT uses this model to estimate coho mortalities off Oregon and California by time and area. The formula, as it applies to Oregon and California, is attached. The model uses output from the KOHM to estimate effort in fishing days (V) in individual California fishing areas and applies a coho catch per unit of effort, based on historic contact rates, to estimate coho encounters. These encounters are multiplied by hook-and-release and drop off mortality rate factors to estimate fishery deaths, which are fed into the Coho FRAM. The problem with the CIM, as it applies to California, is that it is not scaled to estimated coho abundance--the OPI in particular, which it is used for Oregon fisheries north of the Klamath Management Zone (KMZ). That is, the coho contact rates north of the KMZ are a function of projected OPI coho abundance. Thus, regardless of the projected abundance of coho in the ocean, the California portion of the CIM will estimate the same coho impact for a given level of effort. The scaling problem, in our view, has two consequences: 1) at high coho abundance levels, California coho catches are likely underestimated, and 2) at low abundance levels (like this year), the situation is reversed.

In our opinion, the CIM assumption for California fisheries needs to be reassessed. We suspect the problem can be addressed by forcing the regression line of the available data points through zero (which is what is done in the KOHM for estimating effort in a cell) or categorizing low, medium and high abundance tiers. However, this is a matter best left up to the STT and the Scientific and Statistical Committee (SSC).

Coho FRAM: We suspect the problem of estimating coho impacts off California is exacerbated in low OPI abundance years by stock scaling (N) within the FRAM (see attached). That is, the relative abundance of coho stocks in the model changes with the stock projections (i.e, the stock proportions are not fixed). Thus, in a year of relatively low hatchery coho abundance compared to OCN and/or Rogue-Klamath coho, the latter stocks will show up in relatively high proportions off California, which is the situation this year.

We understand that the CIM, as it applies to California fisheries, has been reviewed and endorsed by the STT in recent years. However, we are not aware that they have discussed it in the context of stock scaling that takes place within the Coho FRAM.

In conclusion, we believe there are two problems in the modeling of coho impacts off California this year: 1) an exaggerated estimate of fishing effort in the Fort Bragg cells under a seasonal management approach, and 2) the lack of stock scaling in the CIM as it applies to California fisheries. We do not perceive a problem in the Coho FRAM, except that stock scaling in the FRAM combined with the lack of stock scaling in the CIM results in exaggerated impacts of OCN and Rogue-Klamath coho stocks in years of low hatchery coho abundance.

Recommendation: Our primary concern for 2002 management of our commercial fishery is to provide for 1) a full season of fishing south of Point Arena and 2) greater commercial fishing opportunity in the Fort Bragg area than in the recent past. Both fisheries have been documented to target Central Valley fall chinook, a stock that has been exceeding its goal range by very large amounts in recent years (see attached graph). There is also an abundance of Klamath River fall chinook remaining in all of our options for harvest in ocean fisheries. In fact, the estimated coho impacts off California are resulting in a major shift of Klamath River fall chinook catch to Oregon fisheries under either options 2 or 3 due to coho constraints (see Pre-season Report No. 2).

The seasonal management option for the Fort Bragg area, with 31 days of unrestricted fishing during the month of May, results in an estimated harvest rate for OCN coho of 2.0% (which, if true, represents the single largest impact on the stock on the entire west coast). We propose to control the amount of effort that will occur in that fishery by applying a chinook quota, a constrained season structure (e.g., application of daily or weekly trip limits), or a reduced season length that will result in OCN and Rogue-Klamath impacts that are slightly above those that we agreed to as a ceiling in our March meeting. We do not propose to modify the CIM until further analysis can be conducted of the model and the input data. This analysis should include the basis of the early season coho encounter rate estimates for the California troll fishery, which was closed to May coho fishing starting in 1983. We agree that the final regulations should keep us well under the 15% OCN and 13% Rogue-Klamath ceilings approved for ESA

purposes. Before next November, we would like to have CDFG staff work with ODFW staff in reviewing and updating the CIM as it applies to California fisheries and bring the results of that analysis back to the SSC and Council for use in modeling 2003 fisheries.

Thank you all for considering our request.

Sincerely,

LB Boydstun, Representative
Intergovernmental Affairs Office

Enclosure

Predicted Coho Encounters in Troll Fisheries

$$D_{xz} = (V_x)(C_{xz})(M_z)$$

$$C_{xz} = (R_{xz})(T)(G)$$

Where

C_{xz} = predicted coho per vessel day for time period x and catch area z

R_{xz} = mean observed coho per vessel day during 1986-92 coho fisheries *(scaled to OPI abundance north of the KMZ)*

T = chinook targeting credit (25% reduction)

G = four-spread gear reduction credit (*Oregon troll fisheries*)

Mortality Rate in Troll Fisheries

$$D = (V)(C)(M_T)$$

$$M_T = M_h + M_{do}$$

Where

M_T = mortality rate - 31%

M_h = hooking mortality rate - 26%

M_{do} = drop-off mortality - 5%

CIM

FRAM Catch Estimates by Stock and Fishery

$$C_{s,f} = BPER_{s,f} * N_s * S_f$$

Where:

$C_{s,f}$ Catch of stock *s* in fishery *f*.

$BPER_{s,f}$ Base Period Exploitation Rate for stock *s* in fishery *f*. 1986-91

N_s Number of fish in the cohort for stock *s*.

S_f Impact scalar for fishery *f* relative to the base period.

Impact Scalar - *S*

Effort-based fisheries: *S* calculated by modeler and is based on projected effort versus based period effort.

Catch-based fisheries: *S* calculated by FRAM as follows. Applies to quota and non-retention fishery mortality.

$$S_f = \frac{Quota_f}{\sum_s C_{s,f}}$$

Where: $C_{s,f}$ = Catch of stock *s* in fishery *f* during the base period.

Spawning escapements of adult Sacramento River fall chinook

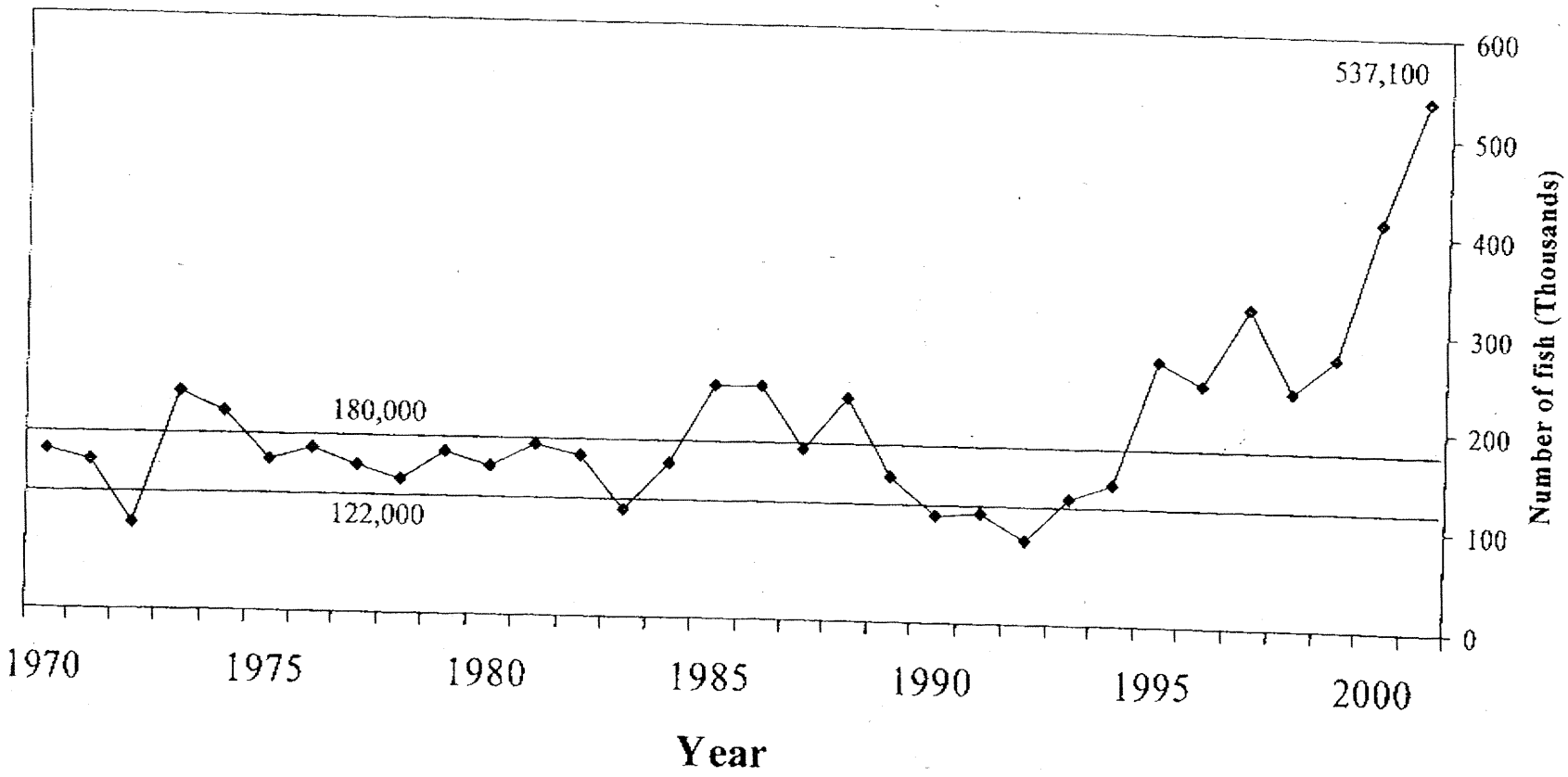

Exhibit B.4.k
Supplemental Public Comment
April 2002

Subject: [Fwd: Ocean Sport Season]
Date: Tue, 26 Mar 2002 16:28:26 -0800
From: "PFMC Comments" <pfmc.comments@noaa.gov> Internal
To: chuck.tracy@noaa.gov

-------- Original Message --------
Subject: Ocean Sport Season
Date: Mon, 25 Mar 2002 22:43:25 EST
From: <MayleD@aol.com>
To: pfmc.comments@noaa.gov

I would like to comment on the three options for the proposed sport salmon season for the Klamath Management Zone. I live in Crescent City, California and I am disappointed that all three options have the season closed for the entire month of July. Many people visit our town over the July 4th weekend for the purpose of salmon fishing. By closing the season during this period, it will create a negative financial impact on our community. It will also deprive visitors of a sport they traditionally participate in. I would recommend reducing the weekly limit from 6 to four fish and allow the season to stay open until July 7th. This would protect the stock and allow visitors to fish over a traditional holiday. Thank you for the opportunity to comment,

Richard Mayle
605 Tan Oak Dr.
Crescent City, Ca.
95531
mayled@aol.com

To: Pacific Fisheries Management Council

From: William & John Keller - Vessels ITC II & Frances M

Re: Comments on 2002 Ocean Troll salmon options

We operate 2 small surf dories primarily out of Cannon Beach and the Columbia River. We also purchase a wholesale fish dealer license and have been working to re-establish a market for troll caught coho for the last 2 years.

It is critical to our marketing that we have at least some coho available. Having no troll coho for several years prior to the last couple of years virtually destroyed the market for troll coho. We had to basically start over.

The effort and catch rate for coho in recent years has been quite low. This was caused in large part by the low market price and the general lack of any buyers. If we have another year with no coho at all, we will lose a lot of the credibility and momentum we have built up in the last 2 years with our marketing efforts.

We believe that it should be possible to have a limited fishery which includes hatchery coho North of Cape Falcon. Restrictions designed to slow the catch rate, such as 4 days on and 3 off, with a limited number of coho per vessel per opening would presumably be necessary due to the limited number of coho available.

If the ocean is closed to sport fishing Fridays and Saturdays, as it has been in some prior years, allowing commercial fishing on those days would reduce friction.

Thank you for your consideration.

William M. Keller

John M. Keller

We are in support of option 2 with the following changes to June and July

- Increase June quota from 1500 to 3000
- Increase July quota from 3000 to 3500
- Daily limit of 30 fish and a trip limit of 60 fish

The KMZ weather is different from other areas on the coast. The Month of June and July usually does not allow us much time on the water because of high winds. The weather will dictate how much time we get to fish. We will probably not get to fish 10 days out of each month due to the high winds, and about 15 days of each month we will only be able to fish 4 or 5 hours in the morning before being blown off for the day. On the half days we are charged for a full day of fishing effort.
This is a good opportunity for Brookings fishermen to participate in a high abundance year of Chinook.

- Increase June from 1500 to 3000
- Increase July quota from 3000 to 3500
- Daily limit of 30 fish and a trip limit of 60 fish

So this will help limit effort.

Ralph Dairy F-V Tammy B.
John Fraser F/V N Jord
Scott Baly F/V Frances

Ralph Dairy
96465 Coverdell Rd #45
Brookings OR 97415
(541) 469-5900
Fishing Vessel Tammy B
4/1/02

Brookings-Harbor
CHAMBER OF COMMERCE
"Working To Help Our Businesses Grow"

April 1, 2002

Pacific Fisheries Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384

Dear Sir:

The Board of Directors of the Brookings-Harbor Chamber of Commerce has reviewed the Klamath Management Zone Ocean Recreational Fisheries options. We understand setting fishing guidelines is a complicated task. As a result, our guiding principle is to create a sustaining system that maximizes the number of days on the water for sport fishermen while setting catch limits in attractive and reasonable numbers. We are aware of the long term view and do not want to increase days on the water or catch limits today at the cost of those elements in the future.

We are aware that an error was made related to closing the July fisheries in this region due to Coho impacts. As a result of this closure one thousand Klamath Chinook salmon were designated to other user groups. Insufficient credits were given for the loss of these fish in any of the proposed options. As a result, we believe that the options should be revisited to increase days on the water and catch limits. Specifically, we believe an option that sets catch limits at two (2) fish a day with six (6) fish in seven (7) days, and sets days on the water at nothing less than Option III, is advisable.

We join the Port of Brookings Harbor in supporting Option 2 for Commercial Fisheries.

Finally, we would like to thank you for your hard work. This is an inordinately complicated area with many competing and vocal parties. Your service and commitment to fairness is appreciated.

Very truly yours,

Peter C. Spratt
President

P.O Box 940 • Brookings, Oregon 97415 • (541) 469-3181
E-mail: chamber@wave.net • Fax (541) 469-4094 • www.brookingsor.com

April 1, 2002

TO: PACIFIC FISHERIES MANAGEMENT COUNCIL

FROM: BEN PLATT
COMMERCIAL FISHERMAN
F/V "KAY BEE"
315 N. HAROLD ST. #B
FT. BRAGG, CA 95437

RE: CALIFORNIA 2002 SALMON SEASON OPTIONS

DEAR COUNCILMEMBERS:

I WOULD LIKE TO MAKE A FEW POINTS REGARDING THE SALMON SEASON OPTIONS.

1. I and many other salmon fishermen who are busy readying for the upcoming season and are unable to attend this meeting are strongly in favor of the options which include more time north of Pt. Arena. For those of us who make our homes north of Pt. Arena, it puts quite a strain on our families to have to spend so much of the season far away from home. Many fishermen have had to quit the business in recent years for this reason.

I believe the options which include May, August and September north of Pt. Arena would help in this regard and also spread out the fleet, putting less pressure on local markets to the south.

If it is not possible this year to open all three of these months, I would choose August and September over May, since there is more chance to have good weather for fishing.

(continued)

2. I am strongly opposed to the option of opening the season in May from Pigeon Point to the Mexican border for these reasons:

A. It forces most of the fleet into a small area, primarily Monterey Bay. If there are no fish in this area, the fleet will virtually starve for the two months until the Pt. Arena opening on July 1.

B. I see no reason why this line has to move from Pt. San Pedro, and there are a significant number of smaller boats in Half Moon Bay who would not be able to "day fish" for the first two months under this option.

* This option is totally unacceptable and unnecessary.

3. I, and many other fishermen, are strongly in favor of the options which include the opening on May 1 from Pt. Arena to the Mexican border. This would allow us much more area to look for salmon, spread the fleet out much more in the opening months, and reduce the pressure on local fresh markets; which in turn could mean a more favorable price for our products at the dock.

In closing, I strongly recommend the opening on May 1 from Pt. Arena to the South, and the openings in August and September north of Pt. Arena.

Sincerely,
Ben Dibb

WESTPORT CHARTERBOAT ASSOCIATION
P. O. BOX 654 • WESTPORT, WASHINGTON 98595

APRIL 1, 2002

TO: PACIFIC FISHERY MANAGEMENT COUNCIL

FROM: STEVE WESTRICK, PRESIDENT
WESTPORT CHARTERBOAT ASSOCIATION

TESTIMONY ON THE 2002 SALMON SEASON OPTIONS

The Westport Charterboat Association supports Ocean Option I (150,000 Coho and 150,000 Chinook) north of Cape Falcon. We support the 2 Chinook limit throughout the season and a 7-day week during the May 25 – June 16 Chinook-only fishery. We support a June 30th opening for the all-species fishery. However, we do have the following concerns:

CHINOOK QUOTA ASSIGNED TO THE CHINOOK-ONLY FISHERY

Our highest priority for this fishery is to be able to fish the entire time period and avoid an in-season closure. We want the public to feel confidant that they can plan a trip for any day during that period and not be in danger of having their trip cancelled. That requires assigning enough Chinook to this fishery to ensure the full 23 days. The 20,000 in Option 1 should more than guarantee the full time period. Any Chinook remaining in the sub-quota after the early season could then be "rolled" into the later season beginning June 30TH if needed. This could be done in the same manner as is done in the Troll fishery. If there are higher impacts on critical Chinook stocks in July-August than in May-June then we could model 10,000 of the Chinook in the July-August fishery. That way they could be rolled over without increasing impacts over pre-season estimates.

SEVEN DAY PER WEEK FISHERY IN AUGUST

We are concerned about opening the July-August fishery 7 days per week on August 16TH. The recreational goals and objectives in the Salmon Framework Management Plan (FMP) place a high priority on a Memorial Day to Labor Day recreational salmon season. Although the low Coho quota this season may preclude fishing beyond mid-August, getting much beyond that date would be far less likely if we went to a 7-day week on the 16TH. We would rather have the 7-day week timeframe be initiated on August 30TH rather than August 16TH.

CHINOOK TRADE TO THE TROLL FISHERY FOR COHO

We support a trade with the Troll fishery to maximize the amount of Coho available to the recreational fishery above Cape Falcon. This species is far more critical to the recreational fishery in order to keep the season length as long as possible. The exchange ratio should be 4 Coho per Chinook as required by the Salmon FMP.

Thank you for continuing to have Public Hearings in Westport and for considering our views.

Memo

4-01-02

To: Pacific Fisheries Management Council

Submitted at: April 1, 2002 Hearing
Chateau Westport
Westport, Washington

From: Washington Trollers Association

Subject: Preferred 2002 Troll Option

Because of the unknown in the available coho TAC, the WTA has not been to come to agreement on the best season structure. We hope more definitive information will be available at tomorrow's North of Falcon meeting. We have a WTA Board meeting on April 6 where we hope to decide on a final structure.

Halibut - last year's regulation of one halibut per three salmon plus one additional halibut and a 35 halibut cap is the preferred option of the Westport Port.
Halibut - Option 3, the additional closure in Area 3 from 48N 00' to 48N 15' is unnecessary for the following reasons

- The real impact on the yelloweye is from the recreational fishery. Anecdotal information indicates that often the recreational fisher would catch halibut and then move to another area to catch there limit of yelloweye.
- Our fishermen indicate that when catching salmon/halibut in the "highspot" area being closed, they encounter almost no yelloweye. A reason for this is that our array of gear drag the line back and make it difficult to get to the bottom area where the yelloweye live.
- I'm sure a review of the landing data for the area will show insignificant landings of yelloweye.
- The additional 15 miles of closure, particularly inside of 50 fathoms (generally inside of abundant yelloweye areas) is a known as an excellent chinook harvest area in May, June and July.
- The Trollers have voluntarily offered the closure of the "mushroom" area to avoid PS stocks migrating through the Straits. This closes the bulk of the area that the recreational fishery has shown is high abundance of yelloweye
- In summary, we ask that you <u>not</u> adopt option 3.

Exhibit B.4.b
Supp Public Comment

National Audubon Society

Ten Mile Creek Sanctuary
P. O. Box 496
Yachats, OR 97498
(541) 547-4227

Fax: (541) 547-3229

To: Pacific Fisheries Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384

From: Paul Engelmeyer
NW Policy Analyst
Living Oceans Program
National Audubon Society

April 2, 2002

Dear Mr. McIsaac:

Audubon welcomes this opportunity to comment on the proposed 2002 salmon fishing season. There are a number of issues and concerns that I would like to drawn to your attention.

Coho Salmon

It is essential that the Council maximize spawner abundance on this Oregon Coastal Natural (OCN) coho 2002 brood year. The parental spawning escapement that produced the OCN coho salmon returning in 2002 was approximately 35,000 coast-wide excluding the lake component. If you review the recently released ODFW document entitled, **'Population Assessment: Oregon Coast Coho Salmon ESU'** by Thomas Nickleson you will see that it clearly indicates that these populations have just barely reached abundance's that are out of the **'Critical Threshold'** designation (see enclosed graphs Figure 8, 10, and 12). Although I still have a number of concerns about the document, the analysis shows that these stocks are in the initial stage of recovery, with many basins having spawning densities of only 5 to 10 fish per mile.

I urge the Council, when considering the 2002 salmon fishing options to review the Scientific and Statistical Committee's (SSC) supplemental technical memo dated 11/2000 which states **"...The SSC stresses that**

when stocks are in the 'Critical' parental spawner category there is no biological justification for allowing harvest." This level of concern is not just limited to the SSC. In the 9/6/2000 letter from the Independent Multidisciplinary Science Team (IMST) to ODFW, the team recommended the following, **"...Because spawner abundance has been extremely low and recruitment for all three recent brood years (1995, 1996, 1997) has been below replacement, fishery impacts should be as close to zero as possible until established signs of recovery are observed."** So, when there are 4 fish per mile there is no biological justification for allowing harvest but now that we are at 5 to 10 salmon per mile we can increase our impacts to the next level even though there are miles of available habitat. The proposed management regime is planned over-fishing in order to have access to hatchery fish, as well as ignoring the millions of dollars being spent by federal and state agencies to recover our coastal wild populations. Once again, I urge the SSC and STT to review the enclosed Figures 8, 10, and 12 and discuss the harvest rate triggers that are in Amendment 13 and the Lower Columbia River Coho management matrix.

In Preseason Report 1, Stock Abundance Analysis for 2002 Ocean Salmon Fisheries the document Table A-1 acknowledges that state and federal agencies have yet to define Conservation Objectives for a number of stocks such as:

- Columbia River coho (naturals) listed under Oregon's Endangered Species Act (ESA)
- Southern Oregon/Northern CA Coastal /ESA listed 5/97
- Central CA Coast Coho / ESA listed 10/96
- Central Valley Spring-run chinook /ESA listed 9/99
- CA Coastal chinook /ESA listed 9/99

It is critical that the Council moves forward with the development of Conservation Objectives as well as defining exploitation rates for all stocks impacted by Council management, such as Klamath Spring Chinook and Sacramento Fall Chinook.

I urge the Salmon Technical Team and the SSC to consider including the Lower Columbia River coho (naturals) as two subunits of the OCN coho management regime. There must be consistency with the state of Oregon's salmon recovery strategy for all naturally spawning coho. When there is discussion concerning rebuilding strategies and/or increasing exploitation rates, all indicators of recovery must be acknowledged and included in the

analysis. The IMST has recently completed the report entitled, **'Salmon Escapement and Harvest Management: Implications for Rebuilding Stocks of Wild Salmon in Oregon'** which clearly identifies the criteria to evaluate recovery - abundance, productivity, spatial and temporal structure, genetic diversity and ecological functions.

Selective Fisheries Considerations

Audubon is very concerned about the regional fisheries management's ability to appropriately analyze and manage selective fisheries. The risks and potential consequences of multiple selective fisheries create difficulties in modeling non-landed mortalities. The region has moved into a new fisheries management regime with inadequate review and analysis. We urge the Council to develop a comprehensive review of nonretention fisheries management. This review should include independent peer review process in addition to the Council's SSC and STT advisory bodies.

In the 9/6/00 letter to ODFW, the Independent Multidisciplinary Science Team concluded; **"Current estimates of mortality from non-retention fisheries are highly variable, subject to substantial uncertainty, and cannot be characterized as accurate. Experimental methods are limited and subject to many sources of error. Even low incidental mortality rates of OCN coho salmon could significantly slow recovery for depressed stocks. Scientific review of hook and release mortalities should be an on-going process, as environmental conditions change."**

Ocean Productivity and Environmental Conditions

Recent information concerning ocean productivity and environmental conditions indicates that despite record levels of upwelling off the Oregon coast during spring-summer 2001, the conversion of coho smolts to jacks appears to have been poor this year. This information has significant ramifications for salmon populations' region-wide. There is potential for negative impacts to returning adults 2002. Short-term fluctuations in ocean productivity and adverse environmental conditions dictate the need to ensure maximum spawner abundance in order to protect genetic integrity of the numerous ESA listed salmon populations. I urge the state and federal agencies to take a precautionary approach when projecting wild salmon abundance over the next few brood cycles.

Recommendations:

Audubon urges the Council to endorse the following recommendations,

1) Support Option lll, the most conservative option for the 2002 salmon-fishing season, in order to maximize spawner abundance and protect genetic integrity of the numerous ESA listed salmon populations throughout the region.
2) Initiate an independent comprehensive review of the regional non-retention fisheries management regime.
3) Initiate technical analysis for including the Lower Columbia River coho (naturals) into the OCN coho sub-unit management regime, and develop a timeline for the establishing Conservation Objectives for stocks impacted by Council management that have no spawning escapement goal.
4) Utilize a precautionary approach when ESA listed salmon populations are being impacted or when knowledge base is limited.

Sincerely,

Paul Engelmeyer
Living Oceans Program
Audubon

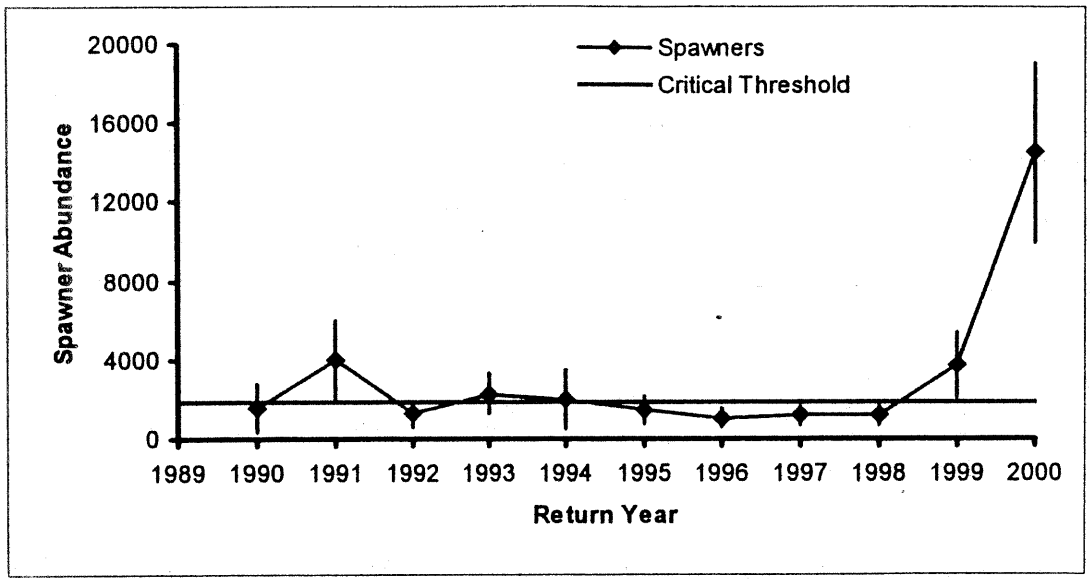

Figure 8. Trend in adult coho salmon abundance relative to the critical population level for the Nehalem Complex. Error bars are 95% confidence limits.

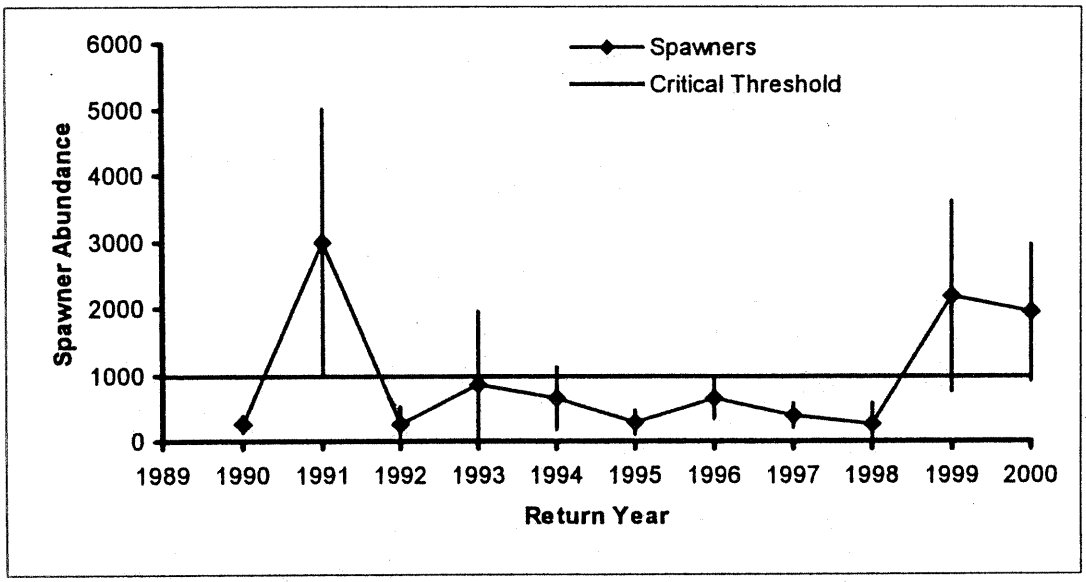

Figure 10. Trend in adult coho salmon abundance relative to the critical population level for the Tillamook Complex. Error bars are 95% confidence limits.

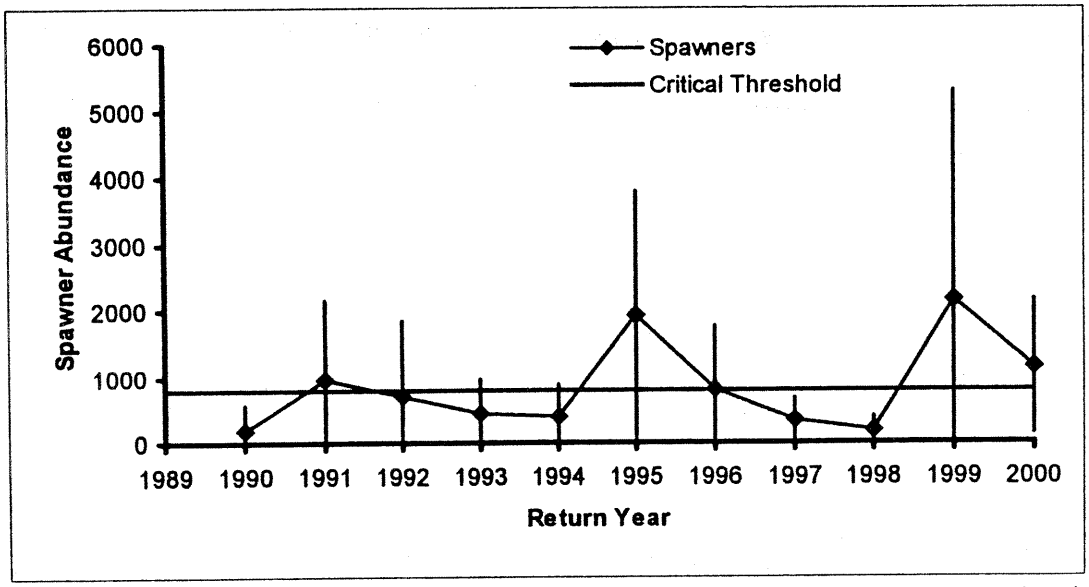

Figure 12. Trend in adult coho salmon abundance relative to the critical population level for the Nestucca Complex. Error bars are 95% confidence limits.

Annual estimates of wild coho spawner abundance in coastal river basins within the Oregon Coastal ESU, 1990-99.

Gene Conservation Area, Basin/Group	Spawner Abundance by Return Year									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999[a]
North Coast:										
Necanicum R. & Elk Creek	191	1,135	185	941	408	211	768	253	946	708
Nehalem R.	1,552	3,975	1,268	2,265	2,007	1,463	1,057	1,173	1,190	3,540
Tillamook Bay	265	3,000	261	860	652	289	661	388	271	2,177
Nestucca R.	189	728	684	401	313	1,811	519	271	169	2,109
Sand Lake & Neskowin Cr		240	24	41	77	108	275	61	0	45
Miscellaneous	-	204	-	-	-	-	-	-	-	
Total	**2,197**	**9,282**	**2,422**	**4,508**	**3,457**	**3,882**	**3,280**	**2,146**	**2,576**	**8,580**
Mid Coast:										
Salmon R.	385	39	28	364	107	212	271	237	8	124
Siletz R.	441	984	2,447	400	1,200	607	763	336	394	997
Yaquina R.	381	380	633	549	2,448	5,668	5,127	384	365	2,596
Devil's Lk.& Beaver Cr.	23	-	756	500	1,259	-	1,340	425	1,041	3,397
Alsea R.	1,189	1,561	7,029	1,071	1,279	681	1,637	680	213	1,996
Yachats R.	280	28	337	287	67	117	176	99	102	151
Siuslaw R.	2,685	3,740	3,440	4,428	3,205	6,089	7,625	668	1,089	2,796
Miscellaneous	207	-	700	180	250	231	1,188	13	71	77
Total	**5,591**	**6,732**	**15,370**	**7,779**	**9,815**	**13,605**	**18,127**	**2,842**	**3,283**	**12,126**
Umpqua:										
Lower Umpqua R. & Smith R.	589	1,316	1,759	4,804	1,689	6,803	4,904	935	5,118	2,447
Mainstem Umpqua	455	-	192	1,431	1,240	352	339	397	444	1,261
Elk & Calapooya Cr.	185	-	-	-	708	2,315	1,709	196	379	443
South Umpqua	2,508	2,284	-	2,415	579	755	1,685	512	1,807	1,235
Cow Creek			201	661	269	1,124	1,112	193	678	1,197
Total	**3,737**	**3,600**	**2,152**	**9,311**	**4,485**	**11,349**	**9,749**	**2,233**	**8,426**	**6,526**
Mid-South Coast:										
Coos Bay & Big Cr.	2,273	3,813	16,545	15,284	14,685	10,351	12,128	1,127	3,167	4,867
Coquille	2,712	5,651	2,115	7,384	5,035	2,116	16,169	5,720	2,466	3,021
Total	**4,985**	**9,464**	**18,660**	**22,668**	**19,720**	**12,467**	**28,297**	**6,847**	**5,633**	**7,888**
Oregon Coastal ESU	**16,510**	**29,078**	**38,604**	**44,266**	**37,477**	**41,303**	**59,453**	**14,068**	**19,816**	**35,177**

a *Estimates for 1999 are preliminary.*

5/4/00

DEFINITIONS OF FISHING GEAR

The Council's March options do not require any changes to the annual definitions of fishing gear. Hook restrictions, such as the California proposal for circle hooks with no offset between the point and shank, can be implemented in the annual regulations (Tables 1 and 2) under the areas in which they apply. Unless new information or a new proposal emerges during public review, Council staff recommends the gear definition used from 1996-2001, as provided below, be adopted for 2002 regulations.

Commercial Troll Fishing Gear

1996-2001 Regulation

(Allows trolling or mooching off California.)

> **Troll fishing gear** for the fishery management area (FMA) is defined as one or more lines that drag hooks behind a moving fishing vessel.
>
> In that portion of the FMA off Oregon and Washington, the line or lines must be affixed to the vessel and must not be intentionally disengaged from the vessel at any time during the fishing operation.

Recreational Fishing Gear

1996-2001 Regulation

(Allows trolling or mooching and only one rod and line north of Point Conception when fishing for or possessing salmon.)

> **Recreational fishing gear** for the FMA is defined as angling tackle consisting of a line with no more than one artificial lure or natural bait attached.
>
> In that portion of the FMA off Oregon and Washington, the line must be attached to a rod and reel held by hand or closely attended; the rod and reel must be held by hand while playing a hooked fish. No person may use more than one rod and line while fishing off Oregon or Washington.
>
> In that portion of the FMA off California, the line must be attached to a rod and reel held by hand or closely attended. Weights directly attached to a line may not exceed four pounds (1.8 kg). While fishing off California north of Point Conception, no person fishing for salmon, and no person fishing from a boat with salmon on board, may use more than one rod and line.
>
> Fishing includes any activity which can reasonably be expected to result in the catching, taking, or harvesting of fish.

PFMC
03/26/02

TENTATIVE ADOPTION OF 2002 OCEAN SALMON MANAGEMENT MEASURES FOR ANALYSIS

Situation: The Council adopted three salmon management options in March, which were published in Preseason Report II and sent out for public review. A draft environmental assessment (EA) of the March options and the status quo (2001 regulations) option will be available at the meeting. The draft EA analyzes impacts to the environment (Exhibit B.4, Supplemental Attachment 2).

In this action, the Council must narrow the March management options to the final season recommendations. To allow adequate analysis before final adoption, the tentatively adopted recommendations should resolve any outstanding conflicts and be as close as possible to the final management measures. This is especially important to ensure final adoption is completed on Thursday afternoon.

The Council's procedure provides any agreements by outside parties (e.g., North of Cape Falcon Forum, etc.) to be incorporated into the Council's management recommendations must be presented to the Council in writing prior to adoption of the tentative options. The procedure also stipulates any new options or analyses must be reviewed by the Salmon Technical Team (STT) and public prior to the Council's final adoption.

In addition to adoption of the annual management measures, the Council must annually approve definitions for commercial and recreational fishing gear. For 2002, no new definitions were proposed in the adopted options. The 2001 definitions are provided in Exhibit B.4, Attachment 1.

If necessary, the STT will check back with the Council on Wednesday (Agendum B.5) or at other times to clarify any questions or obvious problems with the tentative measures. The Council must settle all such issues on Wednesday to allow STT analysis and meet the final adoption deadline of Thursday afternoon.

Summaries of the testimony presented at the public hearings will be provided at the meeting in the supplemental reports noted below (Exhibit B.4.b). Public comment letters received at the Council office by April 2 are included in Exhibit B.4.c.

Council Action:

1. **Adopt tentative treaty Indian commercial and non-Indian commercial and recreational management measures for STT analysis.**
2. **Adopt tentative definitions for commercial and recreational fishing gear.**

Reference Materials:

1. *Preseason Report II Analysis of Proposed Regulatory Options for 2001 Ocean Salmon Fisheries* (mailed prior to the hearings and available at meeting).
2. Definitions of Fishing Gear (Exhibit B.4, Attachment 1).
3. Exhibit B.4.j, CDFG Comments.
4. Draft environmental assessment of tentatively adopted management options for West Coast ocean salmon fisheries (Exhibit B.4, Supplemental Attachment 2). Received 4-5-02.
5. Summary of public hearings (Exhibit B.4.b, Supplemental Public Hearing Reports 1 through 5). Received 4-9-02

Agenda Order:

a.	Agendum Overview	Chuck Tracy
b.	Summary of Public Hearings	Hearing Officers
c.	Summary of Written Public Comments	Chuck Tracy
d.	Recommendations of the U.S. Section of the Pacific Salmon Commission	Participants
e.	Recommendations of the North of Cape Falcon Forum	WA, OR, Tribes
f.	Recommendations of the Klamath Fishery Management Council (KFMC)	Dan Viele

over →

g. Update on Estimated Impacts of March Options — Dell Simmons
h. Reports and Comments of Advisory Bodies
i. Tribal Comments — Jim Harp, et. al.
j. Agency Comments and Recommendations
k. Public Comments
l. **Council Action:** Tentatively Adopt Management Measures for 2002 Ocean Salmon Fisheries

PFMC
03/27/02

Supplemental Reference Materials

6. Exhibit B.4.K, Supplemental Public Comment.
7. Exhibit B.4.j, Supplemental Recopied CDFG Comments.
8. Exhibit B.4.d, Supplemental PSC Report.
9. Exhibit B.4.K, supplemental public comment.
10. Exhibit B.4.f, Supplemental KFMC Report.
11. Exhibit B.4.h, Supplemental SAS Report
12. Exhibit B.4.g, Supplemental STT Report.

Administrative Record

ENVIRONMENTAL ASSESSMENT

FOR THE

PROPOSED 2002 MANAGEMENT MEASURES FOR THE OCEAN SALMON FISHERY

MANAGED UNDER THE PACIFIC COAST SALMON PLAN

Pacific Fishery Management Council
7700 NE Ambassador Pl., Suite 200
(503) 326-6352
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April 2002

DRAFT

Table of Contents

List of Tables v

List of Figures v

Abbreviations and Acronyms vi

Abstract 1

1 Introduction 1

1.1 How This Document is Organized 1

1.2 Purpose and Need 1

1.2.1 Problems for Resolution 1

1.2.2 Purpose of the 2002 Management Measures 2

1.3 Background 3

1.4 Scoping Summary 3

1.5 Relevant Issues 4

2 Alternatives Including the Proposed Action 9

2.1 Ocean Salmon Fisheries 9

2.1.1 Preferred Alternative 9

2.1.2 No Action Alternative 9

2.1.3 Other Alternatives Considered 10
Option I 10
Option II 11
Option III 12

2.2 Alternatives Considered For Halibut Incidental Catch 12

3 Affected Environment 15

3.1 Target Stocks 15

3.2 Non-target Species 17

3.2.1 Non-salmon Incidental Catch and Bycatch 17

3.2.2 Non-target Salmon Stocks Listed Under the ESA 18

3.3 Socio-economic Environment 19

3.3.1 Fisheries and Fishing Communities 19
Canadian Border to Cape Falcon 19
Cape Falcon to Humbug Mountain 20
Humbug Mountain to Horse Mountain (Klamath Management Zone) 21
South of Horse Mountain 21

3.3.2 Health and Safety 21

4 Environmental Consequences 37

4.1 Ocean Salmon Fisheries 37

4.1.1 Impacts of Alternative 1 (Preferred Alternative) 37

4.1.2 Impacts of Alternative 2 (No Action) 37
Target Stocks 37
Non-Target Stocks 38
Socioeconomic Impacts 38
Health, Safety and Other Socioeconomic Issues 39

4.1.3 Impacts of Other Alternatives Considered 39
Target Stocks 39
Non-Target Stocks 41
Socioeconomic Impacts 41
Health, Safety and Other Socio-economic issues. 42

4.2 Cumulative Impacts 42

4.3 Summary and Comparison of Impacts Between Alternatives 43

5 National Environmental Policy Act 49

6 Reference Material 51

6.1 Bibliography 51

6.2 Biological Opinions for Council-Managed Salmon Stocks 52

6.3 List of Public Meetings, Agencies and Persons Consulted 53

6.4 List of Preparers 53

Appendix A: Detailed Descriptions of Management Alternatives A-1

List of Tables

Table 2-1 Summary of the environmental impacts of the alternatives 14

Table 3-1 Chinook and coho salmon stocks managed under the Pacific Coast Salmon Plan ... 22

Table 3-2 Chinook and coho stock status 23

Table 3-3 Incidental halibut allocation and harvest in the Area 2A salmon troll fishery 28

Table 3-4 Coast wide groundfish landings by salmon troll vessels 28

Table 3-5 Recreational landings by port and zone 29

Table 4-1 Chinook and coho harvest impacts 44

List of Figures

Figure 3-1 Preseason chinook forecasts 30

Figure 3-2 Preseason coho forecasts 31

Figure 3-3 Chinook landings by management zone 32

Figure 3-4 Coho landings by management zone 33

Figure 3-5 Recreational fishing by management zone 34

Figure 3-6 Recreational catch by species and zone, 2001 35

Figure 4-1 Chinook harvest impacts 46

Figure 4-2 Coho harvest impacts 47

Abbreviations and Acronyms

CPUE	Catch per unit of effort
CVI	Central Valley Index
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FMP	Fishery Management Plan
KMZ	Klamath Management Zone
NEPA	National Environmental Policy Act
NMFS	National Marine Fishery Service
OCN	Oregon Coast Natural (coho salmon)
OPI	Oregon Production Index (area)
SEIS	Supplemental EIS
TAC	Total Allowable Catch

Abstract

An environmental assessment (EA) is used to determine whether an action being considered by a federal agency has significant impacts. If such impacts are anticipated then an EIS must be prepared. This document analyzes the environmental and socio-economic impacts of proposed management measures for ocean salmon fisheries occurring off the coasts of Washington, Oregon and California. The Council produces four documents each year that provide information for decision making and report the annual management measures that will be implemented for the fishing season. (These are the Review of 2001 Ocean Salmon Fisheries, and Preseason Reports I through III and are listed in the bibliography) These documents form the basis for the description of alternatives and the impact analysis in this EA.

1 Introduction

1.1 How This Document is Organized

The Pacific Fishery Management Council (hereafter, the Council) develops annual management measures for ocean salmon fisheries occurring off the coasts of Washington, Oregon and California[1/] and submits them to the Secretary of Commerce for review and implementation. The scope of the measures that may be chosen in this annual process is limited by the management framework established in the Pacific Coast Salmon Plan, a fishery management plan (FMP) first developed by the Council in 1977 and subsequently amended 14 times, most recently in 1999. The FMP conforms to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act, or MSA), the principal legislation governing fishery management within the Exclusive Economic Zone (EEZ), which extends from the outer boundary of the territorial sea to a distance of 200 miles from shore. This document contains the analyses required under the National Environmental Policy Act (NEPA).

The rest of this section discusses the reasons for establishing new management measures for the 2002 season. This description of purpose and need defines the scope of the subsequent analysis. Section 2 outlines different alternatives that have been considered to address the purpose and need. [One of these alternatives was chosen by the Pacific Fishery Management Council as its preferred alternative, which is the proposed action.] Section 3 describes the affected environment. This information provides the basis for the analysis contained in Section 4, which assesses the potential environmental and socio-economic impacts of the alternatives outlined in Section2.

1.2 Purpose and Need

1.2.1 Problems for Resolution

Salmon are anadromous fish, spending a part of their life in ocean waters but returning to freshwater rivers and streams to spawn and then die. After a rearing period of up to two years, young fish migrate to the ocean for their adult phase. Council-managed ocean salmon fisheries mainly catch chinook and coho salmon (*Oncorhynchus tshawytscha* and *O. kisutch*); pink salmon (*O. gorbuscha*) are also caught in odd-numbered years, principally off of Washington. Fisheries that are not managed by the Council also target these fish. These fisheries include those prosecuted by Indian Tribes—who have access rights based on treaties—and freshwater commercial and recreational anglers. Historical and contemporary habitat modification and degradation, primarily in and along rivers and streams that are critical to spawning and juvenile survival, have led to precipitous declines in West Coast salmon populations. As a result, several stocks have been listed

---

[1/] In addition to these three coastal states, Council membership includes Idaho because salmon spawn in rivers in that state. However, the Council seat reserved for Idaho is currently vacant because the governor of that state has not submitted a list of qualified nominees to the Secretary of Commerce.

as either threatened or endangered under the Endangered Species Act (ESA). Population levels also fluctuate from year to year due to changes in the ocean environmental regime, affecting the survival and abundance of adult salmon. Salmon originating from hatcheries, where a higher survival rate for juveniles is assured, have become an important component of all West Coast fisheries. When establishing annual management measures, the Council must set catch restrictions in order to meet the competing demands of different user groups and the need to ensure that enough fish spawn so that populations are sustained. These considerations must be applied to each separate stock, keeping in mind its ESA status and the relationship between hatchery-produced and wild stocks. Commercial vessels targeting salmon also catch Pacific halibut incidentally. This high-value species is indirectly managed by the International Pacific Halibut Commission through a quota allocation scheme for major Pacific coast regions. The Council then must subdivide this quota through a catch sharing plan, allocating a portion to incidental catch in the commercial salmon troll fishery.

1.2.2 Purpose of the 2002 Management Measures

This action, implementation of 2002 management measures, will allow fishermen to harvest surplus production of healthy natural and hatchery salmon stocks while minimizing impacts to weak or ESA-listed natural salmon stocks. In achieving this goal, management measures must take into account the allocation of harvest among different user groups. (Section 5.3 of the Pacific Coast Salmon Plan enumerates specific allocation objectives.) The Plan also establishes nine more general harvest-related objectives:

1. Establish ocean exploitation rates for commercial and recreational salmon fisheries that are consistent with requirements for stock conservation objectives, specified ESA jeopardy or recovery standards, or Council adopted rebuilding plans.

2. Fulfill obligations to provide for Indian harvest opportunity as provided in treaties with the United States, as mandated by applicable decisions of the federal courts, and as specified in the October 4, 1993 opinion of the Solicitor, Department of Interior, with regard to federally recognized Indian fishing rights of Klamath River Tribes.

3. Seek to maintain ocean salmon fishing seasons that support the continuance of established recreational and commercial fisheries while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial fisheries. These allocations will be fair and equitable, and fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.

4. Minimize fishery mortalities for those fish not landed from all ocean salmon fisheries as consistent with optimum yield and bycatch management specifications.

5. Manage and regulate fisheries so that the optimum yield encompasses the quantity and value of food produced, the recreational value, and the social and economic values of the fisheries.

6. Develop fair and creative approaches to managing fishing effort and evaluate and apply effort management systems as appropriate to achieve these management objectives.

7. Support the enhancement of salmon stock abundance in conjunction with fishing effort management programs to facilitate a return to economically viable and socially acceptable commercial, recreational, and tribal seasons.

8. Achieve long-term coordination with the member states of the Council, Indian tribes with federally recognized fishing rights, Canada, the North Pacific Fishery Management Council, Alaska, and other management entities which are responsible for salmon habitat or production. Manage consistent with the Pacific Salmon Treaty and other international treaty obligations.

9. In recommending seasons, to the extent practicable, promote the safety of human life at sea.

A second and related purpose is to determine the amount of incidental Pacific halibut that may be harvested by commercial salmon trollers.

1.3 Background

As mentioned above, the Salmon Plan establishes a framework for annual management. This framework allows the Council to develop measures responsive to conditions in a given year, but within constraints established by the Plan. The Plan describes the types of management measures that may be applied and the scope for modification during the annual management process. These measures include setting size limits, bag limits for recreational fishers, gear restrictions, and seasons and quotas. The alternatives described in Section 2 are structured around variations within each type of management measure. They are assessed in light of the allocation and harvest objectives in the Salmon Plan discussed above.

Sections 8 and 9 of the Salmon Plan outlines the annual process for developing management measures. This process results in a review of the previous year's fishery and three Pre-Season Reports, drafted by the Salmon Technical Team (STT), that reflect the information gathering, analysis and decision-making necessary to develop annual management measures. This Environmental Assessment encompasses the annual process. By extension, it is a summation of the environmental impact analysis that is already an important part of the management process, as reflected in the Pre-Season Reports.

For regulatory purposes the fishing season, or term during which annually-developed management measures apply, is May 1 to April 30. Most ocean salmon fishing occurs from early to mid-May until late September. However, it is common for seasons to open earlier than April 1 in some areas. These openings may be anticipated in the previous year's management process with an option for "in-season" modification to allow what are considered early openings (but in terms of the management cycle area actually late openings). But in terms of impacts analysis these "late openings" are considered part of the current-year season.

This management regime has been subject to several previous environmental impact analyses. From 1976 through 1983 the Council prepared an EIS or supplemental EIS (SEIS) for each year's salmon fishing season. The Salmon Plan was comprehensively amended in 1984 to implement the framework for annual management. This resulted in a much more efficient management process and obviated the substantial staff burden of preparing an EIS or SEIS annually. (An SEIS was also prepared in conjunction with that amendment.) A still more recent SEIS accompanied the last plan amendment, which was implemented in 2000. These environmental impact analyses provide considerable basis for narrowing the scope of the analysis for this year's management measures. They also represent an information and analytical resource that, as appropriate, can be incorporated into this document. (Any material incorporated into this EA by reference may be obtained by contacting the Council at the address on the front of this document.)

1.4 Scoping Summary

The scoping process occurs early in any environmental impact analysis. It involves consultation with affected and interested parties—both inside and outside of agencies implementing the management measures—in order to determine which issues, because of their potential significance, should be analyzed in depth. Just as important, this process is used to eliminate those issues that are not significant or have been addressed in other documents. This narrowing of scope allows the preparers to focus their attention on key issues. It should be emphasized that the subject of this EA, the annual process to develop management measures for ocean salmons fisheries, falls within the scope of the Pacific Coast Salmon FMP. As noted, the FMP establishes very specific management goals and outlines the process for developing management measures

to achieve these goals. Fishery managers involved in the process often refer to the "sideboards" established in the FMP; this represents the scope of action that may be contemplated during the annual process.

Early scoping is conducted by the Salmon Technical Team, which comprises fishery biologists from NMFS, USFWS, the three West Coast states, and Indian Tribes. Their review of the previous year's fishery is an early indication of potentially significant issues in the coming year. After the review document is produced, the STT and Council staff compile preseason forecasts of the abundance of salmon for the coming fishing season (which for the most part begins in May although there are limited early openings before then). This compilation, called Preseason Report I and produced in February each year, also describes the expected impacts (in terms of fishing mortality) if the previous year's management measures were applied in the current year. The STT uses several linked computer models to determine fishing mortality, given a set of management measures.

The two Council meetings held annually in March and April each year, which focus on salmon management, are excellent opportunities to gain input from a broader cross-section of interested parties and the public, including those fishermen likely to be directly affected by the management actions. At this meeting the Salmon Advisory Subpanel, with members representing commercial and recreational fishermen, charter boat operators, Indian Tribe representatives, and conservationists, develops three "season options" covering a range from relatively low fishing mortality (more "conservative") to relatively high fishing mortality (more "liberal"). Components of each option may be developed separately for different parts of the coast by subgroups representing each of the three West Coast states. An initial "draft" of these options is then analyzed by the STT, using the aforementioned computer models, to determine if the management measures (mainly the duration and timing of season openings for different sections of the coast) are likely to achieve the target fishing mortality set for each option, meet the FMP conservation goals, and avoid impacts to ESA-listed stocks. The options may be further modified, depending on the results of the STT analysis, and are then brought before the Council for examination. The Council also receives recommendations from a range of other bodies that are involved in salmon management, including the NMFS, Indian Tribes, and state representatives that sit on the Council. Council members often recommend additional modifications to the options, either to ensure conservation objectives or to balance catch allocation between the states. Over the course of the March meeting management options are brought before the Council three times; during the last session the refined options are approved by the Council for public review.

In the week after the March meeting the STT and Council staff produce Preseason Report II, which describes each of the options developed during the March meeting and presents the STT's analysis of their expected impacts in terms of fishing mortality to specific stocks. Along with the two previously prepared documents, Preseason Report II is an information source for public hearings, held in the interim between the March and April meetings, to garner additional public comment on the three options.

Finally, during the April meeting the Council crafts the set of management measures that will regulate the coming fishing season. Although it may choose any one of the season options already developed, typically the adopted measures blend elements from these options. The STT and Council staff then prepare Preseason Report III, which describes the adopted management measures and like the two preceding preseason reports, contains an analysis of impacts, or fishing mortality to specific stocks, expected from ocean salmon fisheries under this regime. The Council-adopted management measures are then transmitted to the Secretary of Commerce so that they may be promulgated as the federal regulations that govern ocean salmon fisheries for the year in question. (Section 6.3 lists public meetings held, and agencies and persons consulted during the annual management process.)

1.5 Relevant Issues

In addition to the scoping activities described above, previous environmental impact analyses for Council-managed salmon fisheries, and other Council documents, are a valuable resource that can be used to narrow the scope of this analysis to potentially significant issues. These are issues that the proposed action is likely

to affect and aspects of the environment that may have changed since the completion of previous analyses. Agency guidance, in the form of NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act, is a good starting point for identifying potentially significant issues. Section 6.02 of this Order lists nine factors to be considered in determining whether a fishery management action is likely to have significant environmental impacts.[2/] In summary, five of these factors are impacts to: (1) target species caught in the fishery; (2) non-target species; (3) habitat, including essential fish habitat (EFH);[3/] (4) biodiversity and ecosystem function; (5) protected species and their habitat (species listed under the ESA, Marine Mammal Protection Act, or other legislation); and (6) public health and safety. The other three factors are socioeconomic impacts interrelated with environmental effects, cumulative adverse impacts to target and non-target species, and the degree to which the proposed action is likely to be controversial (although any determination of significance cannot rest solely on this factor). For those categories that do apply, more specific issues are identified; these form the basis of analytical criteria used in Section 4. This identification process is summarized below.

Target Species: Management measures developed annually for Council-managed fisheries control, by various means, the number of fish that will be harvested. They directly affect target species' populations. Because both the population status and the management measures change each year, and these changes may have significant impacts, this EA considers the impact of different harvest levels under alternatives considered by the Council. The analysis focuses on fishing mortality to specific stocks, especially in relation to conservation objectives identified in the plan.

Non-target Species: The 2000 SEIS found that the impacts of the fishery on fish other than salmon were not significant (see Section 5.2.3 on page 5-5). Characteristics of the fishery, such as changes in gear or method of deployment (including time and area) have not changed substantially since the SEIS was completed. In addition, most incidentally caught fish species are covered under other Council FMPs, such as the groundfish plan. Nonetheless, the non-target catches of selected species will be examined. The Council establishes management measures to achieve an allocation to the commercial salmon fishery for incidental halibut catches. Several rockfish species have been declared overfished and other stocks are depressed. Rockfish may be caught incidentally in ocean salmon fisheries. For these reasons, halibut and rockfish incidental catches are considered in this EA. Certain salmon stocks also may be considered non-target. In general, wild stocks are considered non-target because they are either ESA-listed or stock size is too low to warrant additional mortality from fishing. All wild coho stocks fall in this category. (Fishermen target hatchery produced fish, which can be distinguished because their adipose fin is clipped off.) Most wild chinook stocks are ESA-listed; other stocks are caught in such low numbers that, according to the the FMP, Council action would have no effect on overfishing (see FMP Section 3.2.4.2) and management objectives are not set for these stocks. Therefore, the impact of management alternatives on these non-target salmon stocks are considered in terms of potential mortality from Council-managed fisheries along with target stocks and in terms of the specific standards established by the ESA for listed stocks (see below).

Affected Habitat Including Essential Fish Habitat: Appendix A of Amendment 14 describes salmon EFH and fishing and non-fishing impacts to this habitat. It found that there is no evidence of direct gear effects on this habitat from Council-managed fisheries (page A-58). Although some types of gear, such as bottom trawls are known to have habitat impacts, these gear types are not used in the ocean salmon fisheries considered

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[2/] It should also be noted that NAO 216-6 Section 6.01.b lists 11 other factors used to evaluate the intensity or severity of an impact. Except for the eleventh factor (the introduction and spread of nonindigenous species) these factors are taken directly from the NEPA implementing regulations (40 CFR 1508.27) that discuss significance and are more general than those listed in Section 6.02. Although these factors are considered in this EA, when relevant, they have not been used to structure the analysis.

[3/] The Sustainable Fisheries Act, which amended and re-authorized the MSA in 1996, requires FMPs to describe and delineate essential fish habitat for managed species (§303(a)(7)). Councils and NMFS may consult with federal agencies theat permit or undertake activities affecting such designated habitat.

here, nor is it clear that these impacts affect habitat important to salmon. Non-fishing impacts to salmon habitat have been extensive and significant (see pages A-62 to A-110 in Appendix A). However, salmon management measures do not affect the activities that cause these impacts. Because EFH impacts are extensively described and analyzed in Appendix A, and this analysis demonstrates that the fishery has no significant impacts, EFH will not be considered further in this environmental assessment.

Biodiversity and Ecosystem Function: The 2000 SEIS discusses impacts of the fishery to higher trophic level species including seabirds (Section 5.2.4 and 5.2.5 on pages 5-5 to 5-7) and lower trophic level species (Section 5.2.6 on page 5-7). Higher trophic level species affected by the salmon fishery are marine mammals, particularly seals and sea lions. Salmon form a part of the diet of these animals, so they may compete with fisheries over this resource. However, these two species are opportunistic feeders and their populations have been increasing. (Some other species' populations have been declining.) According to the SEIS analysis, there are insufficient data to distinguish between the natural and anthropogenic factors that affect these species. However, from what is known it is unlikely that Council-managed salmon fisheries are having a significant effect. The SEIS found that direct impacts on seabirds are minimal to non-existent. Indirect impacts, due to competition for salmon and the availability of processing offal as a food source, were determined to be minimal. The SEIS notes that "any amount of harvest removes animals that otherwise would have remained in the ecosystem" to prey on lower trophic levels. However, it concludes that fishery removals are not significant in this respect and that wide-scale changes in oceanographic conditions, resulting from El Niño events for example, are the primary determinants of abundance and structure of lower trophic level populations. Maintaining biodiversity, by conserving evolutionarily significant salmon stocks, is a key management goal. Since biodiversity impacts correlate with fishing mortality to depressed and ESA-listed wild stocks, these impacts can be addressed in assessing impacts to non-target and ESA-listed stocks, as discussed above. Based on the analysis in the SEIS, and the fact that determining conditions have not changed significantly, biodiversity and ecosystem impacts will not be considered in this document separately from non-target/endangered species analyses.

Protected Species Interactions: Section 5.2.4 of the SEIS, referenced above, also discusses direct interactions between marine mammals and ocean salmon fishing vessels. These interactions include vessels approaching these animals, marine mammals feeding on hooked salmon, and rarely, animals that become hooked by or snagged in the gear. The SEIS concludes that these interactions do not constitute a significant impact; the document also notes that these fisheries are classified under the Marine Mammal Protection Act as Category III, indicating that there is no record of such impacts. Other listed species that might be affected by the salmon fishery include sea turtles and certain seabirds. Similarly, the SEIS considered possible impacts to these species and determined that they were not significant. Therefore, interactions with these protected species will not be considered here. However, various salmon, steelhead and trout stocks (or evolutionarily significant units,[4/] ESUs) that are potentially caught in the fishery are listed under the ESA. Since 1992 NMFS has determined that the ocean salmon fishery does not jeopardize the continued existence of ESA listed salmon or adversely affect their critical habitat. This determination has been reached through the Section 7 consultation process that is part of the ESA. This process established a set of "no jeopardy standards" that the fishery must conform to. Because the proposed action changes harvest levels and the no jeopardy standards must be considered when developing management measures, impacts to these salmon stocks are considered in this environmental assessment. As noted above, listed salmon stocks also may be considered non-target species; for simplicity description and analysis of these stocks is included under the non-target species heading.

Public Health and Safety: The SEIS did not consider the impacts of management on public and health and safety. Fisheries management can affect safety if, for example, season openings make it more likely that fishermen will have to go out in bad weather because fishing opportunities are limited. These types of

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[4/] An ESU constitutes a "distinct population segment" for the purposes of listing, delisting, and reclassifying species under the ESA. (See 61 FR 4722 for the current policy on recognizing distinct population segments.)

potential impacts are considered in this EA.

Socioeconomic Environment: As noted above, socioeconomic effects are only considered if they are interrelated with environmental effects (see also 40 CFR 1508.14). The 2000 SEIS describes how management measures that could be part of the proposed action have interrelated environmental effects. Allocation of access between different user groups is the main socioeconomic factor that the Council considers when formulating annual management measures. Since management measures with these interrelated effects change from year to year, and they may cause potentially significant impacts, this environmental assessment considers certain socio-economic effects. Overall harvest opportunities and those related to allocation can affect some communities more than others. Disproportional impacts to particular communities resulting from management alternatives are described.

Cumulative Effects: This class of effects is usually considered separately because it requires consideration of the impacts of actions other than the proposed action that may occur at different times or places. The incremental effects of these many actions may be collectively significant. In the context of salmon management, for example, past and "reasonably foreseeable" management measures may be considered as well as impacts to salmon habitat not caused by the proposed action. Although NEPA implementing regulations do not specifically require cumulative impact analysis as part of an EA, agency guidance (NAO 216-6) and judicial review[5/] suggest that it be included in the EA process. The effect of regulations for the ocean salmon fishery in any given year should be assessed with past and future annual regulations since they affect a given population cohort. (Note that the models used to understand fishing mortality effects and develop season recommendations take this into account.) Although habitat impacts have been considered in previous documents, the cumulative effects of these impacts when combined with fishing permitted under Council authority should also be assessed. For these reasons, cumulative effects are considered.

The final factor, controversy, is not by itself a basis for determining significance. Like other more general factors (see footnote 2) it is considered during EA preparation but is not used to structure the analysis.

[5/] In Fritiosofon v. Alexander (5th Cir. 1985) the Court found that an EA may necessitate a broader analysis of cumulative effects than an EIS because of an EA's role in assessing the potential significance of impacts (as opposed to an EIS, where impacts are known to be significant and are disclosed and analyzed in the document). According to the Court, an EA cumulative impact analysis does not need to be exhaustive; it merely determines whether the proposed action might have potentially significant impacts requiring preparation of an EIS.

DRAFT

2 Alternatives Including the Proposed Action

2.1 Ocean Salmon Fisheries

Management alternatives applicable to this environmental assessment are developed during the annual process described above (see Section 1.4). Preseason Report I contains salmon stock abundance projections for the current year (in this case 2002) and analyzes the impacts if the previous year's management regime (2001) were applied to current-year projections. In the NEPA context it presents the No-Action Alternative: what future circumstances will be without the implementation of the new management measures, which is the proposed action.[6/] Pre-Season Report II, which presents the three options developed during the March meeting, represent the reasonable range of alternatives that, according to NEPA regulations, must be considered by the decision makers. The final management measures developed at the April Council meeting and based on the options in Preseason Report II represent the preferred alternative, which is described in Preseason Report III. Therefore, for the purposes of this EA there are five alternatives drawn from the three Preseason Report I through III.

2.1.1 Preferred Alternative

The preferred alternative, which is the set of management measures adopted by the Council at its April meeting, is summarized in Pre-Season Report III, Tables 1-3. These tables are appended to this EA; see Appendix A.

2.1.2 No Action Alternative

Table I-1 through I-3 in the Review of 2001 Ocean Salmon Fisheries (PFMC 2002) describes last year's fishing season. (These table are reproduced in Appendix A to this EA). The 2001 Preseason Report I describes highlights of last year's management measures; an edited version appears here:

The 2001 seasons were constrained primarily by: low abundance of naturally produced coho salmon over the entire Council management area and low abundance of several chinook stocks, including ESA-listed stocks. Oregon Production Index (OPI) hatchery coho abundance was high, offsetting these constraint somewhat. The 2001 season was the Council's third year of extensive selective fisheries for marked hatchery coho.

Commercial management measures off California: For 2001 the predicted increased abundance of Columbia River hatchery coho and Klamath River fall chinook stocks allowed for a 3,000 chinook quota fishery in Fort Bragg during May. May fishing in this area has not been allowed since 1993 when there was a six day fishery inside three nautical miles of shore. Management measures also allowed increased fishing time between Point Arena and Point Reyes during part of June and all of July. For the first time an October fishery between Point Reyes and Point San Pedro was allowed.

Recreational Measures off California: In the area between Horse Mountain and Point Arena, the minimum size limit was 24 inches through May 31 and 20 inches thereafter. In the area south of Point Arena, the minimum size limit was 24 inches through June 30 and 20 inches thereafter. For the first time since 1993, the fishing season from Horse Mountain to Point Arena was open during all of July. The KMZ sport fishery had a split season, with a two-fish bag limit; the first half of the season had a four fish in seven consecutive days

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[6/] The fishing season is governed by regulations established annually. Because these regulations only apply for the applicable time period, an alternative interpretation on no action could assume that in the absence of new regulations no regulations would apply. This lack of regulations can be interpreted to mean that either there would be a complete prohibition of Council-managed salmon fisheries or that these fisheries would be unregulated. The former interpretation would produce a "no fishing" alternative while in the latter case presumably only capacity constraints would determine total harvests. Neither of these interpretations are likely or as useful analytically as no action alternative used here, which is that last year's regulations would be applied to the current fishery.

possession limit, and the second half had a limit of six fish in seven consecutive days.

Selective fisheries: All-salmon recreational fisheries off Washington and Oregon, as far south as Humbug Mountain (Port Orford), were selective for coho with healed adipose fin clips. Retention of coho in the non-Indian, all-salmon commercial troll fishery north of Cape Falcon was restricted to coho with a healed adipose fin clip. The implementation of mark-selective restrictions began in the 1998 recreational season at the mouth of the Columbia River and was expanded in 1999 to all recreational fisheries north of Cape Falcon and to a limited, all-salmon season in the recreational fishery off central Oregon. Implementation of mark-selective restrictions in the non-Indian troll fishery north of Cape Falcon began in 2000.

Commercial measures north of Cape Falcon: To protect threatened Puget Sound chinook stocks, the Cape Flattery Control Zone was in effect during all non-Indian troll fisheries. Further protection was provided by capping the number of chinook allowed to be caught north of the Queets River. The Columbia River Control Zone, modified to be identical to the recreational control zone, was closed during these fisheries.

Recreational measures north of Cape Falcon: Recreational fisheries were all restricted to no more than one chinook in the daily bag limit. This limitation helped ensure full prosecution of the mark-selective coho fishery under the relatively low chinook allowance required to meet management objectives for Columbia River chinook. Constraints on chinook harvests in the northern areas were intended to help protect ESA-threatened Puget Sound chinook stocks. Further protection was provided by prohibiting retention of chinook in Area 4B while the ocean fishery is open in Area 4 (Neah Bay area outside the Bonilla-Tatoosh line and north of Cape Alava). Retention of coho was prohibited from Tillamook Head to Cape Falcon, beginning August 1, to reduce impacts on the northern component of threatened Oregon coastal natural (OCN) coho.

2.1.3 Other Alternatives Considered

Management measures for the three options developed during the March Council meeting are summarized in Tables 1 and 2 in the 2002 Preseason Report II. (These tables are reproduced in Appendix A.) Option I generally provides the most liberal seasons for both coho and chinook coast wide, with the exception of the California portion of the Klamath Management Zone (KMZ), where Option I is the most conservative. All fisheries allowing coho retention are selective for coho with a healed adipose fin clip. North of Cape Falcon the non-Indian commercial total allowable catch (TAC) is 80,000 chinook and 37,500 coho for Option I; 65,500 chinook and 16,000 coho for Option II; and 45,000 chinook and 22,500 coho for option III. The TAC for Option II includes a preseason trade of 14,000 coho to the recreational fishery in return for 3,500 chinook. Features of each option are summarized below.

Option I

Non- Indian Commercial fisheries: North of Cape Falcon this option has a chinook-only quota fishery in May and June (60,000 fish). A separate chinook quota fishery occurs in July -September (20,000 fish) with a large plug-only restriction north of Leadbetter Point to reduce coho impacts, and a quota (20,600 fish) for selective coho retention south of Leadbetter Point. All commercial fisheries south of Cape Falcon prohibit retention of coho. The central Oregon fishery is divided into two areas, north and south of the Florence south jetty. Both areas are open for 214 days between March 20 and September 30. The northern area is closed July 22-31 and the southern area is closed July 1-10. Both areas are closed August 30-31 to allow an accounting of Klamath chinook impacts before September, which is the beginning of the next annual return cycle. The Oregon portion of the KMZ is open March 20 to May 31, with monthly quota fisheries for June (1,500 fish), July (1,500 fish), August (3,000 fish) and September (2,000 fish); no transfer of remaining quotas from earlier months is allowed. The California portion of the KMZ has a quota fishery in September only (10,000 fish). In the Fort Bragg area, 90 days of fishing are allowed: May 1-31 August 1-29 and September 1-30. The fisheries between Point Arena and Point San Pedro and South of Point San Pedro run 153 days, from May 1 to September 30. A fall target zone fishery in the Point Reyes to Point San Pedro area is allowed October

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Recreational Fisheries: Option I north of the northern margin of the Columbia River control zone provides a chinook -only quota fishery in May and June (20,000 fish). The general fishery is open seven days a week from May 25 to June 16 or until the quota is met. A specialized fishery opens Sundays and Mondays, May 1-24, north of the Queets river to allow halibut fishers an opportunity to fish salmon on days that are closed to halibut fishing. Additional chinook and coho fisheries occur in June and September in the Neah Bay, LaPush, Westport, and Columbia River areas:

- Neah Bay: open June 30 to September 30, seven days a week, with a 11,500 coho quota and a 2,300 chinook guideline.
- La Push: open June 30 to September 20, seven days a week, with a 2,700 coho quota and 1,500 chinook guideline, and again from September 21 to October 13 with a 100 coho and 100 chinook quota.
- Westport: also open June 30 to September 30, but Sunday through Thursday before August 16 and seven days a week thereafter, on a 38,350 coho quota and a 35,500 chinook guideline.
- Columbia River area: open July 7 to September 30, Sunday through Thursday before August 16 and seven days a week thereafter, with a 54,450 coho quota and a 10,600 chinook guideline.

The central Oregon chinook fishery is open April 1 to October 31. A selective coho fishery is open July 7-31, Sunday through Thursday, on a quota of 25,000 coho. The KMZ is open 71 days from May 25 to July 1 and August 1-September 2, with no more than six fish in seven consecutive days. The Fort Bragg area is open 261 days from February 16 to July 17 and August 1 to November 17. The San Francisco area is open 213 days, from April 13 to November 10. The area south of Pigeon Point is open 184 days, from March 30 to September 29.

Option II

Commercial fisheries: Option II does not have a selective coho retention opportunity. North of Cape Falcon a chinook-only quota fishery occurs in May and June (40,000 fish). A separate chinook quota fishery occurs in July -September (25,500 fish) with a large plug-only restriction to reduce coho impacts. The central Oregon fishery is the same as Option I except the dates for the northern and southern areas are switched. The fishery in the Oregon portion of the KMZ is similar to Option I except the quota for July is 3,000 fish. The fishery in the California portion of the KMZ is similar to Option I except for an additional quota fishery in August (3,000 fish). The Fort Bragg area fishery allows a quota fishery in August (3,000 fish) and a seasonal fishery in September. The fishery south of Point Arena is similar to Option I except the season north of Pigeon Point opens July 1, and the Point Reyes to Point to San Pedro fall target zone is restricted to within three nautical miles of shore.

Recreational fisheries: Option II north of the northern margin of the Columbia River control zone has a chinook-only quota fishery in May and June (10,000 fish). The general fishery is open seven days a week, May 19 to June 9 or until the quota is met. The Neah Bay fishery opens July 7 to September 8, seven days a week with a quota of 10,000 coho and a 2,100 chinook guideline. In addition, chinook retention is prohibited east of the Bonilla-Tatoosh line to facilitate an area 4B (state waters in Puget Sound) selective coho fishery. The other north of Cape Falcon zones have similar openings but different quotas or guidelines:

- La Push: open July 7 to September 8, seven days a week, with a 2,700 coho quota and 1,500 chinook guideline.
- Westport: open July 7 to September 8, Sunday through Thursday before August 16 and seven days

a week thereafter, with a 37,500 coho quota and a 31,000 chinook guideline.

- Columbia River area: open July 7 to September 8, Sunday through Thursday before August 16 and seven days a week thereafter, with a 51,325 coho quota and a 9,900 chinook guideline.

The central Oregon fisheries are similar to Option I except the selective fishery opens July 15-31 on a 20,000 coho quota. The KMZ fishery is open for 78 days, May 17 to June 30 with no more than four fish in seven consecutive days, and August 1 to September 2, with no more than six fish in seven consecutive days. The Fort Bragg, San Francisco, and Southern California fisheries are all the same as Option I.

Option III

Commercial fisheries: Option III north of Cape Falcon has a chinook-only quota fishery in May and June (35,000 fish). A second chinook quota fishery occurs in July (5,000 fish) with a large plug-only restriction to reduce coho impacts. A third chinook quota (5,000 fish) and selective coho retention quota (18,500 fish) fishery occurs in August and September. All commercial fisheries south of Cape Falcon prohibit retention of coho. The Central Oregon fishery is the same as Option I. The fishery in the Oregon portion of the KMZ is similar to Options I and II except the quota for July is 4,500 fish. The fishery in the California portion of the KMZ is similar to Option I except the quota is 20,000 fish. The Fort Bragg fishery is the same as Option II. The fishery between Point Arena and Point San Pedro runs 138 days, May 1-31 and June 16 to September 30. There is no fall target zone fishery in Option III. The fishery south of Point San Pedro is the same as Option I.

Recreational fisheries: This option does not have a chinook-only quota fishery north of Cape Falcon in May and June. North of Cape Falcon zones have the following openings and quotas or guidelines:

- Neah Bay: open July 14 to September 8, seven days a week with a quota of 5,900 coho and a 2,000 chinook guideline. In addition, chinook retention is prohibited east of the Bonilla-Tatoosh line to facilitate an Area 4B selective coho fishery.
- La Push: also open July 14 to September 8, seven days a week, with a 1,850 coho quota and 2,400 chinook guideline.
- Westport: open June 23 to September 8, Sunday through Thursday before September 1 and seven days a week thereafter, on a 26,000 coho quota and a 31,600 chinook guideline.
- Columbia River area: open July 14 to September 8, Sunday through Thursday before September 1 and seven days a week thereafter, on a 33,750 coho quota and a 9,000 chinook guideline.

The central Oregon fisheries are similar to Option I except the selective fishery opens July 15-31 with a 20,000 coho quota. The KMZ fishery is open for 93 days, May 15 to June 30 and August 1 to September 15, with no more than four fish in seven consecutive days. The Fort Bragg, San Francisco, and Southern California fisheries are all the same as Option I.

2.2 Alternatives Considered For Halibut Incidental Catch

During its March meeting the Council adopted two Pacific halibut landing restriction options for public review before their April meeting. These apply to commercial salmon trolling in May and June.

Option 1: License holders may land no more than one halibut for every three chinook landed, but one halibut may be landed without meeting this ratio requirement. No more than 35 halibut may be landed per trip. Retained halibut must be 32 inches or greater in length, with the head on. These measures were in place

during the 2001 season and this option is considered the no action alternative.

Option 2: License holders may land no more than one halibut for every five chinook landed, but two halibut may be landed without meeting this ratio requirement. No more than 50 halibut may be landed per trip. Retained halibut must be 32 inches or greater in length, with the head on.

The Council also adopted a third option that could apply in combination with either of the two preceding options. This would close the so-called "halibut hotspot" defined in the halibut catch sharing plan with an additional closure south from this area to 48° N during the time when halibut retention is allowed. This measure is meant to protect yelloweye rockfish, an overfished groundfish species.

Table 2-1: Comparison of impacts of alternatives on selected key stocks.

Stocks	Preferred Alternative	No Action	Option I	Option II	Option III
Chinook					
California Central Valley (Fall chinook escapement, 1,000s of fish) Goal: 122-180		396.1	297.4	365.4	330.8
California Coast	Contribute to ocean fisheries but information insufficient to forecast				
Klamath River (Age 4 harvest rate) Goal: ≤16%		12.9%	15%	12%	11%
Oregon Coast		Natural spawner escapement goal met	Natural spawner escapement goal met	Natural spawner escapement goal met	Natural spawner escapement goal met
Columbia River		5 major stock units exceed spawning escapement goals	5 major stock units exceed spawning escapement goals (see Table 4, Pre-II)	5 major stock units exceed spawning escapement goals (see Table 4, Pre-II)	5 major stock units exceed spawning escapement goals (see Table 4, Pre-II)
Washington Coast and Puget Sound	Council fisheries have a minor impact on these stocks, no evaluation				
Coho					
OPI		Substantial impact--required analysis using 2000 management measures	Conservation goals met for all stocks except for Council-recommended 12.5% for OCN	Conservation goals met for all stocks	Conservation goals met for all stocks
Washington Coast and Puget Sound		Substantial impact--required analysis using 2000 management measures	Conservation goals met for all stocks except Stillaguamish and Hood Canal will require additional shaping of Puget Sound fishing season	Conservation goals met for all stocks except Stillaguamish and Hood Canal will require additional shaping of Puget Sound fishing season	Conservation goals met for all stocks except Stillaguamish and Hood Canal will require additional shaping of Puget Sound fishing season

3 Affected Environment

The following descriptions summarize information provided in the Pacific Coast Salmon Plan and preseason reports.

3.1 Target Stocks

Salmon are anadromous, living in the ocean but returning to freshwater to spawn, and semelparous, dying after they spawn. Eggs are laid in nests (called redds) in stream bottoms with fairly specific characteristics, including clear, cool water and a suitable bottom type for nest excavation. After an incubation period, which varies depending on water temperature, the eggs hatch into yolk sac larvae, which remain in the gravel until the sac is absorbed. These fry emerge and after maturing into smolts capable of living in salt water migrate downstream. These smolts may pause in estuaries before completing the maturation process and entering the ocean environment. Adults then spend from two to six years in the ocean before returning to spawn. Because salmon usually return to their natal streams to spawn, genetically distinct stocks can be identified. Fish from several such stocks may return to freshwater during a given season; this constitutes a seasonal "run." Individual stocks or fish exhibit considerable variability within these life history parameters: pre-spawning adult and post-hatchlings can spend varying amounts of time in freshwater, fish can mature at different ages, and ocean migration patterns can differ. In addition to natural characteristics, the development of hatchery rearing programs over the past century, coupled with the long-term decline in wild stocks, has added another dimension to management. As noted in the Section 1, Council-managed ocean fisheries catch mostly chinook and coho salmon, and pink salmon to a lesser extent.

Population sustainability is predicated on the return of sufficient number of adult fish and their ability to successfully spawn, referred to as escapement. (Hatchery programs have the goal of increasing survival of juvenile fish by raising them under artificial conditions where mortality is comparatively low.) Management therefore focuses on ensuring sufficient escapement for particular stocks and must also consider the timing of the seasonal runs in setting fishing seasons. Escapement levels can be adequately assessed by monitoring the number of fish that reach freshwater spawning areas. Since fish spawn once and then die, and because salmon are relatively short-lived, the ability to predict the impact of fishing mortality on population productivity is somewhat easier than it is for other, exclusively marine fish species. The abundance of hatchery-raised salmon, which are also a less important reservoir of genetic variability in comparison to wild stocks,[7/] has prompted management measures that direct fishermen to target and retain these stocks in preference to wild fish.

Both chinook and coho salmon have specific life history features. Chinook show considerable life history variation. In addition to age of maturity and timing of entry to freshwater, stream-type and ocean type races have been identified. Stream-type fish spend one to two years in freshwater as juveniles and then move rapidly to the ocean. Adults in the race enter freshwater in spring and summer and spawn upriver in late summer or early fall. Juvenile ocean-type fish spend a few days to several months in freshwater, but may spend a long time in estuarine areas. The timing of adult entry varies with latitude. The combination of these characteristics means that as a whole Chinook can be seen entering freshwater during almost any month. But there are peaks in the distribution, accounting for identified runs. In Oregon and Washington Chinook spring (March-May) and fall (August-September) runs are most common; a few stocks run in summer (May-July). In California there are also late fall and winter runs (December-July) in the Sacramento River. (The late fall run has also been reported from the Eel River.) Chinook salmon mature and spawn at two to six years, although most returning fish are three or four years old. Fish that return to spawn early, at two years, are called "jacks." In contrast to chinook, coho salmon have a relatively fixed residence time in fresh and salt

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[7/] Because the parent stock is fairly small and hatchery-raised fish populations may not be exposed to as intense selective pressure, genetic diversity of these populations is lower. A related issue arises when hatchery-raised fish, returning to spawn as adults, interbreed with wild stocks, affecting wild population fitness.

water, resulting in fewer age classes than other Pacific salmon. Juveniles spend at least a year in frewhwater and spend 18 months at sea before maturity. Like chinook, precocious male jacks return to spawn early. Coho generally do not survive beyond three years. Although their historic range stretches south to Monterey Bay, California, most production currently occurs north of California. The Oregon coast and Columbia River are centers of abundance for both wild and hatchery-produced coho stocks. Coho spawning sites are more widely distributed in small streams and tributaries, which account for the bulk of production. Unlike the year round distribution of runs found among chinook populations, coho generally run in the fall. Pink salmon will not be caught during the 2002 season and are not considered target species for the purposes of this EA. (Additional information about Council-managed salmons species' life histories may be found in Appendix A to Amendment 14, which describes salmon essential fish habitat.)

FMP Table 3-1 (reproduced as Appendix A in Preseason Report I) provides an excellent summary of the individual West Coast stocks (or runs) identified for the purpose of managing ocean fisheries. This table describes the conservation objective for each stock or run. To summarize further, chinook stocks are grouped into six major geographic categories, coho into three, and pink into two. For reference, chinook and coho geographic categories and component stocks are listed in Table 3-1 in this document. These are both hatchery-produced and wild stocks. Of the wild stocks, note that two chinook stocks are listed as endangered and 17 are listed as threatened, and three coho stocks are listed as threatened. Because salmon are anadromous, it is relatively easy to monitor the number fish that return to spawn (escapement) and determine whether conservation goals have been achieved. However, managers also need to predict ocean abundance and escapement (number of fish reaching freshwater and available for in-river fisheries and escapement to spawning grounds). Although predictions cannot be made for all of the stocks listed in the FMP, there is sufficient coverage that overall impacts can be correlated to predicted impacts. (Accurate estimates of escapement for all stocks allow assessment of the reliability of preseason predictions.) Tables I-1 and I-2 in Preseason Report I summarize preseason estimates for the current season (2002) and several preceding years. Preseason Report I also provides detailed information on the performance of each predictor and a summary of 2002 stock status based on predictions. These summaries are reproduced in Tables 3-2a and 3-2b.

Overall, current predictions suggest that 2002 will be a somewhat unusual year because of the difference between chinook and coho abundance. Figures 3-1 and 3-2 display the forecast data from Preseason Report I Tables I-1 and I-2. (It should be noted that these tables use different measures for some of the stocks, such as ocean abundance versus ocean escapement, so that the comparisons made in the figures are not exact. Nonetheless, they provide a general idea of the relative abundance of different stocks. Consult Preseason Report I for more information on the predictors.) Although post-season estimates are more accurate, and available for previous years, predictions are used to allow comparison based on one standard. The figures show that for most stocks chinook abundance is predicted to be higher in 2002 than in previous years. Columbia River runs in particular are expected to be substantially larger. California Central Valley runs are also expected to be higher while Puget Sounds stocks may register a modest increase from 2001. In contrast, coho salmon abundance is expected to be substantially lower overall even though some stocks are expected to be healthier than in 2001. Oregon Coastal Natural (OCN) coho are predicted to be up by 43%. This increase is compensated for by a substantial decline in returning hatchery-produced coho from the Columbia River and coastal Oregon, the main target coho stocks. They are down by 79%. These stocks are included in the Oregon Production Index (OPI) shown in Figure 3-2.

The disparity between chinook and coho abundance influences management of ocean salmon fisheries. Ideally, season openings and other measures can be set so that abundant chinook can be caught while coho are avoided. Already depressed stocks, such as Oregon Coastal Natural (OCN) coho, may constrain catches of more abundant stocks because some amount of fishing mortality cannot be avoided even when regulations facilitate higher encounter rates for chinook in comparison to coho. This is exacerbated by the decline in hatchery-produced coho. Fishermen are thus more likely to encounter natural coho stocks, which usually cannot be retained in all but Treaty Indian fisheries. Management measures shaped to minimize mortality to these natural coho could affect fishing access to other, target stocks.

3.2 Non-target Species

3.2.1 Non-salmon Incidental Catch and Bycatch[8/]

Commercial ocean trollers catch a range of species aside from salmon, albeit in low numbers. However, only a few of these species raise management concern, due to their low abundance or value in other fisheries. These species are the Pacific halibut (*Hippoglossus stenolepis*), which is a high-value fish subject to its own directed fishery, and several species of rockfish. Rockfish are targeted and caught incidentally in a range of fisheries managed under the Council's Pacific Coast Groundfish FMP. The abundance of many of these species has dramatically declined over the past two decades and eight rockfish species have been declared overfished by the Secretary of Commerce under the auspices of the MSA.

Halibut are demersal (bottom-dwelling) fish and are most often caught incidentally when trollers target chinook, which occur closer to the bottom than coho. The International Pacific Halibut Commission (IPHC) manages halibut fisheries indirectly throughout the entire North American range of the fish (Alaska, British Columbia and the U.S. West Coast) by means of allocated catch quotas. (More information about the IPHC and halibut life history and management is available from the IPHC web site, http://www.iphc.washington.edu/halcom/.) The allocation, established annually by the IPHC for the West Coast (referred to Area 2A in the IPHC's scheme of management zones), is subdivided among various user groups according to a catch sharing plan developed by the Council. This plan allocates 15% of the non-Indian commercial halibut allocation in Area 2A to the salmon troll fishery incidental catch during May and June (with provision for additional harvest from July through September if sufficient quota remains). A change in the regulations in 2001 identified harvest of the incidental quota in the May/June salmon troll fishery as the primary management objective, and the harvest of any remaining quota during July through September as a secondary objective. Table 3-3 provides the number of licenses, allocation, harvest, and landing restrictions for the incidental halibut fishery since the initial season in 1995. The Council has successfully used landing ratios and a total trip limit to assure a manageable progression of the fishery in past years.

The Pacific Coast Groundfish FMP manages more than 80 different fish. About two-thirds of these are rockfish or thornyheads (*Sebastes* and *Sebastolabus* spp.), although only about 10 species account for most landings. These species occur in a wide variety of marine habitats, ranging from inshore shallow waters to pelagic and deep bottom environments offshore. More information on the management regime for these species may be gleaned from the Council's EA for proposed 2002 harvest levels (PFMC 2001) and Stock Assessment and Fishery Evaluation (SAFE) documents published annually (most recent, PFMC 2001). For more general information on the biology and habits of these species the reader may wish to consult a field guide such as Eschmeyer et al. (1983). Rockfish landings are accounted for in the groundfish FMP management process. A complicated regime of harvest guidelines and cumulative trip limits is used to limit rockfish (and other groundfish) landings across various fisheries. Groundfish management allocates catches between limited entry permit holders and participants that do not have permits and are thus considered part of the "open access" sector. Most salmon landings are made by vessels in the open access sector; vessels with a limited entry permit (held because they participate in other groundfish fisheries) account for about four percent of landings. If landings of a given groundfish species approaches the annual target established for that species, open access cumulative trip limits are reduced accordingly in-season. Table 3-4 summarizes information on groundfish landings by the ocean troll fishery in recent years. According to the table seven to eight percent of trips land some groundfish in addition to any salmon landed and groundfish account for one percent or less of total landings. Thus groundfish are not a significant part of the catch, although landings

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[8/] As used here, the term bycatch conforms to its definition in the MSA: these are fish or other organisms that are discarded after being caught, either because they have no economic value or regulations prohibit retention. Incidental catch refers to species that may be retained but are not the principal species targeted in the fishery.

(and indirectly catch[9/]) still must be regulated since some groundfish species are at low abundance and overfished. Recreational groundfish catches, for selected species or species groups, are also regulated by the annual specifications set under the Pacific Coast Groundfish FMP.

3.2.2 Non-target Salmon Stocks Listed Under the ESA

ESA-listed species are managed under regulations pursuant to that law rather than the MSA. "Take" (a term that covers a broader range of impacts than just mortality) of listed species may be allowed as long as it is not the primary purpose of the activity. For salmon fisheries this means that incidental catch may be allowed (along with some additional mortality resulting from, for example, fish that "drop off" the hook and consequently die). As part of the process authorizing such take, regulatory agencies must consult with NMFS[10/] so that any permitted take is carefully reviewed in order to ensure that it does not "jeopardize the continued existence of the species" (or in the case of salmon, the evolutionarily significant unit, ESU). For marine species, including salmon, NMFS is both the regulatory agency and the consulting agency so it must consult with itself. Because of the Council's central role in developing fishery management regimes, it must take the results of such consultations into account. This process, termed a "Section 7 consultation" after the relevant section in the ESA, results in a biological opinion that applies a set of "jeopardy standards" to the subject activity and mandates those actions that must be taken in order to avoid such jeopardy. The jeopardy standards, which are quantitative targets that must be met to avoid jeopardy, are also incorporated into the Pacific Coast Salmon FMP and play an important part in developing annual management measures. A Section 7 consultation may be reinitiated periodically as environmental conditions change and new measures may be required to avoid jeopardy. (Biological opinions for Council-managed salmon stocks are listed in Section 6.2 and are available from NMFS Habitat Conservation Division, Northwest Region. These documents also provide detailed information on the biology and status of these stocks.)

As part of the process for developing annual management measures NMFS provides guidance to the Council on targets that should be achieved to avoid jeopardy. This guidance, delivered in the form of a letter dated March 8, 2002, was presented to the Council during its March meeting. It describes requirements under relevant biological opinions and consultation standards for the current season. Pages 6-7 in Preseason Report II and Appendix A in Preseason Report III summarize this guidance. For most stocks NMFS guidance does not differ from the jeopardy standard. Particulars of the guidance differing from jeopardy standards, summarized on page 7 of Preseason Report II are as follows:

- Central Valley spring chinook and Sacramento River winter chinook impacts are addressed by a delayed opening in the recreational fishery in parts of California.
- Exploitation rate targets are identified for threatened Puget Sound chinook stocks.
- An exploitation rate less than or equal to that for Oregon Coast coho (OCN) is recommended for Southern Oregon and Northern California threatened coastal coho stocks.
- NMFS concurs with the combined ocean and freshwater exploitation rate recommended by the State of Oregon for OCN stocks, which is 12.5% to protect Lower Columbia River Wild coho. (This state-recommendation is less than NFMS's preliminary recommendation of 15%, which is the standard set

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[9/] It should be noted that only landings can be fully accounted for; it is difficult to assess bycatch (fish discarded at sea) without direct observation. Bycatch rates can (and are) estimated, however, to account for total fishing mortality. In the ocean troll fishery bycatch of rockfish and halibut is probably limited because total catch is small and these species have a relatively high market value, making retention economically viable.

[10/] NMFS is the designated agency for listed marine species. The U.S. Fish and Wildlife Service is responsible for listed terrestrial species.

in Amendment 13 to the Pacific Coast Salmon FMP.)

In addition to listed stocks, the status of three other unlisted natural stocks deserve mention. According to the FMP, if a natural stock's conservation objective is not met for three consecutive years then a conservation alert is designated for that stock. The Upper Columbia River Summer, Grays Harbor Fall and Queets Spring/Summer chinook stocks have not met conservation objectives for the last three years or more. According to the FMP fisheries affecting stocks on conservation alert would be closed, except that there certain exceptions, one of which applies to these stocks. The exceptions are: (1) if the stock is hatchery-produced, (2) if the stock is ESA listed (in which case the relevant biological opinion determines impact reduction measures), or (3) if Council-managed ocean fisheries have less than a five percent exploitation rate. This last exception applies to these stocks. (Additional information on these exceptions and other mitigating factors may be found in the footnotes to Table I-3 in the Preseason Report I.)

3.3 Socio-economic Environment

3.3.1 Fisheries and Fishing Communities

Chapter IV in the Review of 2001 Ocean Salmon Fisheries provides information on the socioeconomic environment. The most significant trend in the non-Indian commercial troll fishery is a long-term decline in the real ex-vessel value of landings (see Figure IV-4 in the Review). This is due both to a decline in landings and declines in the real price obtained for coho and chinook (see Figure IV-3 in the Review). Accordingly, the number of participants has declined and in 2001 was 78% of the 1986-1990 average. Recreational fishing for ocean salmon includes private vessels, charter boats and some shore-based fishing, although this last component accounts for a small amount of the recreational ocean catch. Measured by number of trips, California has the highest level of participation, although 2001 showed a substantial decline from the previous year. California also exhibits the highest proportion of charter boat participation of the three states. Oregon and Washington, in contrast, showed increases in participation in 2001. Coastwide, however, there has been a long-term decline in the number of ocean recreational trips.

While analysis of impacts to the natural environment is organized around stocks that spawn in particular rivers, the social dimension, including management measures, is organized around management zones, as described in the FMP. These zones also correspond to some extent with the ocean distribution of salmon stocks, which are spatially mixed in those ocean areas where Council-managed fisheries are prosecuted. Broadly, from north to south these zones are (1) from the Canadian border to Cape Falcon, which is on the Oregon coast south of the Columbia River mouth; (2) between Cape Falcon and Humbug Mountain on Oregon's southern coast; (3) the Klamath Management Zone, which covers ocean waters from Humbug Mountain in southern Oregon to Horse Mountain in northern California; and (4) from Horse Mountain to the U.S.-Mexican border. (There are also numerous subdivisions within these zones. These subdivisions are used to further balance stock conservation and harvest needs.) The following description of the fisheries and fishing communities is organized around these zones and is derived from the Review.

Canadian Border to Cape Falcon

Figures 3-3 and 3-4 display landings data from Tables IV-6 through IV-8 in the Review. Those tables report historical landings by major port areas by state. In the figures port areas have been grouped by management zone. (Some amount of catch in a management area may be landed at a port outside that zone but the resulting discrepancies are not great.) The figures show that the north of Cape Falcon zone accounts for a small proportion of commercial chinook landings, about six percent in 2001, but a very large portion of coho landings, some 98% last year. (Note that commercial landing of Coho was illegal south of Cape Falcon in 2001.) Coho stocks experienced serious declines in the early 1990s. Regulatory action to limit catches accounts for the immediate fall in landings; retention of coho has been for the most part prohibited south of Cape Falcon since that time. Thus, total coho landings are small but most are made in this zone. (For more

information on the history of these management actions refer to Amendment 13 to the Pacific Coast Salmon Plan.) The area north of Cape Falcon covers fisheries around the Columbia River mouth and the Washington coast. Port areas in this zone include Neah Bay and La Push on the northern Olympic Peninsula; Westport and Ilwaco in southern Washington near the Columbia River mouth; and Astoria, Oregon on the south side of the Columbia River mouth. (Smaller ports whose landings fall under these ports in landings statistics are listed in footnotes to Table IV-6 through IV-8.) Chinook salmon caught in this zone are mostly Columbia River stocks. British Columbia and Central and Northern Oregon stocks are less important contributors. (See Preseason Report I and especially Table A-1 for details on the occurrence of stocks in ocean fisheries.) Columbia River and Washington Coast stocks are the main contributors to coho catches in this zone. Indian tribes land a portion of the total catch in accordance with treaty rights. The Hoh, S'Klallam, Makah, Quileute, and Quinault tribes participate in ocean troll fisheries in this zone.

In 2001 ports north of Cape Falcon accounted for 34% of coast wide recreational fishing trips. (Figure 3-5 shows historical data on charter and private fishing trips by management zone.) Two-thirds of these trips were made by private vessels. Westport and Columbia River ports (Astoria and Ilwaco) are the dominant ports for charter trips. In 2001 the north of Cape Falcon zone accounted for 57% of the total coast wide landings. (See figure 3-6. Table 3-5 presents the numerical data and percent of coast wide landings by species for ports and zones.) As with commercial landings, the north of Cape Falcon zone accounts for the largest share of coho landings at almost 80%. Management measures gave more opportunity to recreational fisheries to catch hatchery coho and this is reflected in this proportion. Significantly, retention of coho with a healed adipose fin clip was permitted in the recreational fishery.

Although not part of the Council management process, two recreational fisheries in this zone must be considered when modeling the impacts of management options. One is referred to as Buoy 10 in reference to a navigational aid at the entrance to the Columbia River that demarcates the inner boundary of the Columbia Control Zone, typically closed to recreational salmon fishing. This fishery is important because it intercepts a substantial portion of ocean escapement at point where fish are just entering freshwater. The second fishery is referred to as Area 4B in reference to state waters near Neah Bay in the Strait of Juan de Fuca. Like Buoy 10 fisheries, recreational fisheries here intercept ocean escapement, in this case entering Puget Sound, and must be considered in assessing the impacts of Council-managed ocean fisheries.

Cape Falcon to Humbug Mountain

This zone covers the northern and central Oregon coast. Commercial landings of chinook are significant. As can be seen in Figure 3-3, Oregon coast ports between Cape Falcon and the KMZ are the major contributors to chinook landings, along with California ports south of the KMZ; in 2001 they accounted for half of all chinook landings. Coho landings were very large in this area until 1992 when, as noted, stock declines coupled with regulatory action eliminated most landings south of Cape Falcon. (Some mortality to these stocks still occurs, and is accounted for in estimates, due to gear encounters including hook-and-release.) Tillamook, Newport and Coos Bay are the major port areas in this zone; more than half of the chinook landings were made at Newport. Fisheries in this zone catch a mix of stocks, which can vary from year to year. Columbia River and Oregon Coast chinook stocks are important contributors to fisheries in this zone. But in some years Central Valley and Klamath River stocks also contribute to these fisheries. Although regulations have prohibited retention of coho south of Cape Falcon in recent years, Oregon and northern California stocks are encountered in areas south of Cape Falcon.

This zone accounted for 18% of coast wide recreational fishing trips in 2001; four-fifths were on private boats. Recreational coho landings were also significant in Oregon in 2001, accounting for almost a fifth of coast wide recreational coho catch (Table 3-5) and 12.5% of the total coast wide recreational salmon catch (see Figure 3-6). This is partly due to seasonal management measures that allowed a selective fishery for hatchery-produced coho in this zone. Of the three ports in this zone Newport originated the most charter trips in 2001. But the two other ports (Tillamook and Coos Bay) each originated more private trips than the number of charter trips out of Newport. Thus, while Newport is an important center for charter fishing, recreational fishing

on private boats is important at all of the ports.

Humbug Mountain to Horse Mountain (Klamath Management Zone)

The KMZ covers waters in southern Oregon and northern California around the mouth of the Klamath River. This is geographically the smallest zone, and also accounts for a small proportion of commercial landings. In 2001 about 14% of chinook landings were made at the three major ports in this zone: Brookings, Oregon; and Crescent City and Eureka in California. Central Valley, Klamath River, and Central Oregon chinook stocks are the main contributors to catches in the KMZ. Recreational trips in the KMZ accounted for about 13% of coast wide trips with slightly more than 96% of these trips made on private vessels. Charter fishing in the zone, from a coast wide perspective, is negligible at half a percent in 2001.

South of Horse Mountain

Although this zone is defined as stretching to the U.S.-Mexican border, ocean salmon fishing generally occurs from Morro Bay northward. California fisheries historically have been the major component of West Coast ocean salmon fishing, accounting for a major share of chinook landings as recently as 2000 (see Figure 3-3). Coho were less important historically than chinook, and like all fisheries south of Cape Falcon retention has not been allowed since the early 1990s. Major ports for this zone (as listed in Review Table IV-6) are Fort Bragg, San Francisco and Monterey. Central Valley chinook stocks are important throughout this zone but particularly south of Fort Bragg (Point Arena). Klamath chinook stocks are caught in this zone. In 2001 this zone accounted for 40% of commercial chinook landings. San Francisco is the major port for commercial landings, accounting for about three-quarters of landings at the three ports in 2001. The other two ports had a greater share of landings in the past and as recently as 2000 Monterey landings were almost equal to San Francisco's.

Figure 3-5 suggests that the number of recreational trips has remained more stable over the long term in the south of Horse Mountain zone. As a result, the number of trips occurring this zone as a proportion of coast wide trips has increased since the 1980s. In 2001 the south of Horse Mountain zone accounted for the highest percent of recreational trips coast wide, at 35.1%, although this figure exceeds the proportion of recreational fishing north of Cape Falcon by a slim margin. This zone had the largest share of coast wide recreational chinook landings in 2001 at 57% (Table 3-5); coho landings were negligible, reflecting regulations prohibiting coho retention in this zone. (The reported landings includes some illegal harvest, as footnoted in the Review tables.) Charter fishing historically, and today, has accounted for a much larger fraction of recreational trips in this zone; in 2001 almost half of trips south of Horse Mountain were made by charter vessels. San Francisco is by far the largest port for charter trips while private recreational trips are more evenly distributed among the three ports in this zone.

3.3.2 Health and Safety

The only potentially significant health and safety issue relates to management measures that either encourage or force fishermen to venture out in inclement weather. A few open days, when fishing is allowed, may alternate with closed days for example. Or the fishery may only be open during certain days of the week. These seasons structures, designed to spread out fishing effort over a longer time period or reduce encounters with certain stocks, can put fishermen in position of having to either risk fishing in bad weather or miss out on an opportunity during a limited opening.

Table 3-1: Chinook and coho salmon stocks managed under the Pacific Coast Salmon Plan.

Chinook	Coho
California Central Valley Sacramento River Fall Sacramento River Spring (**threatened**) Sacramento River Winter (**endangered**)	Oregon Production Index Area Central California Coast (**threatened**) Northern California (**threatened**) Oregon Coastal Natural (**threatened**) Columbia River Late Hatchery Columbia River Early Hatchery Columbia River Natural
Northern California Coast Eel, Mattole, Mad (**threatened**), and Smith Rivers, Fall and Spring Klamath River Fall Klamath River Spring	
Oregon Coast Southern Oregon (aggregate of several stocks) Central and Northern Coast (aggregate of several stocks)	
Columbia River Basin Norther Lewis River Fall (**threatened**) Lower River Hatchery Fall Lower River Hatchery Upper Willamette (**threatened**) Mid-River Bright Hatchery Spring Creek Hatchery Klickitat, Warm Springs, John Day, and Yakima Rivers Snake River Fall (**threatened**) Snake River Spring/Summer (**threatened**) Upper River Bright Upper River Summer Upper River Spring (**endangered**)	
Washington Coast Willapa Bay Fall Natural Willapa Bay Fall Hatchery Grays Harbor Fall Grays Harbor Spring Quinault Fall Queets Fall Queets Summer/Spring/ Hoh Fall Hoh Spring/Summer Quillayute Fall Quillayute Spring/Summer Hoko Summer/Fall	Washington Coastal Willapa Bay Hatchery Grays Harbor Quinault Hatchery Queets Hoh Quillayute Fall Quillayute Summer Hatchery Western Strait of Juan de Fuca
Puget Sound Eastern Strait of Juan de Fuca Summer/Fall (**threatened**) Skokomish Summer/Fall (**threatened**) Nooksack Spring (**threatened**) Skagit Summer/Fall (**threatened**) Skagit Spring (**threatened**) Stillaguamish Summer/Fall (**threatened**) Snohomish Summer/Fall (**threatened**) Cedar River Summer/Fall-Lake Washington (**threatened**) White River Spring (**threatened**) Green River Summer/Fall (**threatened**) Nisqually River Summer/Fall-South Puget Sound (**threatened**)	Puget Sound Eastern Strait of Juan de Fuca Hood Canal Skagit Stillaguamish Snohomish South Puget Sound Hatchery
Southern British Columbia Coastal Stocks Fraser River	Southern British Columbia Coast Coastal Stocks Fraser River

Table 3-2a: Chinook 2002 predicted stock status.

Stock/Predictor	Status
Sacramento River Fall Chinook	A total of 42,200 age-two chinook are estimated to have returned to the Central Valley in 2001, forecasting a 2002 CVI of 825,400 adult chinook (Figure II-1), which is 1.27 times the 2001 forecast.
Klamath River Fall Chinook	The forecast September 1, 2001 (preseason) ocean abundance of Klamath River fall chinook salmon is 209,000 age-three fish, 143,800 age-four fish, and 9,700 age-five fish (Figure II-3). Absent ocean and river fisheries in 2002, the projected stock strength would be expected to result in 94,800 fish maturing and returning to the basin in 2002 to spawn as adults in natural areas. Late-season ocean fisheries in 2001 (September-November) were estimated to have harvested zero age-three, 1,900 age-four, and 400 age-five Klamath River fall chinook. This harvest will be deducted from the ocean fishery's allocation in determining the 2002 allowable ocean harvest.
Oregon Coastal Chinook, North Migrating	Based on the density index of total spawners, the generalized expectation for Oregon coastal north migrating (NOC and MOC) stocks in 2002 is for above average abundance. The density of adults observed since 1985 has met or exceeded the goal of 60-90 spawners per mile, a primary indicator that these stocks are generally healthy
Oregon Coast Chinook, South/Local Migrating	A quantitative estimate is made only for Rogue River fall chinook; the ocean abundance index for 2002 is 30,400 chinook, the highest since 1988.
Columbia River Fall Chinook	Abundance predictions are made for five major fall stock units characterized as being hatchery or natural production and originating above or below Bonneville Dam. The upriver brights (URB) and lower river wild (LRW) are primarily naturally produced stocks. The lower river hatchery (LRH) tule, Spring Creek Hatchery (SCH) tule, and mid-Columbia brights (MCB) are primarily hatchery produced stocks. The tule stocks generally mature at an earlier age than the natural fall stocks and do not migrate as far north. Minor stocks include lower river bright (LRB), a naturally produced stock, and Select Area brights (SAB), a hatchery stock originally from Rogue River stock; both occur downstream from Bonneville Dam.

Table 3-2a (cont.)

Stock/Predictor	Status
Columbia River Fall Chinook (cont.)	The preliminary forecast for 2002 **URB fall chinook** ocean escapement is 281,000 adults; if realized, would represent the largest return since 1988, the fourth largest since 1964, and 64% greater than the recent 5-year average returns. No preseason estimate of Snake River wild fall chinook ocean escapement for 2002 is currently available. However, the Columbia River technical staffs are expected to develop a run size estimate for this critical ESA listed stock prior to the April Council meeting process. Ocean escapement of **LRW fall chinook** in 2002 is forecast at 18,700 adults, suggesting the largest return since 1991 and greater than the 10 year average of 11,300. The forecast run is expected to exceed the spawning escapement goal of 5,700 into the North Lewis River, Washington. The preliminary forecast for 2002 ocean escapement of **LRH fall chinook** is for a return of 137,600 adults, which would be the largest return since 1988 and greater than the recent 10 year average of 55,400. Ocean escapement of **SCH fall chinook** in 2002 is projected to be 144,400 adults, the fifth largest return since 1964 and largest since the 1976 return of 182,200. The preliminary forecast for the 2002 ocean escapement of **MCB fall chinook** is 96,200 adults, which would be the largest on record and 25% more than the 2001 observed return of 76,400 adults. The MCB chinook are primarily returns from hatchery releases of bright fall chinook stock in the area downstream from McNary Dam, although some natural spawning in tributaries between Bonneville and McNary dams also occurs.
Washington Coastal Chinook	Preseason forecasts for most Washington coastal chinook stocks were not available for inclusion in Preseason Report I. The Willapa Bay hatchery fall chinook ocean escapement abundance forecast is 18,768 adults, up approximately 5% from the 2001 preseason forecast. The natural fall chinook ocean escapement abundance forecast is 3,701 adults, down approximately 13% from the 2001 preseason forecast.
Puget Sound Chinook	**Spring chinook** originating in Puget Sound are expected to remain depressed. Runs in the Nooksack, Skagit, White, and Dungeness rivers are of continuing concern. The total return of natural Puget Sound **summer/fall stocks** is expected to be about the same as in 2001. Returns to the Skagit River are forecast to be 13,800, which is 52% greater than the 2001 forecast. Returns to the Strait of Juan de Fuca, south Puget Sound, Stillaguamish, and Snohomish rivers are expected to be similar to the 2001 preseason forecasts. Natural stocks from Puget Sound have experienced poor survival in recent years, resulting in depressed production and escapements. Only four natural Puget Sound summer/fall chinook stocks have met escapement goals at least once in the last five years (Hoko, Snohomish, Green, and Nisqually). However, two of these stocks (Green and Nisqually) have significant numbers of hatchery chinook that stray into natural spawning areas and are counted as natural fish. The total return from Puget Sound hatchery production is forecast to be about 25% above the 2001 predicted level.

Table 3-2b: Coho 2002 predicted stock status.

Stock/Predictor	Status
Oregon Production Index Area–Public Hatchery Coho	Using the appropriate values from Appendix B, Table B-2, the OPIH abundance prediction for 2002 is 361,700 coho, 21% of the 2001 prediction and 26% of the preliminary 2001 postseason estimate. The decrease in predicted OPIH coho from 2001 to 2002 is primarily due to substantially reduced hatchery jack returns in 2001 relative to 2000.
Oregon Production Index Area–Oregon Coastal Natural Coho	The 2002 preseason prediction for OCN (river and lake systems combined) is 71,800 coho, 143% of the 2001 preseason prediction and 44% of the 2001 postseason estimate. The 2002 preseason stratified random sampling prediction for OCNR and OCNL components are 57,200 and 14,600 coho, respectively.
Oregon Production Index Area–Private Hatchery Coho	The 2002 preseason STEP index abundance prediction is 600 coho. The 2002 prediction is below the 2001 preseason prediction of 1,000 coho due to low OPI smolt to jack survival.
Washington Coastal and Puget Sound Coho Stocks	
Willapa Bay	The 2002 **Willapa Bay hatchery** total ocean coho abundance forecast is 40,400 adults, a 12% increase over the 2001 preseason forecast of 36,100. The prediction is based on a recent six year mean return per release without adjustment for jack abundance. The **Willapa Bay natural** coho ocean abundance forecast is 21,600. This prediction is the average terminal run size estimate for the recent three years (1999-2001). Terminal forecasts for both hatchery and natural stocks were expanded to ocean abundances using an ocean survival rate derived from Bingham Creek wild coded-wire tag recovery data.
Grays Harbor	Preseason forecasts of abundance are made for natural fish throughout the system and for hatchery fish returning to three freshwater rearing complexes and three saltwater net-pen sites. The forecasts include returns expected from numerous volunteer production projects. The forecast of **Grays Harbor natural** stock abundance for 2002 is 55,400 ocean recruits. The forecast of **Grays Harbor hatchery** stock ocean abundance is 56,800 adults.
Quinalt River	The 2002 forecast for **Quinault natural** coho is 29,400 ocean recruits, an 238% increase from the 2001 projected level of 8,700. This estimate represents the 1999 brood year escapement (12,666) multiplied by the 1992-1996 brood year average ocean recruits per spawner (3.31), multiplied by a bias adjustment based on the predictor performance over the last five years (0.701). The **Quinault hatchery** coho forecast is 11,750 ocean recruits, an increase of 13% compared to the 2001 forecast level of 10,800. The forecast is derived from the mean 1992-1996 brood year observed marine survival rates (0.0178) and 1999 brood year smolt release (659,400). Approximately 197,100 (30%) of the fish released were marked with an adipose fin clip and CWT.

Table 3-2b (cont.)

Stock/Predictor	Status
Queets River	The **Queets natural** coho forecast is 12,500 ocean recruits, a slight increase compared to the 2001 forecast level. This forecast represents the estimated adult production from natural spawning, based on a Ricker stock-recruit model model adjusted for sea surface temperature anomalies. The forecast for supplemental production is 2,000 ocean recruits, based on releases (138,600) multiplied by the average recruits/release (0.0142). All supplemental releases were adipose fin clipped. The **Queets hatchery** (Salmon River) coho forecast is 14,000 ocean recruits, an increase of 40% compared to the 2001 forecast level. This forecast is based on the smolt release of 894,100 multiplied by the 1992-1995 brood year average observed marine survival rate (0.0157). Approximately 8.4% of the fish released from the Salmon River facility were marked with an adipose fin clip. CWTs were inserted into 16% of the fish released.
Hoh River	The **Hoh River natural** coho forecast is 8,500 ocean recruits, the same as the 2001 forecast. This forecast is based on estimated smolt production per square mile of watershed (based on Clearwater tributary to the Queets) multiplied by the size of the Hoh watershed for a total of 170,700 smolts. The total smolt production is then multiplied by the average recent year ocean survival rate (0.05) from the Bingham Creek jack return model and Queets coho survival estimates. No hatchery production is projected for the Hoh system for 2002.
Quillayute River	The **Quillayute River summer natural and hatchery** coho forecasts for 2002 are 1,200 and 4,900 ocean recruits, respectively. The natural component run size is based on estimated smolt production (22,400) and a projected ocean survival rate of 0.055 (average of the 0.061 survival suggested by a sea surface temperature model and the 0.045-0.051 estimated by extrapolating Bingham Creek jack return data to Queets survivals). The hatchery component run forecast is based on 1980-1993 brood year average ocean recruits per release (0.0253) multiplied by the number of smolts released (607,500). The 2002 forecast abundance of natural summer coho is 100% above the 2001 forecast while the hatchery forecast is 8% below the 2001 forecast level. The **Quillayute River fall natural and hatchery coho** forecasts are 22,300 and 15,000 ocean recruits, respectively. The forecast of the natural component run size is based on the estimated smolt production (406,000), multiplied by the projected ocean survival rate (0.055, as described above for summer coho). The hatchery production forecast is based on average ocean recruits per release (0.0247) multiplied by the number of smolts released (607,500). The 2002 forecast abundance of natural and hatchery components of Quillayute fall coho are 3% and 2% below their respective 2001 forecast levels.

Table 3-2b (cont.)

Stock/Predictor	Status
Puget Sound	The 2002 total hatchery and wild coho ocean recruit forecast for Puget Sound is 807,800, 15% above the year 2001 forecast. The hatchery forecast of 448,000 is 33% over the 2001 forecast. The wild forecast of 359,800 is 2% below the 2001 forecast. The 2002 forecasts for **Strait of Juan de Fuca natural and hatchery** coho ocean recruits are 21,200 and 14,000, respectively. The ocean survival rate for Strait of Juan de Fuca natural coho forecast (5.6%) was derived from the average of the Hood Canal predicted 2002 natural coho survival rate and the North Coastal overall average predicted 2002 survival rate. Strait of Juan de Fuca coho survival rates were assumed to be intermediate between coastal and Puget Sound coho stocks. The 2002 forecasts for **Nooksack-Samish natural and hatchery** coho ocean recruits are 22,000 and 105,400, respectively. The forecast is the product of projected smolt production from these basins and an adjusted Skagit smolt survival rate. The 2002 forecasts for **Skagit natural and hatchery** coho ocean recruits are 98,500 and 14,100, respectively. The ocean recruit survival rate prediction of 12.96% was based on the mean of the most recent four odd brood year ocean recruit survival rates observed for the Baker wild coho indicator stock. Odd brood years were used because Skagit wild coho exhibit different smolt production and marine survival rates during even and odd brood years. The Skagit survival rate was also applied to the Nooksack, Samish, and Strait of Georgia tributaries smolt production estimates after a slight subjective reduction. The 2002 forecast for **Stillaguamish natural coho** ocean recruits is 19,700. No hatchery production is anticipated. The Stillaguamish wild coho ocean survival rate (9%) was developed from the 1997 and 1998 brood year Wallace River Hatchery coho marine survival rates. The 2002 forecasts for **Snohomish natural and hatchery** coho ocean recruits are 123,100 and 60,300, respectively. The Snohomish wild coho ocean survival rate (9%) was developed from the 1997 and 1998 brood year Wallace River Hatchery coho marine survival rates. The Snohomish Hatchery coho ocean survival rate (6.4%) was developed from the 1996 to 1998 brood year Wallace River Hatchery coho marine survival rates. The 2002 forecasts for **South Puget Sound natural and hatchery coho** ocean recruits are 40,400 and 222,500, respectively. The South Sound ocean survival rate prediction of 5% was based on recent year survival rates at the Washington Department of Fish and Wildlife Deschutes River research station. The 2002 forecasts for **Hood Canal natural and hatchery coho** ocean recruits are 34,900 and 33,300, respectively. The 2001 Hood Canal natural coho forecast is based on an average of four different regressions of Big Beef Creek jacks versus Hood Canal December age-two run sizes.

Table 3-3: Incidental halibut allocation and harvest in Area 2A salmon troll fishery.

	Licenses Issued[a/]					Pounds of Halibut			Restriction	
Year	WA	OR	CA	AK-2A	Total	Allocation	May-June Harvest	Total Harvest	Halibut per Chinook	Trip Limit
1995	14	104	2	5	125	16,068	2,125	2,125	1 per each 20	none
1996	22	82	5	14	123	16,068	9,521	9,521	1 + 1 per each 15	20
1997	59	187	10	19	275	21,635	17,570	17,570	1 + 1 per each 10	20
1998	44	188	15	18	265	25,344	9,123	13,124	1 + 1 per each 8	25
1999	54	193	12	25	284	23,490	9,955	9,955	1 + 1 per each 5	35
2000	49	154	8	24	235	24,464	20,925	22,350	1 + 1 per each 3	35
2001	63	232	13	37	347	34,046	-	34,324	1 + 1 per each 3	35
2002	-	-	-	-	-	39,300	-	-	-	-

[a/] Licenses are issued by vessel number in the following order: Alaska, Washington, Oregon, California. For example, if a vessel has both Alaska and Washington vessel numbers, the license would be issued to the Alaska vessel number.

Table 3-4: Coast wide groundfish landings by salmon troll vessels.

Year	Proportion of trips with groundfish landings	Groundfish as a proportion of total landings
1999	989 trips out of 12,076 (8.2%)	23.8 mt out of 2,486.2 (1.0%)
2000	1,057 trips out of 14,417 (7.3%)	18.8 mt out of 3,531.5 (0.5%)
2001	973 trips out of 12923 (7.5%)	14.5 mt out of 2,935.9 (0.5%)

Table 3-5: Recreational landings by port and zone (thousands of fish and percent).

Port/Zone	Chinook	Coho	Total
Neah Bay	1.523 (1.0%)	17.877 (6.9%)	19.4 (4.8%)
La Push	0.584 (0.4%)	3.31(1.3%)	3.894 (1.0%)
Westport	15.745 (10.7%)	69.396 (26.7%)	85.141 (20.9%)
Ilwaco	5.122 (3.5%)	77.479 (29.9%)	82.601 (20.3%)
Columbia River	2.6 (1.8%)	39.2 (15.1%)	41.8 (10.3%)
North of Falcon	**25.574 (17.4%)**	**207.262 (79.9%)**	**232.836 (57.2%)**
Tillamook	2.5 (1.7%)	12.3 (4.7%)	14.8 (3.6%)
Newport	5.3 (3.6%)	19.3 (7.4%)	24.6 (6.0%)
Coos Bay	9.5 (6.5%)	19.3 (7.4%)	28.8 (7.1%)
Falcon to Humbug	**17.3 (11.7%)**	**50.9 (19.6%)**	**68.2 (16.8%)**
Brookings	7.2 (4.9%)	0 (0.0%)	7.2 (1.8%)
Crescent City	2.2 (1.5%)	0.1 (.0%)	2.3 (0.6%)
Eureka	10.5 (7.1%)	0.1 (0.0%)	10.6 (2.6%)
KMZ	**19.9 (13.5%)**	**0.2(0.1%)**	**20.1 (4.9%)**
Fort Bragg	24.9 (16.9%)	0.4(0.2%)	25.3 (6.2%)
San Francisco	39.8 (27.0%)	0.5(0.2%)	40.3 (9.9%)
Monterey	19.8 (13.4%)	0.2(0.1%)	20 (4.9%)
South of Horse Mt.	**84.5 (57.4%)**	**1.1(0.4%)**	**85.6 (21.0%)**
Total	147.274 (100.0%)	259.462 (100.0%)	406.736 (100.0%))

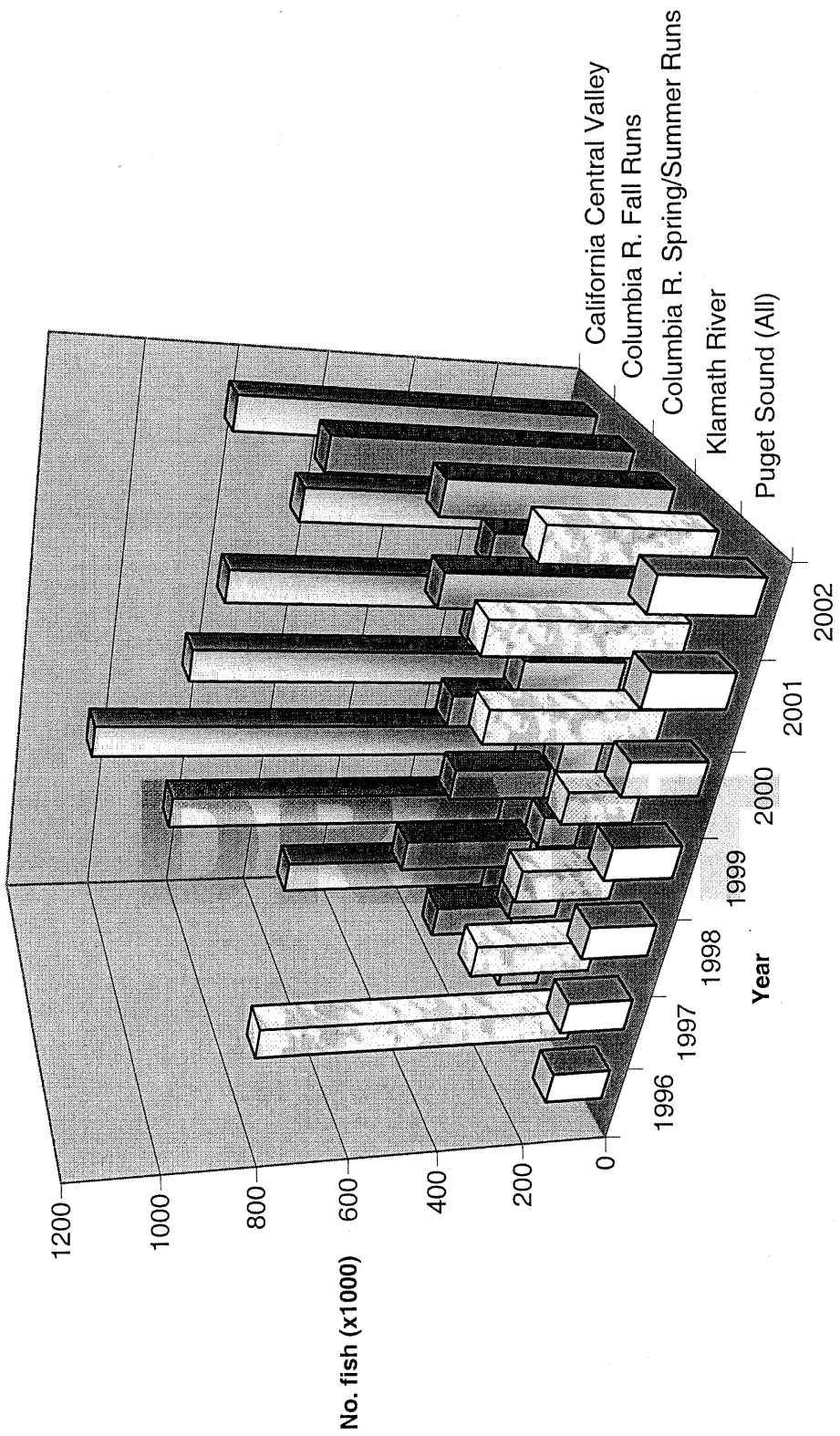

Figure 3-1: Preseason chinook forecasts.

Figure 3-2: Preseason coho salmon forecasts.

Figure 3-3: Chinook landings by management zone.

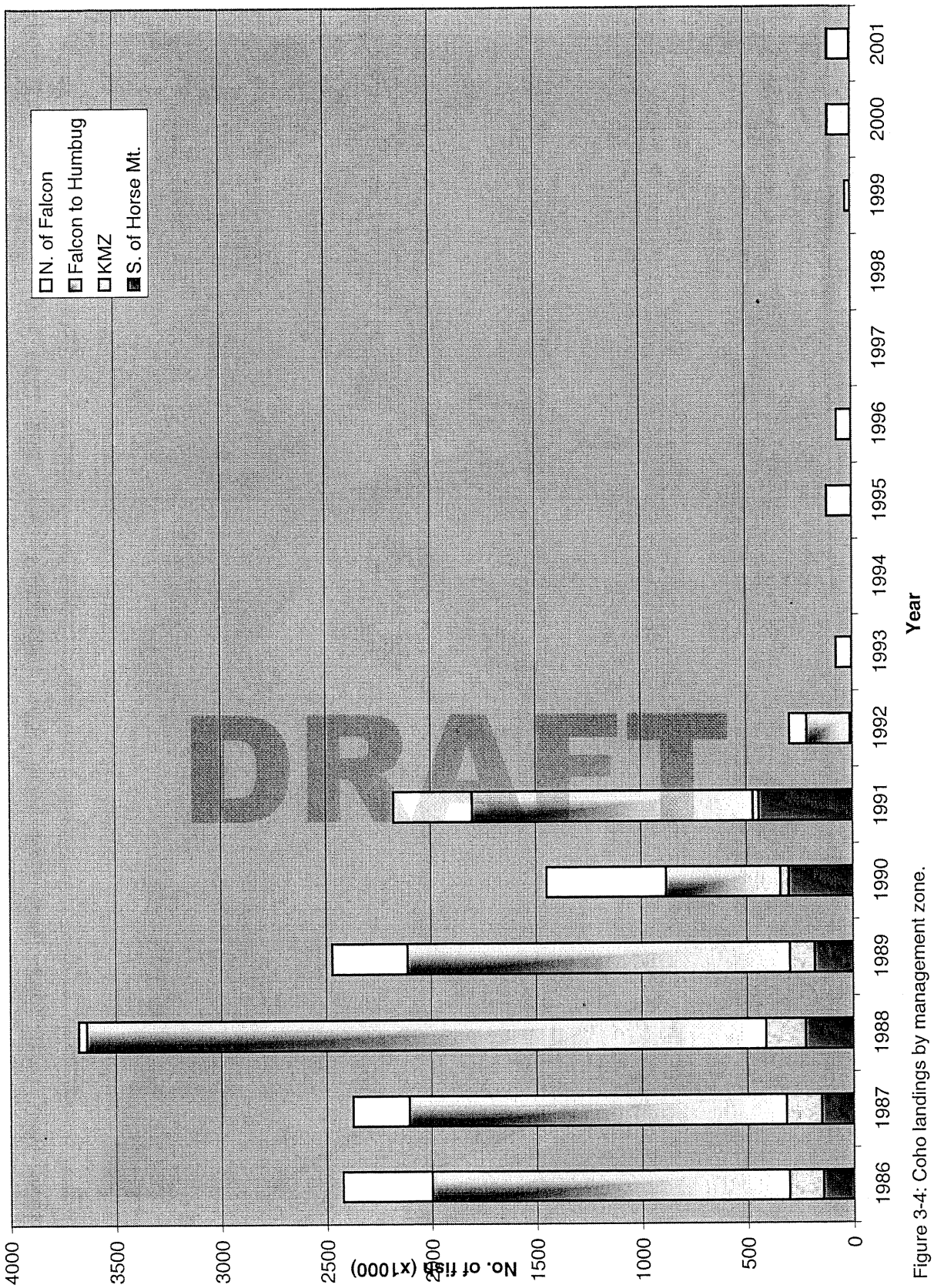

Figure 3-4: Coho landings by management zone.

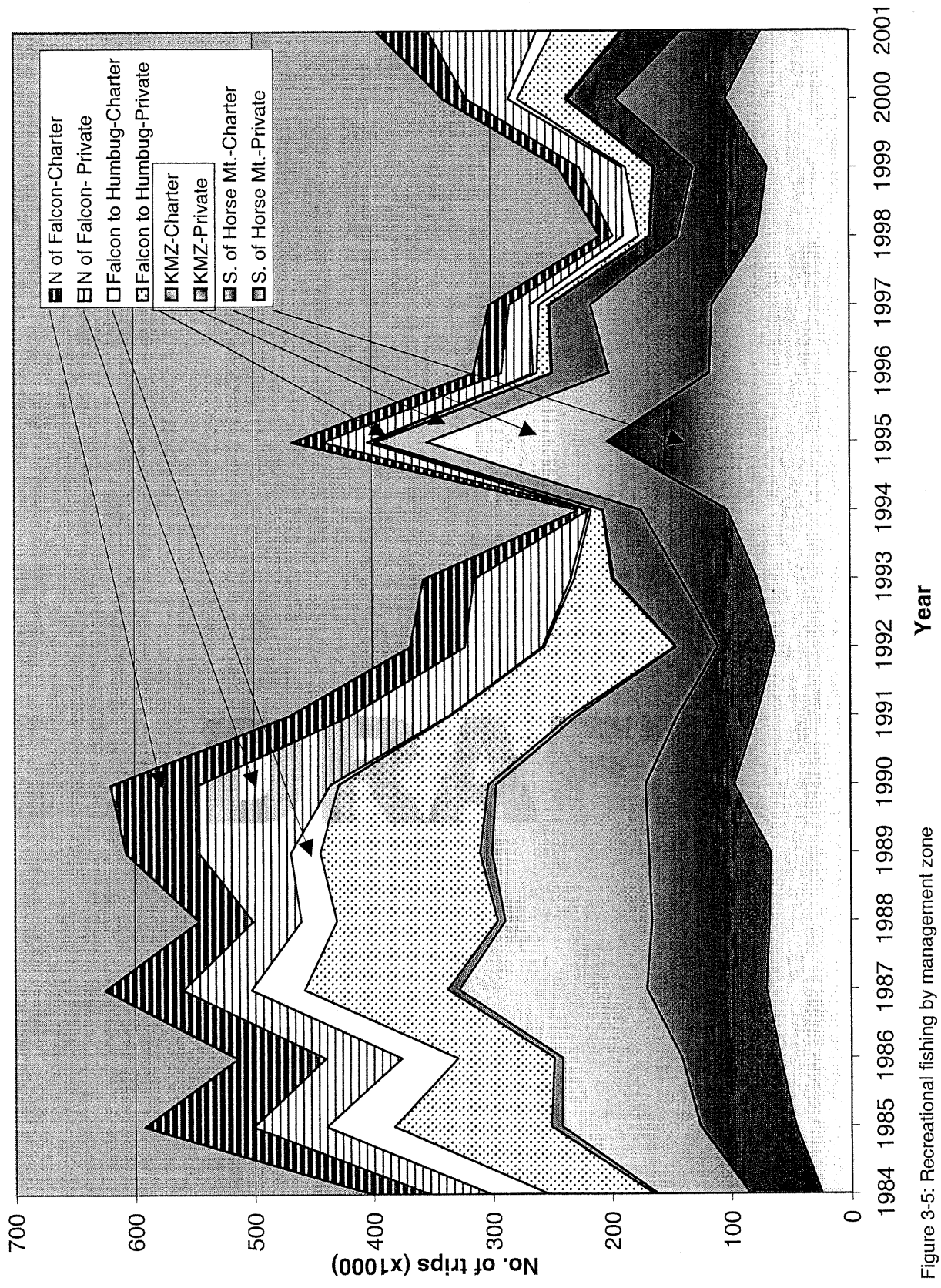

Figure 3-5: Recreational fishing by management zone

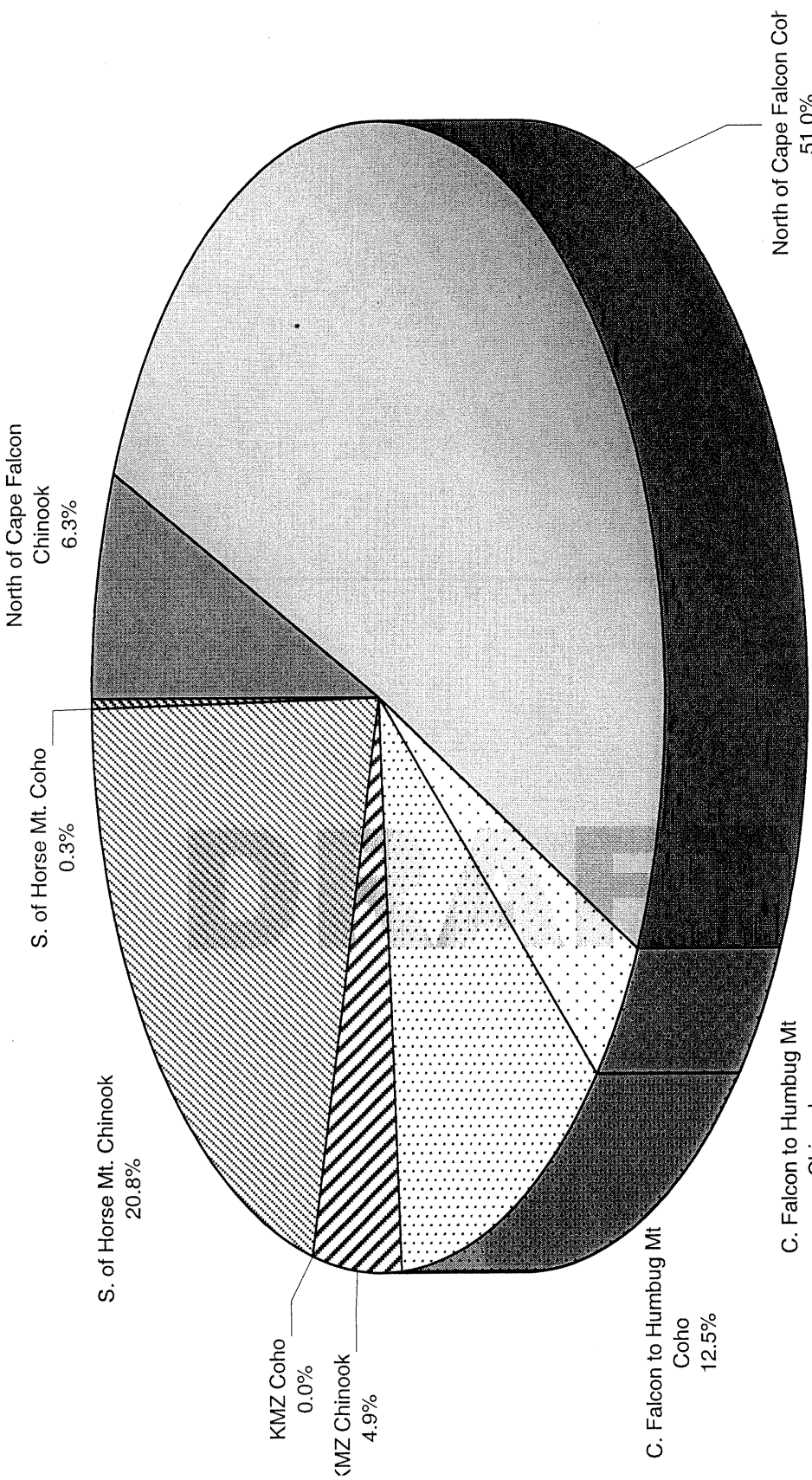

Figure 3-6: Recreational catch by species and zone, 2001, in numbers of fish.

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4 Environmental Consequences

4.1 Ocean Salmon Fisheries

4.1.1 Impacts of Alternative 1 (Preferred Alternative)

4.1.2 Impacts of Alternative 2 (No Action)

Target Stocks

Preseason Report II evaluates the effect of applying previous years' regulations (2000 or 2001) to stocks in the current year (2002). This information is summarized below.

Sacramento Fall Chinook: The Central Valley Index is (CVI) used assess the abundance of combined Central Valley chinook stocks; the Sacramento River fall run comprises over 90% of the total. The CVI harvest index, based on the CVI, is a ratio of harvested fish to the population as measured by harvest and escapement. A repeat of 2001 regulations in 2002 would result in an index value similar to the last five years. Because of the strength of this year's run, the calculated escapement would be 396,100, substantially above the target range of 122,000-180,000.

Klamath River Fall Chinook: The Klamath Ocean Harvest Model forecasts a spawning population of approximately 59,900 adults, of which 36,800 would be expected to spawn in natural areas. This is above the conservation objective minimum of 35,000 naturally spawning adults. However, to maximize recruitment an estimated range of 41,000 to 106,000 adults is required. It is n% of potential adult natural spawners, compared to the conservation objective of 33-34%.

Oregon Coastal Chinook: The conservation objective of an aggregate 150,000 to 200,000 naturally spawning adults would be met if 2001 regulations were applied.

Columbia River Fall Chinook: All five major stock units (LRW, URB, MCB, SCH and LRH) would exceed the conservation objectives set for them. Compared to 2001, ocean escapement is substantially greater except for Lower River Wild (LRW), which is slightly lower.

Washington Coast and Puget Sound Chinook: Council-managed fisheries have a minor impact on these stocks since they are generally distributed further north, in Canadian and Alaskan waters. For this reason, an evaluation of impacts is not made.

The STT was unable to apply 2001 regulations to 2002 coho stock abundance forecasts because there are not enough marked hatchery-produced coho this year to allow a valid analysis. (Model runs produce negative values for ocean escapement, indicating that all these fish would be taken in ocean fisheries.) The STT therefore forecast the projected impacts of 2000 regulations on 2002 stock forecasts for selected coho stocks.

Oregon Production Index Area (Coho): Application of 2000 regulations would result in a 10.8% exploitation rate for OCN coho. This is below the 15% allowable rate based on the harvest matrix developed pursuant to Amendment 13.[11/] The forecast predicts a 6.4% exploitation rate for Rogue/Klamath hatchery coho, which is below the allowable rate of 13% for this stock. Ocean escapements into the Columbia River would be sufficient to allow some inside harvest and meet hatchery egg take goals.

[11/] The harvest matrix identifies maximum exploitation rates based on estimates of marine survival and parent spawner status, the main factors affecting the strength of a given year class.

North of the Oregon Production Index Area (Coho): Table III-6 in Preseason Report I presents a projection of ocean escapement based on 2000 regulations and 2002 abundance for these stocks. All of these stocks except for the Stillaguamish would meet ocean escapement goals. Impacts of inside fisheries would ultimately determine actual spawning escapement.

In addition to the immediate effects discussed above, the long-term effects of the no action regulations on stocks failing to meet conservation objectives could further depress listed stocks and hinder recovery efforts.

Non-Target Stocks

The No Action alternative for regulations governing incidental halibut bycatch is described in Section 2.2. No analysis is available to determine if the halibut-chinook ratio and landing limit, given 2002 salmon abundance, would result in substantially different incidental halibut catches. However, the full allocation of halibut was taken before the end of the commercial season and this would also likely occur in 2002.

By the same token, data and analysis are insufficient to determine the effect of re-applying 2001 regulations on incidental rockfish catches. The greater abundance of chinook salmon in quota fisheries would result in higher catch-per-unit-effort (CPUE) and less time on the water, resulting in lower incidental rockfish catches. Seasonal fisheries would have similar impacts.

Preseason Report I does not explicitly describe the expected impacts of 2001 regulations on ESA-listed salmon stocks, if applied in 2002.

Socioeconomic Impacts

The impacts of applying 2001 ocean harvest regulations to 2002 stock abundances are short- and long-term and have allocational implications in addition to the implications for current year and future harvest and economic benefits derived from the ocean salmon fishery. The 2000 SEIS (see Section Section 1.3) describes typical social and economic trade-offs involved with specifying ocean harvest. The status quo and alternatives for the 2002 fishery are within the range of options discussed in that SEIS.

In the following discussions, the effects of applying the 2001 regulations to 2002 stock conditions are considered in two different ways. The first comparison is a comparison of the impacts that would be expected in 2002 relative to the impacts estimated for 2001. The second is a comparison of the impacts of the 2001 regulations applied in 2002 relative to other regulatory options that might be applied in 2002.

Short-term economic impacts in the ocean fisheries compared to the previous years' fisheries would be similar between the two years for quota driven fisheries, assuming that in each management area the difference in availability of fish to harvest (catch per unit of effort, or CPUE) between the two years was not large. Under the same assumptions, seasonally managed fisheries (those managed by time and area) would have similar short-term ocean impacts between the two years. Inside fisheries would be differentially affected by the ocean harvest, depending on the stock composition of the ocean harvest and overall abundance of the individual stocks. In 2002, coho are much less abundant than 2001 and chinook are substantially more abundant. Applying 2001 regulations to 2002 ocean stock abundances would result in some inside fisheries having more and others less ocean escapement available for harvest than in 2001.

The effects of 2001 ocean regulations applied to 2002 fish abundances on long-term abundance and harvest (socio-economic value) will depend on the stock composition and overall abundance of the various stocks. The 2001 ocean regulations were designed to achieve desired spawning escapement levels given 2001 stock abundances and anticipated 2001 regulations governing the inside fisheries. Excessive harvest or excessive escapement (escapement substantially above MSY) would result in lower long-term production

than alternatives for which regulations are adjusted to match the 2002 expected abundance. However, these effects would depend in part on whether adjustments could be made to inside fisheries that would be sufficient to compensate for the changes in ocean escapement. Not every stock is taken in an inside fishery, and if the ocean escapement is reduced sufficiently, even a complete elimination of inside harvest may not be sufficient to compensate for reduced ocean escapement. However, where inside adjustments could be made such that target spawning escapements are met, it is apparent that the issue of applying 2001 regulations to 2002 harvests would be largely allocational, involving the balance of harvest between inside and outside, commercial and sport, and tribal and non-tribal harvest interests.

Over the short term, the effects on economic benefits depend on CPUE and total harvest. If the 2001 regulations are applied to the 2002 abundance but CPUEs are lower than in 2001, a lower economic value per unit of harvest would be expected as compared to 2001. For commercial fisheries the lower value would be the result of lower net revenue per unit of harvest related to increasing costs per unit of catch (reduction in net economic value) and reduction in personal income generated in local communities. For recreational fisheries, the reduction would be in the value of the experience for the individual recreational angler (reduction in net economic value). If during the season recreational angler effort dropped off because of spreading information about low CPUEs, the reduction in angler effort would likely translate to a reduction in the rate of spending in local communities. However, for a recreational fishery managed under a quota, lower CPUEs may translate to an increase in the number of angler trips, provided the season duration is sufficient to allow complete harvest of the quota. A higher number of angler trips may or may not result in an increase in the total net economic value generated by the quota fishery. The effect on total net economic value of the fishery would depend on the degree of the decrease in angler satisfaction per trip as compared to the increase in the total number of trips taken. However, provided sufficient trips are taken to fully harvest the available quota, the lower CPUE would increase the number of trips taken, increasing local community income associated with the recreational fishery. This discussion of the relative effects of different CPUEs mainly applies when comparing the effects of 2001 regulations applied to 2002 abundances to the effects of the 2001 regulations applied to 2001 abundances.

Comparing status quo regulations for 2002 (applying 2001 regulations to 2002 abundances) with the application of regulatory alternatives designed for 2002 fish abundances, the net revenue per unit harvest should not vary substantially between the options for commercial fisheries and the CPUE should be roughly the same for recreational fisheries. Any differences in CPUE would be attributable to differences between the time and area of openings between the status quo and other options. However, from one year to the next it is very difficult to predict with much certainty where and at what time CPUEs will be the highest. So, at this level (the level of comparing CPUEs between options and inferring differences in economic effects) it is not possible to reasonably distinguish between different patterns of openings. All estimates of economic differences between the 2002 regulatory options are based on estimates in the differences between the options in overall harvest and angler participation.

Health, Safety and Other Socioeconomic Issues

Health safety and other socio-economic issues are discussed in the 2000 SEIS for the salmon FMP. No significant differences in health and safety issues would be expected from 2001 if the same regulations were in effect in 2002. Season length would be the same for most fisheries, and most quota fisheries did not close early after reaching the quota. Impacts would be within the range described in the aforementioned SEIS for this fishery.

4.1.3 Impacts of Other Alternatives Considered

Target Stocks

Anticipated impacts of the options developed during the March Council meeting are described on pages 8-10

in Preseason Report II. All of the options would meet conservation objectives for target stocks. Table 4 in Preseason Report II compares key stock escapements, ocean exploitation rates, or other criteria to objectives. It shows that objectives would be met for all key stocks. However, two natural stocks not listed under the ESA, Stillaguamish and Hood Canal coho, would not meet conservation objectives under Option I. (Since these are weak natural stocks they may be considered non-target but are mentioned here because they are not ESA listed.) But adjustments to management measures for Puget Sound fisheries should allow conservation objectives for these two stocks to be met. (For OCN stocks see below under ESA-listed salmon.)

Figures 4-1 and 4-2 chart the modeled impact, in terms of landings, of the options. (The values in these charts include both catch and bycatch mortality, as given in Preseason Report II Table 5. The vertical axis in both charts is set to the same scale.) Tables 4-1a-b present this total (harvest plus bycatch) mortality for each option and within each option the percent distribution between zones. Table 4-1c summarizes the distribution of impacts by species and fishery sector for each option. As can be seen in the figures, both commercial and recreational chinook impacts would increase from 2001 levels while coho would be less than projected 2001 levels for all three options. (The 2001 values in the tables and figures are projected harvest impacts, taken from the 2001 Preseason Report III. Actual harvest impacts are different. Projected values are used because they more accurately compare with 2002 projections.) Overall, more chinook impacts occur south of Cape Falcon while coho impacts are greater north of Cape Falcon and would occur more in recreational fisheries. In comparison to 2001, all options would result in significantly less chinook impacts to the Cape Falcon-Humbug Mountain zone. All options show an increase in total impacts (chinook and coho combined) from commercial fishing but a decline in recreational impacts (see Table 4-1c). In all options chinook harvest south of Cape Falcon is the single biggest component of overall impacts (see Table 4-1a-b). This reflects the strength of the Sacramento River fall run.

Option I has the highest overall mortality for both chinook and coho with commercial troll mortality to chinook south of the KMZ accounting for the largest component. In contrast, recreational impacts to chinook south of Horse Mountain are more equivalent among the three alternatives. Option I does not differ substantially from the other two options in terms of recreational impacts to chinook. In terms of coho impacts, Option I results in relatively fewer impacts to Treaty Indian fisheries, although again the absolute amount is greater, and more to non-Indian commercial fisheries north of Cape Falcon. In comparison to 2001, Option I would result in more chinook impacts North of Cape Falcon and commercial troll coho impacts south of Cape Falcon are roughly half of the 2001 value.

In terms of overall mortality, Option II is intermediate. But the distribution of impacts differs somewhat from the other options. For chinook, Option II actually shows a slightly lower overall total mortality for commercial fishing because it favors recreational fishing in comparison to the other two options. (Under Option II recreational fishing would account for 33.6% of impacts to both species versus about 30% for the other two options.) It also has the lowest combined commercial and recreational fishing impact to chinook (898,000 fish, see Table 4-1c). Chinook mortality in the commercial fishery is distributed more to the zones north of Humbug Mountain, relative to the other options. But looking at the distribution of impacts within Option II, the absolute chinook harvest impact is still greater south of Horse Mountain. A greater proportion of commercial coho impacts would occur in Treaty Indian fisheries under this option, although in absolute terms it is intermediate between the other two options.

Option III has the smallest overall impact and with lower total fishing mortality than the 2001 season (1,105,600 versus 1,147,200 fish). In comparison to the other two alternatives, Chinook account for a larger proportion of impacts (81.7% versus 77.9%) and the absolute chinook harvest is actually greater than Option II (Table 4-1c). This option would also result in a relatively large share of recreational coho impacts south of Cape Falcon in comparison to the other two alternatives (Table 4-1b). But in relative terms, coho mortality is a smaller share of total impacts (18.3% versus 22.1% in Options I and II, see Table 4-1c).

Non-Target Stocks

Option 2 in Section 2.2 could be applied in combination with any of the options for managing ocean salmon harvests. It decreases the ratio of halibut to landed chinook, reflecting increased chinook abundance. No analysis is available of the expected harvests given this change in regulations. However, in addition to the ratios and trip limits, halibut incidental catch is governed by the overall allocation for commercial ocean salmon fisheries. If this quota is met before the salmon season ends, commercial vessels would not be allowed to land halibut. Although there would be some bycatch-associated mortality (fish that die after being discarded at sea) this is accounted for when quotas are set. As with the no action alternative, there are no data and analysis to determine the likely harvest impact to rockfish. As noted, higher chinook abundance resulting in more targeting of this species could result in more incidental catch and bycatch of rockfish in recreational fisheries. However, as discussed in Section 3.2.1, annual harvest guidelines for rockfish species are established by the Council. Incidental catch is deducted from this guideline, which also accounts for bycatch. As a result, impacts of the ocean salmon fishery are accounted for when determining total mortality to these species. The closed area option proposed as an addition to the options for halibut incidental catch is intended to reduce yelloweye rockfish catches, which are relatively abundant in this area. No analysis is available to determine the impact of this measure on rockfish mortality, but given its intent is would be expected to reduce incidental catches in the ocean salmon fishery.

According to Preseason Report II (pages 8-10) jeopardy standards for all ESA listed salmon species will be met by the options. Listed stocks are identified in Preseason Report II Table 4. For Chinook these include Coweeman tules, which are a component of the Lower Columbia River Natural Tules stock. Other listed chinook stocks, all of which achieve jeopardy standards, are the Lewis River, Snake River Fall and Sacramento Winter runs. Two listed coho stocks are shown in Table 4, OCN and Southern Oregon/Northern California Coastal. As noted in the table, although the jeopardy standard for OCN is a combined ocean and freshwater exploitation rate less than 15%, at the March meeting the Council recommended that it be reduced to less than 12.5% in order to ensure protection of lower Columbia coho, which have been designated endangered under Oregon state law. At 14.6% Option I would exceed this rate ceiling.[12/] For Southern Oregon/Northern California Coast coho the conservation objective is a 13% exploitation rate on Rogue/Klamath coho stocks, which are used as a surrogate; all options are below this rate. OCN and Rogue/Klamath stocks are usually very important in determining the impacts of management options because their status tends to act as a constraint to allowing more harvest of healthier target stocks. Table 6 breaks down the total ocean exploitation rate by management area for each of the options. (South of Humbug Mountain, components of the exploitation include bycatch mortality, and for selective fisheries, incidental handling mortality.)

Socioeconomic Impacts

Tables 8 and 9 and Figures 1 and 2 in Preseason Report II show the economic impacts of the options. For the commercial fishery these are expressed as ex-vessel value and local community income impacts (in dollar terms). For the recreational fishery the tables show angler trips and as with the commercial sector, local community income impacts. Short-term economic effects in the ocean fishery generally correlate with the harvest impacts discussed above. Referring to Preseason Report II, commercial fishing will experience a coast wide revenue increase in comparison to 2001 while recreational fishing will show a decline in benefits. Examining commercial fishing by management zone (see Preseason Report Table 8), the Central Oregon coast commercial fishery (Cape Falcon to Humbug Mountain) would experience a decline in revenues that is roughly equivalent under all options. Ocean commercial fishery revenue increases in the other zones are greatest for Option I, with the Fort Bragg area (Horse Mountain to Point Arena) showing the largest increase from 2001. (However, Option I in preseason report II would not be expected to meet ocean

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[12/] Note that Preseason Report II contained erroneous values for several coho stocks (Tables 4 and 6), which were corrected in an appended errata sheet.

escapement objectives.) Recreational fishing shows across-the-board declines in economic effects when compared to 2001. Referring to Preseason Report Table 9, in most cases Option III would produce the greatest decline. The KMZ is an exception: there Option I would result in the greatest decline in benefits. For the north of Cape Falcon area the largest relative decline in benefits would occur under Option III.

Health, Safety and Other Socio-economic issues.

Health safety and other socio-economic issues are discussed in the most recent EIS for the salmon FMP. Impacts would be within the range described in the most recent EIS for this fishery and are not expected to vary substantially between the options except with respect to tribal harvest.

4.2 Cumulative Impacts

Cumulative effects are caused by the aggregate of past, present and reasonably foreseeable actions, including impacts outside the scope of the proposed action (in this case annual management measures). Two broad categories of cumulative impacts can be identified for salmon species that are affected by Council-managed ocean troll and recreational fisheries. All other sources of fishing mortality outside of these two fishery sectors fall in the first category. These include other ocean fisheries, many of which are managed by the Council, and so-called inside fisheries prosecuted in internal waters (like Puget Sound) and in rivers as salmon migrate towards their spawning grounds. Fishing mortality also has some broader ecological effects since it removes salmon that might otherwise be consumed by other ecosystem components. Other human activities that affect the sustainability of salmon populations are part of the second category. Because salmon spend part of their life cycle in freshwater, they are more vulnerable to a broad range of human activities (since humans spend most of their time on land) that affect the quality of these freshwater environments. These effects are generally well known and diverse. They include physical barriers to migration (dams), changes in water flow and temperature (often a secondary effect of dams or water diversion projects), and degradation of spawning environments due to increased silt in the water due to adjacent land use. A very large proportion of the long-term, and often permanent, declines in salmon stocks is attributable this class of impacts. (For a detailed summary of non-fishing impacts to salmon habitat see Section 3.2.5 of Appendix A to Amendment 14.)

Consideration of cumulative effects is intrinsic to fishery management. When developing management measures, fishery managers try to account for all sources of mortality in a given population and the productivity of that population. This accounting does not have to be explicit, in that total mortality is exactly partitioned among each cause, except that natural and fishing mortality are distinguished. The aggregation accounts for a wide variety of effects, including past fishing mortality along with estimates of future fishing based on broad limits set by the management regime. Other actions—that, for example, degrade habitat—are accounted for in estimates of natural mortality and population productivity. In the case of salmon, fishing mortality is reasonably accounted for because quotas or allocations to other fisheries are known or foreseeable. Natural mortality is estimated and accounts for all non-fishing impacts to a given population. By the same token, productivity estimates include reproductive success and recruitment to the adult, fishable population. This accounts for short and long-term changes to spawning habitat, among other things. Although salmon's anadromous life cycle is its "Achilles heel" in one sense (because it exposes key life stages to human-induced impacts) it makes the task of stock assessment much easier because reproductive success can be estimated with a fair degree of certainty. Marine survival is harder to measure. But taken together, as part of the stock assessment, these measures effectively account for cumulative effects to salmon targeted by the proposed action. However, the effect of fishing on the ecosystem, due to the shift in balance between fishing and natural mortality, is much harder to predict. Fish removed by fishermen are unavailable to other trophic levels, to be eaten by predators or recycled by decomposers for example. These effects cannot be readily assessed, but there is no indication that fishing mortality significantly contributes to ecosystem-wide effects.

Despite the effectiveness of these management models in accounting for cumulative impacts, uncertainty by itself can be considered an additional source of cumulative impacts. Although easier for salmon than other marine species, it is inherently difficult to precisely measure many population parameters. These multiple uncertainties have a compound effect, and in this sense uncertainty produces cumulative effects that must be accounted for in decision making. For example, drop-off mortality cannot be measured directly and must be estimated. Similarly, mortality from recreational fishing is, in many cases, difficult to estimate because it is hard to monitor fisheries with many thousands of participants fishing in the ocean, rivers and streams. The cumulative effect of error in parameter estimates ultimately determines managers' success setting management targets that ensure sustained exploitation across all users. The discussion of abundance predictors and comparison of pre-season predictions with post-season estimates, found in the 2001 Review of Salmon Fisheries shows that predictions are generally accurate. In comparison to other fisheries, these cumulative errors have not significantly detracted from management performance.

4.3 Summary and Comparison of Impacts Between Alternatives

The no action alternative would have a significant impact because it would result in over-harvest of coho stocks. (In fact, the STT had to model 2000 regulations because of the incongruous results produced by 2001 regulations.) Re-application of 2001 management measures would, for the same reason, have a significant impact on ESA-listed salmon. Although no analysis is available, incidental catches of other species (halibut and rockfish) are not expected to differ from current year options. No analysis is available to directly compare the harvest impacts of the no action alternative to the preseason options.

Option I has the highest overall harvest impacts to both chinook and coho of the three options. Although conservation objectives would be met, the OCN exploitation rate exceeds the Council-recommended level, meant to reduce impacts to lower Columbia River stocks. In addition, two non-ESA-listed natural stocks, Stillaguamish and Hood Canal coho, also would not meet conservation objectives under Option I. (Adjustments to management measures for Puget Sound fisheries should allow conservation objectives for these two stocks to be met.) As with no action, no information is available to assess incidental catches for any of the preseason options, including the effect of the two halibut options described in Section 2.2. But these impacts are accounted for under management plans for those species and are not significant.

Option II is intermediate in terms of overall harvest impacts. In comparison to the other two options a higher share of harvest impacts occurs in the recreational sector (almots 34% versus about 30% in the other two options). Although chinook harvest impacts are greatest south of the KMZ, as with the other options, in relative terms a higher proportion of impacts occur north of Cape Falcon in this alternative in comparison to the other two alternatives. The option would meet conservation objectives for all stocks.

Option III has the lowest overall harvest impacts. As a result, in relative terms more of the total is allocated to more abundant chinook harvests, which are actually higher than under Option II. This option also results in a relatively larger share of recreational coho harvests occurring south of Cape Falcon than the other options. It would also meet conservation objectives for all stocks.

Table 4-1a: Chinook harvest impacts (catch and bycatch combined, thousands of fish) and percent distribution within each option.

	Troll				Recreational			
	2001 (projected)	Option I	Option II	Option III	2001 (projected)	Option I	Option II	Option III
Treaty Indian	37 (6.6%)	68.1 (8.1%)	56.5 (8.5%)	45.1 (6.7%)	NA	NA	NA	Na
N. of C. Falcon	30 (5.4%)	95.6 (11.4%)	78.5 (11.9%)	52.2 (7.7%)	30 (16.9%)	78.7 (30.8%)	61.2 (25.9%)	50.5 (22.2%)
C. Falcon to Humbug Mt.	147.4 (26.3%)	161.4 (19.2%)	162.7 (24.6%)	161.7 (23.9%)	6.3 (3.5%)	11.7 (4.6%)	9.3 (3.9%)	9.3 (4.1%)
KMZ	15.4 (2.8%)	21.5 (2.6%)	26.5 4.0%)	36 (5.3%)	25.7 (14.5%)	19.9 (7.8%)	21 (8.9%)	22.2 (9.8%)
S. of Horse Mt	330.2 (59.0%)	493.5 (58.7%)	337.1 (51.0%)	381 (56.4%)	115.8 (65.1%)	145.2 (56.8%)	145.2 (61.3%)	145.2 (63.9%)
Total	560 (100%)	840.1 (100%)	661.3 (100%)	676 (100%)	177.8 (100%)	255.5 (100%)	236.7 (100%)	227.2 (100%)

Table 4-1b: Coho harvest impacts (catch and bycatch combined, thousands of fish) and percent distribution within each option.

	Troll				Recreational			
	2001 (projected)	Option I	Option II	Option III	2001 (projected)	Option I	Option II	Option III
Treaty Indian	90 (54.5%)	73.7 (50.7%)	63.2 60.9%)	52.7 (55.0%)	NA	NA	NA	NA
N. of C. Falcon	75 (45.5%)	59.3 (40.8%)	32.1 (30.9%)	34.4 (35.9%)	225 (80.4%)	129.4 (78.3%)	121 (80.1%)	79.4 (74.6%)
South of C. Falcon	0 (0.0%)	12.4 (8.5%)	8.5 (8.2%)	8.8 (9.2%)	55 (19.6%)	35.9 (21.7%)	30 (19.9%)	27.1 (25.4%)
Total	165 (100%)	145.4 (100%)	103.8 (100%)	95.9 (100%)	280 (100%)	165.3 (100%)	151 (100%)	106.5 (100%)

Table 4-1c: Summary of the distribution of impacts within option.

	Commercial	Recreational	
2001 (projected)			**Total**
Chinook	560 (47.3%)	177.8 (15.0%)	737.8 (62.4%)
Coho	165 (13.9%)	280 (23.7%)	445 (37.6%)
Total	725 (61.3%)	457.8 (38.7%)	1182.8 (100.0%)
Option I			**Total**
Chinook	840.1 (59.7%)	255.5 (18.2%)	1095.6 (77.9%)
Coho	145.4 (10.3%)	165.3 (11.8%)	310.7 (22.1%)
Total	985.5 (70.1%)	420.8 (29.9%)	1406.3 (100.0%)
Option II			**Total**
Chinook	661.3 (57.4)%	236.7 (20.5%)	898 (77.9%)
Coho	103.8 (9.0%)	151 (13.1%)	254.8 (22.1%)
Total	765.1 (66.4)%	387.7 (33.6%)	1152.8 (100.0%)
Option III			**Total**
Chinook	676 (61.1%)	227.2 (20.5%)	903.2 (81.7%)
Coho	95.9 (8.7%)	106.5 (9.6%)	202.4 (18.3%)
Total	771.9 (69.8%)	333.7 (30.2%)	1105.6 (100.0%)

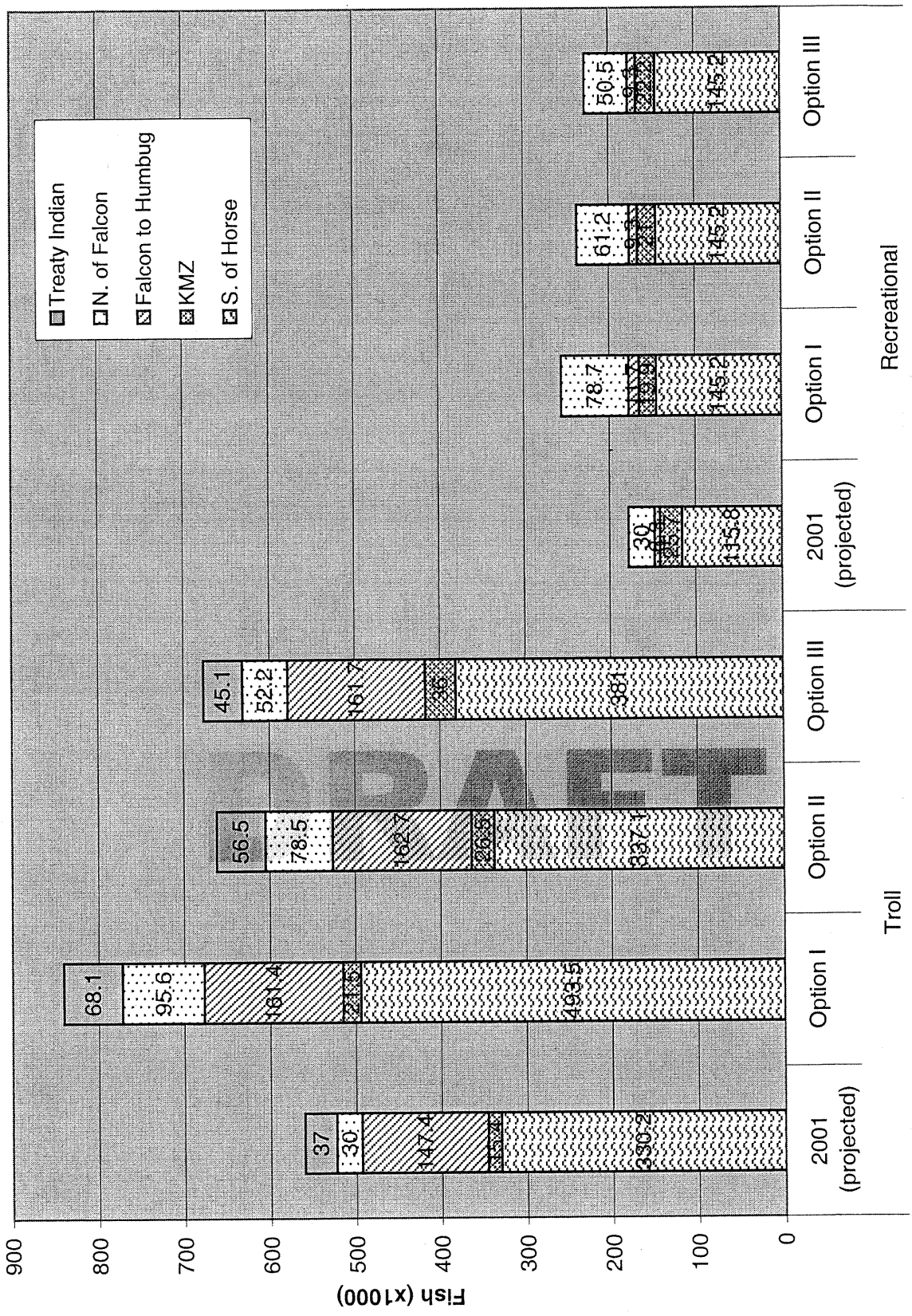

Figure 4-1: Chinook harvest impacts.

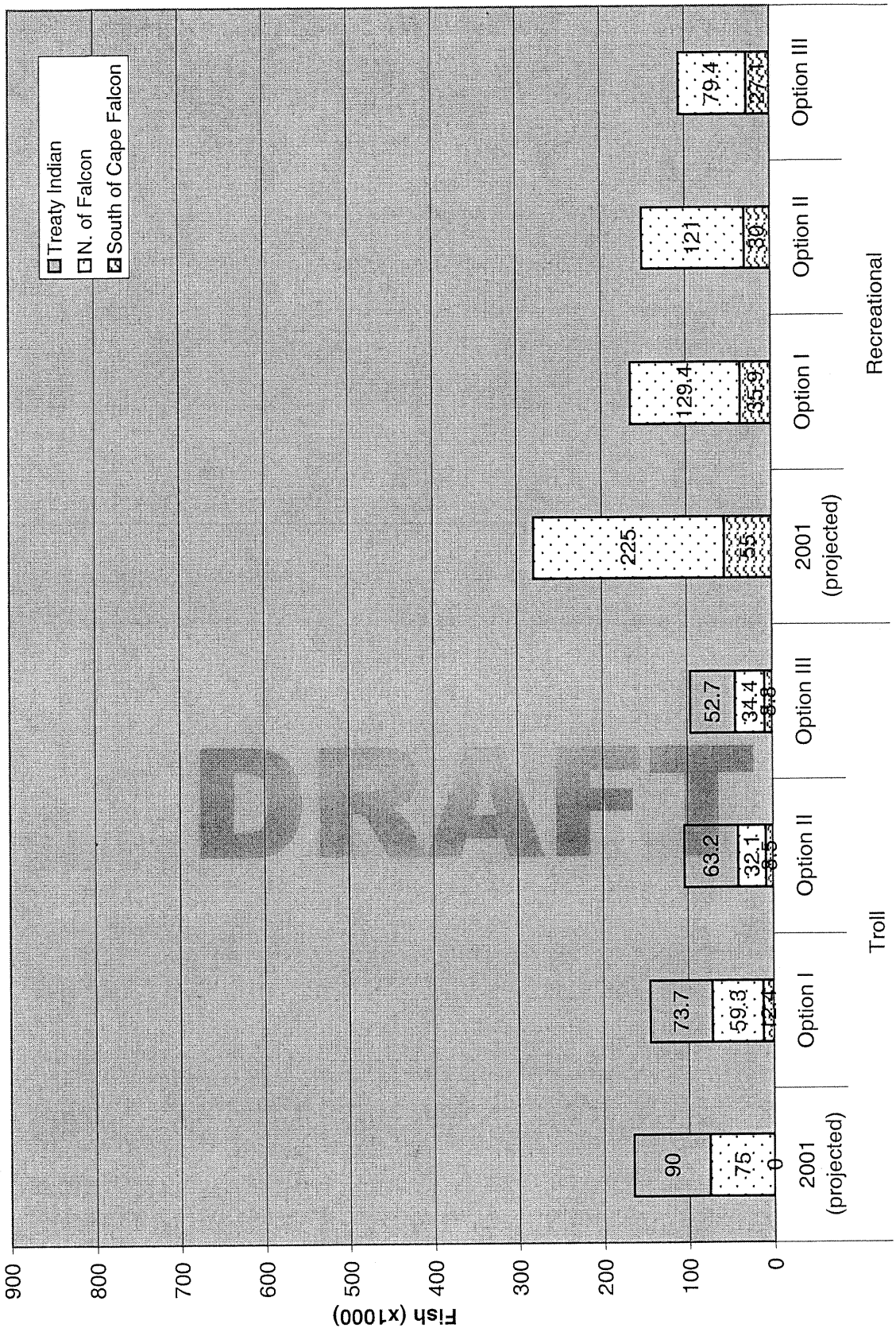

Figure 4-2: Coho harvest impacts

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5 National Environmental Policy Act

This document has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 to assess the impacts on the human environment that may result from the proposed action. It contains the elements consistent with an Environmental Assessment (EA). These are: the need for the proposed action, found in Section 1; the proposed action and alternatives, found in Section 2; the environmental impacts of the proposed action and alternatives, found in Section4; and a list of agencies and persons consulted during preparation of the EA, found in Section 6.3

The results of the analysis of the proposed action and its alternatives are summarized in Appendix B, which is the Finding of No Significant Impact (FONSI). The FONSI is a determination that the impacts stemming from the proposed action are not significant and therefore preparation of an Environmental Impact Statement is unnecessary.

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6 Reference Material

6.1 Bibliography

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Pacific Fishery Management Council. 2000. *Status of the Pacific coast groundfish fishery through 2000 and recommended acceptable biological catches for 2001.* October 2000. Portland: Pacific Fishery Management Council.

Pacific Fishery Management Council. 2001. *Environmental assessment/regulatory impact review/initial regulatory flexibility analysis for proposed groundfish acceptable biological catch and optimum yield specifications for the 2002 pacific coast groundfish fishery.* October 2000. Portland: Pacific Fishery Management Council.

Pacific Fishery Management Council. 2002. *Review of 2001 ocean salmon fisheries.* February 2002. Portland: Pacific Fishery Management Council.

Salmon Technical Team. 2002. *Pre-season report I.* February 2002. Portland: Pacific Fishery Management Council.

Salmon Technical Team and Fishery Economics Staff Officer. 2002. *Pre-season report II.* March 2002. Portland: Pacific Fishery Management Council.

6.2 Biological Opinions for Council-Managed Salmon Stocks

The Following biological opinions have been prepared for West Coast stocks by NMFS. Many of these documents are available from the NMFS Northwest Region web site at http://www.nwr.noaa.gov/1publcat/allbiops.htm

Date (Coverage)	Duration	ESU covered
March 1, 1991 (BO)	superseded	Sacramento River winter chinook
March 8, 1996 (BO)	until reinitiated 5 years	Snake River chinook and sockeye Sacramento River winter chinook
February 18, 1997 (BO)	4 years	Sacramento River winter chinook
April 30, 1997 (BO)	1 year	S. Oregon/Northern California Coastal coho, Central California Coastal coho, Umpqua River cutthroat trout all steelhead ESUs proposed for listing
April 29, 1998 (BO)	1 year	S. Oregon/Northern California Coastal coho Cental California Coastal coho Umpqua River cutthroat trout eight listed steelhead ESUs
April 28, 1999 (BO)	until reinitiated	S. Oregon/Northern California Coastal coho Central California Coastal coho Oregon Coastal Natural coho
April 30, 1999 (BO)	1 year	Puget Sound chinook Lower Columbia River chinook Upper Willamette River chinook Upper Columbia River spring chinook ten steelhead ESUs Ozette Lake sockeye Hood Canal summer chum Columbia River chum Umpqua River cutthroat trout (under USFWS)
April 28, 2000 (BO)	until reinitiated	Central Valley Spring-Run chinook California Coastal chinook
April 28, 2000 (BO)	1 year	Puget Sound chinook Lower Columbia River chinook Upper Willamette River chinook Upper Columbia River spring chinook ten steelhead ESUs Ozette Lake sockeye Hood Canal summer chum Columbia River chum Umpqua River cutthroat trout (under USFWS)
April 27, 2001 (4(d) Limit)	2 years until withdrawn	Puget Sound chinook Hood Canal summer chum

Date (Coverage)	Duration	ESU covered
April 30, 2001 (BO)	until withdrawn	Lower Columbia River chinook Upper Willamette River chinook Upper Columbia River spring chinook Ozette Lake sockeye ten steelhead ESUs Columbia River chum

6.3 List of Public Meetings, Agencies and Persons Consulted

The following public meetings were held as part of the salmon management process:

January 5 and February 6: Salmon Technical Team/Scientific and Statistical Committee joint meeting, Portland, OR.

January 22-25: Salmon Technical Team (Review preparation), Portland, OR.

February 20-22: Salmon Technical Team Preseason Report I preparation), Portland, OR.

March 11-15: Pacific Fishery Management Council meeting, Sacramento, CA.

April 1-3: Public hearings on management options in Westport, WA; Tillamook and Coos Bay, OR; and Eureka and Moss Landing, CA.

April 8-12: Pacific Fishery Management Council meeting, Portland, OR.

The following organizations were consulted and/or participated in preparation of supporting documents:

California Department of Fish and Game
Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife

National Marine Fisheries Service, Sustainable Fisheries Division, Northwest Region
U.S. Fish and Wildlife Service

West Coast Indian Tribes

6.4 List of Preparers

Pacific Fishery Management Council staff:

Christopher Dahl
Chuck Tracy
Jim Seger

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Appendix A: Detailed Descriptions of Management Alternatives

Table A-1: 2001 commercial management measures.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

- Overall allowable non-Indian catch north of Cape Falcon: 60,000 chinook; 300,000 coho.
- Total allowable commercial catch apportioned in the three fisheries below (no preseason trade): 30,000 chinook and 75,000 coho.

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U.S.-Canada Border to Cape Falcon

May 1 thru earlier of June 30 or 17,000 chinook guideline (see C.7.a). All salmon except coho. No more than 4 spreads per line beginning June 1 (see gear restrictions in C.2). Cape Flattery and Columbia Control Zones closed (C.4.a and C.4.b). The 17,000 chinook guideline includes a subarea guideline of 12,000 chinook for the area between the U.S.-Canada border and the Queets River. State regulations require that fishers fishing within the U.S. Canada Border to Queets River subarea and intending to land their catch outside of this subarea notify WDFW before they leave the subarea. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (see C.7.a).

U.S.-Canada Border to Leadbetter Pt.

July 1 thru earliest of July 27 or 7,000 chinook preseason guideline (see C.7.a) or 12,000 marked coho guideline. All salmon (all retained coho must have a healed adipose fin clip). The 7,000 chinook guideline includes a subarea guideline of 4,000 chinook for the area between the U.S.-Canada border and the Queets River. Gear restricted to plugs 6 inches or longer; no more than 4 spreads per line plus 1 flasher w/o hooks (see also C.2). Cape Flattery Control Zone closed (C.4.a). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason. Fishery is continuous until 75% of either guideline is caught then reverts to 4 days open/3 days closed. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. State regulations require that fishers fishing within the U.S. Canada Border to Queets River subarea and intending to land their catch outside of this subarea notify WDFW before they leave the subarea.

Leadbetter Point to Cape Falcon

July 20 through July 27. Catch in this fishery will be assessed against the 6,000 chinook and 63,000 marked coho guidelines in the Queets River to Cape Falcon fishery (below). All salmon (all retained coho must have a healed adipose fin clip). See gear restrictions in C.2. Trip limits, gear restrictions, and guidelines (see C.7.a) may be instituted or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Columbia River Control Zone is closed (C.4.b).

Queets River to Cape Falcon

The earlier of the day following closure of the U.S.-Canada Border to Leadbetter Pt. July troll fishery or July 28, but not before July 20, thru earliest of Sept. 30 or the overall chinook quota (preseason 6,000 chinook guideline; see C.7.a.) or 63,000 marked coho guideline. All salmon (all retained coho must have a healed adipose fin clip). See gear restrictions in C.2. Fishery continuous until 75% of either guideline caught, then reverts to a cycle of 4 days open/3 days closed. Trip limits, gear restrictions, and guidelines may be instituted or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Columbia River Control Zone is closed (C.4.b).

South of Cape Falcon

Cape Falcon to Florence South Jetty

Apr. 1 thru July 18; July 27 thru Aug. 29; and Sept. 1 thru Oct. 31. All salmon except coho. See gear restrictions C.2 and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. [**Note:** Incidental retention of halibut is not allowed until May 1.]

Florence South Jetty to Humbug Mt.

April 1 thru July 9; July 18 thru Aug. 29; and Sept. 1 thru Oct. 31. All salmon except coho. See gear restrictions in C.2.

Humbug Mt. to OR-CA Border

May 1 thru May 31. All salmon except coho. See gear restriction C.2.

June 3 thru earlier of June 30 or 1,500 chinook. All salmon except coho. Fishery follows a cycle of 2 days open/2 days closed (may be adjusted inseason to match management needs). Possession and landing limit of 30 fish per day. See gear restrictions C.2. All salmon must be landed and delivered to Gold Beach, Port Orford, or Brookings within 24 hours of closure.

Aug. 1 thru earlier of Aug. 31 or 3,000 chinook quota. All salmon except coho. Possession and landing limit of 30 fish per day. See gear restrictions C.2. All salmon must be landed and delivered to Gold Beach, Port Orford, or Brookings within 24 hours of closure.

Humbug Mt., OR to Humboldt South Jetty

Sept. 1 through earlier of Sept. 30 or 8,000 chinook quota. All salmon except coho. Possession and landing limit of 30 fish per day. All fish caught in this area must be landed within the area. See gear restrictions in C.2. Klamath Control Zone closed (C.4.). The 8,000 chinook quota includes a harvest guideline limiting the combined landings at the ports of Gold Beach, Port Orford, and Brookings to no more than 2,000 chinook. If this guideline is reached prior to the overall quota, the fishery will close north of the Oregon-California border. When the fishery is closed north of the Oregon-California border and open to the south, Oregon State regulations provide for the following action: Vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival.

Horse Mt. to Pt. Arena (Fort Bragg)

May 1 thru earlier of May 31 or 3,000 chinook quota. All salmon except coho. All fish caught in this area must be landed within the area. Minimum size 26 inches. See gear restrictions in C.2.

Sept. 1 thru Sept. 30. All salmon except coho. Minimum size 26 inches. See gear restrictions in C.2.

Pt. Arena to Pt. Reyes (Bodega Bay)

June 24 thru Sept. 30. All salmon except coho. Minimum size limit 26 inches thru June 30 and 27 inches thereafter. See gear restrictions in C.2.

Pt. Reyes to Pt. San Pedro

May 24 thru Sept. 30. All salmon except coho. Minimum size 26 inches thru June 30 and 27 inches thereafter. See gear restrictions in C.2.

Mon. thru Fri. Oct. 1 thru Oct. 12. All salmon except coho. Minimum size 27 inches. See gear restrictions in C.2.

Pt. San Pedro to Pt. Sur

May 1 thru Aug. 14. All salmon except coho. Minimum size limit 26 inches thru June 30 and 27 inches thereafter. See gear restrictions in C.2.

Pt. Sur to U.S.-Mexico Border

May 1 thru Aug. 14 and Sept. 11 thru Sept. 30. All salmon except coho. Minimum size 26 inches thru June 30 and 27 inches thereafter. See gear restrictions C.2.

In 2002, Council to consider opening a fishery from Apr. 15-30 south of Pt. Sur (see C.7.b).

Table A-2: 2001 Recreational management measures.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

- Overall allowable non-Indian catch: 60,000 chinook; 300,000 coho marked by a healed adipose fin clip (marked coho). The adipose fin is the small fleshy fin on the back of the fish just ahead of the tail.
- Total allowable recreational catch apportioned in the four fisheries below (no preseason trade): 30,000 chinook and fishery impacts for a landed catch of 225,000 coho with healed adipose fin clips.

c. Neah Bay/La Push agreed coho allocation per Amendment 14. No Area 4B add-on fishery.

d. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 82,600 marked (healed adipose fin clip) coho in Aug. and 57,400 marked coho in Sept.

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U.S.-Canada Border to Cape Alava (Neah Bay Area)

July 1 thru earlier of Sept. 30 or 23,400 coho subarea quota. All salmon (7 days per week), 2 fish per day, but only 1 chinook, and all retained coho must have a healed adipose fin clip. Chinook non-retention in Area 4B unless modified by inseason management. Inseason management (C.4) may be used to sustain season length and keep harvest within a guideline of 1,700 chinook.

Cape Alava to Queets River (La Push Area)

July 1 thru earlier of Sept. 23 or subarea sub-quota of 5,350 coho; Sept. 24 through earlier of Oct. 21 or overall subarea coho quota of 5,850 (500 set-aside). All salmon (7 days per week), 2 fish per day, but only 1 chinook, and all retained coho must have a healed adipose fin clip. Inseason management (C.4) may be used to sustain season length and keep harvest within a guideline of 1,000 chinook for the general season and 100 chinook for the set-aside season.

Queets River to Leadbetter Pt. (Westport Area)

Sun. thru Thurs. July 1 thru earlier of Sept. 30 or 83,250 coho subarea quota. All salmon. 2 fish per day, but only 1 chinook and all retained coho must have a healed adipose fin clip. Inseason management (C.4) may be used to maintain season length and limit harvest within a guideline of 19,450 chinook.

Leadbetter Pt. to Cape Falcon (Columbia River Area)

Sun. thru Thurs. July 1 thru earlier of Sept. 3 or subarea sub-quota of 102,500 coho; Tillamook Head to North Head Lighthouse, 7 days per week, Sept. 4 through earlier of Sept. 30 or overall subarea quota of 112,500 coho (10,000 set-aside). All salmon. 2 fish per day, but only 1 chinook and all retained coho must have a healed adipose fin clip. **Closed** between Tillamook Head and Cape Falcon beginning Aug. 1. Closed in Recreational Columbia Control Zone (C.3.a). Inseason management (C.4) may be used to sustain season length and limit harvest within a guideline of 7,750 chinook.

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South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 thru Oct. 31; all salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions in C.2.a and C.2.b. See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

Selective fishery for marked hatchery coho:

June 22 thru earlier of July 31 or a landed catch of 55,000 coho. All salmon. 2 fish per day, all retained coho must have a healed adipose fin clip. No more than 6 fish in 7 consecutive days. All salmon except coho season reopens the earlier of Aug. 1 or attainment of the coho quota.

Humbug Mt. to Horse Mt. (Klamath Management Zone)

May 17 thru July 8 and July 24 thru Sept. 3. All salmon except coho. 2 fish per day. From May 17 thru July 8, no more than 4 fish in 7 consecutive days. Beginning July 24, no more than 6 fish in 7 consecutive days. See gear restrictions in C.2. Klamath Control Zone (C.3.b) closed during Aug.

Horse Mt. to Pt. Arena (Fort Bragg)

Feb. 17 through Nov. 18. All salmon except coho. 2 fish per day. Minimum size 24 inches thru May 31, and 20 inches thereafter. Gear restrictions include: one rod per angler, no more than 2 barbless hooks, and circle hooks when not trolling (C.2.a, C.2.c and C.2.d).

In 2002, season opens Feb. 16 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2001.

Pt. Arena to Pigeon Pt.

Apr. 14 thru Nov. 13. All salmon except coho. 2 fish per day. Minimum size limit 24 inches thru June 30, and 20 inches thereafter. One rod per angler. Gear restrictions include: one rod per angler, no more than 2 barbless hooks, and circle hooks when not trolling (C.2.a, C.2.c and C.2.d).

In 2002, the season will open Apr. 13 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2001. This opening could be modified to allow an earlier opening date following Council review at its November 2001 meeting.

Pigeon Pt. to U.S.-Mexico Border

Mar. 31 thru Sept. 30. All salmon except coho. 2 fish per day. Minimum size limit 24 inches thru June 30, and 20 inches thereafter. Gear restrictions between Pigeon Point and Point Conception include: one rod per angler, no more than 2 barbless hooks, and circle hooks when not trolling (C.2.a, C.2.c and C.2.d).

In 2002, the season will open Mar. 30 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2001. This opening could be modified to allow an earlier opening date following Council review at its November 2001 meeting.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
Horse Mt. To Pt. Arena	20.0[a/]	-	20.0
South of Pt. Arena	20.0[b/]	-	20.0

a/ **Except** 24.0 inches prior to June 1.
b/ **Except** 24.0 inches prior to July 1.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

- *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank, barbless hooks are required for all fishing gear. **Note:** ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.

- *Off Oregon between Cape Falcon and Humbug Mt.*:
  Apr. 1-30: Anglers are limited to artificial lures and plugs of any size, or bait no less than 6 inches long (excluding hooks and swivels). All gear must have no more than 2 single point, single shank, barbless

hooks. Divers are prohibited and flashers may be used only with downriggers.
May 1 thru Oct. 31: No special gear restrictions other than anglers must use no more than 2 single point, single shank, barbless hooks.

- Off California North of Pt. Conception: Anglers must use no more than 2 single point, single shank, barbless hooks.

- Off California between Horse Mt. and Pt. Conception: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

  Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;

  Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

- *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

- *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

At the November 2001 meeting the Council will consider recommendation to open seasons for all salmon except coho prior to April 13 in areas off California between Pt. Arena and the U.S.-Mexico border. At the March 2002 meeting, the Council will consider an inseason recommendation to open seasons for all salmon except coho prior to May 1 in areas off Oregon.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
Cape Falcon to Pt. Arena	26.0[a/]	19.5[a/]	-	-	None
South of Pt. Arena prior to July 1	26.0[a/]	19.5[a/]	-	-	None
South of Pt. Arena after June 30	27.0[a/]	20.25[a/]	-	-	None

a/ Chinook not less than 26 inches (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

c. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to salmon fishing while possessing salmon, however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°10'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 34,046 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 5,000 chinook from the area south of the Queets River in the May/June harvest guideline are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 5,000 chinook (or remaining portion thereof) may be transferred south of the Queets River to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 5,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

2. At the March 2002 meeting, the Council will consider inseason recommendations to: (1) open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and off California south of Point Sur, and (2) identify the areas, season, quota, and special regulations for any experimental April fisheries (proposals must meet Council protocol and be received by November 2001).

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE 1. **Commercial troll** management options proposed by the Council for non-Indian ocean salmon fisheries, 2002. (Page 1 of 6)

A. SEASON OPTION DESCRIPTIONS

OPTION I North of Cape Falcon	OPTION II North of Cape Falcon	OPTION III North of Cape Falcon
Supplemental Management Information: 1. Overall non-Indian TAC: 150,000 chinook and 150,000 coho. Trade: No, but may be considered at the April Council meeting. 2. Non-Indian troll TAC: 80,000 chinook and 37,500 coho. 3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in Jul.-Sept. 15 with no rollover allowed from chinook season); and 70,000 coho.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 120,000 chinook and 120,000 coho. Trade: 14,000 coho to recreational fishery for 3,500 chinook. 2. Non-Indian Troll TAC: 65,500 chinook and 16,000 coho. 3. Treaty Indian commercial ocean troll quotas of: 50,000chinook (25,000 in May and June; 25,000 for all-salmon season in Jul. through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.	**Supplemental Management Information:** 1 Overall non-Indian TAC: 90,000 chinook and 90,000 coho Trade: No, but may be considered at the April Council meeting. 2 Non-Indian Troll TAC: 45,000 chinook and 22,500 coho. 3 Treaty Indian commercial ocean troll quotas of: 40,000 chinook (20,000 in May and June; 20,000 for all-salmon season in July through Sept. 15 with no rollover allowed from chinook season); and 50,000 coho.
U.S.-Canada Border to Cape Falcon • May 1 through earlier of June 30 or 60,000 chinook quota. All salmon except coho (C.6). Cape Flattery and Columbia River Control Zones closed (C.4). Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).	**U.S.-Canada Border to Cape Falcon** • May 1 through earlier of June 30 or 40,000 chinook quota. All salmon except coho (C.6). See gear restrictions in C.2. Columbia River Control Zone closed (C.4). Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).	**U.S.-Canada Border to Cape Falcon** • May 1 through earlier of June 30 or 35,000 chinook quota. All salmon except coho (C.6). Cape Flattery and Columbia River Control Zones closed (C.4). Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a). For 2003, Council to consider opening a fishery beginning April 20 north of Cape Falcon (C.7.c).
U.S.-Canada Border to Cape Falcon • July 1 through earliest of Sept. 30 or 20,000 chinook quota (C.7.a). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. U.S.-Canada Border to Leadbetter Point - All salmon except coho. Gear restricted to plugs 6 inches or longer (C.2). Leadbetter Point to Cape Falcon - All salmon. Sub area harvest guideline of 20,600 marked coho (all retained coho must have a healed adipose fin clip). Columbia River Control Zone closed (C.4). No special gear restrictions (C.2).	**U.S.-Canada Border to Cape Falcon** • July 1 through earliest of Sept. 10 or 25,500 chinook quota (C.7.a). All salmon except coho. Columbia River Control Zone closed (C.4). Gear restricted to plugs 6 inches or longer (C.2). Trip limits, gear restrictions, and quotas or guidelines may be implemented or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery.	**U.S.-Canada Border to Cape Falcon** • July 1 through earliest of July 31 or 5,000 chinook quota (C.7.a). All salmon except coho. Columbia River and Cape Flattery Control Zones closed (C.4). Fishery is continuous until 75% of chinook guideline is caught then changes to 4 days open/3 days closed. Gear restricted to plugs 6 inches or longer (C.2). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery.

TABLE 1. **Commercial troll** management options proposed by the Council for non-Indian ocean salmon fisheries, 2002. (Page 2 of 6)

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
		U.S.-Canada Border to Cape Falcon • August 1 through earliest of Sept. 30 or 5,000 chinook quota (see C.7.a), or 18,500 marked coho quota (C.7.b). All salmon. Columbia River and Cape Flattery Control Zones closed (C.4). Fishery is continuous until 75% of either guideline is caught then changes to 4 days open/3 days closed. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. All retained coho must have a healed adipose fin clip.
South of Cape Falcon	**South of Cape Falcon**	**South of Cape Falcon**
Cape Falcon to Florence South Jetty • March 20 through July 21; Aug. 1 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.	**Cape Falcon to Florence South Jetty** • March 20 through June 30; July 11 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. In 2003, same as Option I.	**Cape Falcon to Florence South Jetty** • Same as Option I. In 2003, same as Option I.
Florence South Jetty to Humbug Mt. • March 20 through June 30; July 11 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2). In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.	**Florence South Jetty to Humbug Mt.** • March 20 through July 21; Aug. 1 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2). In 2003, same as Option I.	**Florence South Jetty to Humbug Mt.** • Same as Option I. In 2003, same as Option I.

TABLE 1. **Commercial troll** management options proposed by the Council for non-Indian ocean salmon fisheries, 2002. (Page 3 of 6)

A. SEASON OPTION DESCRIPTIONS

OPTION I

Humbug Mt. to OR-CA Border

- March 20 through May 31. All salmon except coho. See gear restrictions (C.2).
- June 1 through earlier of June 30 or 1,500 chinook quota;
- July 1 through earlier of July 31 or 1,500 chinook quota;
- Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota;
- Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota.

No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 100 fish per trip. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

OR-CA Border to Humboldt South Jetty

- Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 30 fish per day. All fish caught in this area must be landed within the area. See gear restrictions (C.2). Klamath Control Zone closed (C.4.).

Horse Mt. to Pt. Arena (Fort Bragg)

- May 1 through May 31, Aug. 1 through Aug. 29, and Sept. 1 through Sept. 30. All salmon except coho. All fish caught in this area must be landed within the area. See gear restrictions (C.2).

Pt. Arena to Pigeon Pt. (San Francisco)

- May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

OPTION II

Humbug Mt. to OR-CA Border

- March 20 through May 31. All salmon except coho. See gear restrictions (C.2).
- June 1 through earlier of June 30 or 1,500 chinook quota;
- July 1 through earlier of July 31 or 3,000 chinook quota;
- Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota;
- Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota.

No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 30 fish per day. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003, same as Option I.

OR-CA Border to Humboldt South Jetty

- Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota.
- Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. No transfer of remaining quota from Aug. fishery allowed.

All salmon except coho. Possession and landing limit of 30 fish per day. All fish caught in this area must be landed within the area. See gear restrictions (C.2). Klamath Control Zone closed (C.4.).

Horse Mt. to Pt. Arena (Fort Bragg)

- Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota.
- Sept. 1 through Sept. 30.

All salmon except coho. All fish caught in this area must be landed within the area. See gear restrictions (C.2).

Pt. Arena to Pigeon Pt. (San Francisco)

- July 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

OPTION III

Humbug Mt. to OR-CA Border

- March 20 through May 31. All salmon except coho. See gear restrictions (C.2).
- June 1 through earlier of June 30 or 1,500 chinook quota;
- July 1 through earlier of July 31 or 4500 chinook quota;
- Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota;
- Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota.

No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 30 fish per day. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003, same as Option I.

OR-CA Border to Humboldt South Jetty

- Sept. 1 through earlier of Sept. 30 or 20,000 chinook quota.

All salmon except coho. All fish caught in this area must be landed within the area. See gear restrictions (C.2). Klamath Control Zone closed (C.4.).

Horse Mt. to Pt. Arena (Fort Bragg)

- Same as Option II.

Pt. Arena to Pigeon Pt. (San Francisco)

- May 1 through May 31 and June 16 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

TABLE 1. **Commercial troll** management options proposed by the Council for non-Indian ocean salmon fisheries, 2002. (Page 4 of 6)

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Pt. Reyes to Pt. San Pedro (Fall Area Target Zone) • Oct. 1 through Oct. 15. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).	**Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)** • Oct. 1 through Oct. 15. Inside 3 nautical miles. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).	
Pigeon Pt. to U.S.-Mexico Border (Monterey) • May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions in C.2. For 2003, Council to consider opening an experimental fishery from April 15 through April 30 south of Pt. Sur (C.7.c).	**Pigeon Pt. to U.S.-Mexico Border (Monterey)** Same as Option I.	**Pigeon Pt. to U.S.-Mexico Border (Monterey)** Same as Option I.

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank barbless hooks are required in all fisheries.

b. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

c. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: **Options I and II** - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;
Option III - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3 Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll gear in the water while transiting any area closed to salmon fishing while possessing salmon;

TABLE 1. **Commercial troll** management options proposed by the Council for non-Indian ocean salmon fisheries, 2002. (Page 5 of 6)

however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 1)* - The area from Cape Flattery (48° 23'00" N lat.) to the northen boundary of the U.S. EEZ; and the area from Cape Flattery south to 48° 15'00" N lat. (Cape of Arches) and west of 125° 05'00" W long.

b. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N lat., 124°06'50" W long.) and the green lighted Buoy #7 (46°15'09' N lat., 124°06'16" W long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N lat.,124°03'07" W long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N lat., 124°05'20" W long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N lat., 124°04'05" W long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206/634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800/662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

Option 1: License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip. Halibut retained must be no less than 32 inches in total length (with head on).

Option 2: License holders may land no more than 1 halibut per each 5 chinook, except 2 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip. Halibut retained must be no less than 32 inches in total length (with head on).

Option 3: In combination with either option 1 or 2 above, close the halibut "hotspot" area, as defined in the Pacific Council Catch Sharing Plan in Washington Marine area 3; and extend the closure south to 48°00'00" for protection of yelloweye rockfish. This closure would be in effect during periods open to retention of halibut.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. Within the overall non-Indian commercial chinook quota north of Cape Falcon:
20,000 chinook Option 1;
10,000 chinook Option 2;
5,000 chinook Option 3;
from the May/June quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these chinook (or remaining portion thereof) may be transferred to the July-September harvest quota at a one-to-one rate if not caught in the May/June fishery. Any remaining chinook from the May/June quota in excess of these amounts may be transferred to the July-September quota on a fishery impact equivalent basis.

b. Under Option I, for the Leadbetter Point to U.S. Canada border chinook only fishery, an estimated 2,500 coho mortalities were modeled preseason in the July coho retention fishery. Those mortalities were subtracted from the overall north of Cape Falcon coho quota of 37,500 to obtain the 35,000 coho quota for the August/September marked coho retention fishery. Any difference in the coho impacts from the July fishery will be transferred to the August/September fishery coho quota.

c. At the March 2003 meeting, the Council will consider inseason recommendations to: (1) open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon and (2) identify the areas, season, quota, and special regulations for any experimental April fisheries (proposals must meet Council protocol and

TABLE 1. **Commercial troll** management options proposed by the Council for non-Indian ocean salmon fisheries, 2002. (Page 6 of 6)

be received in November 2002).

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE 2. **Recreational** management options proposed by the Council for ocean salmon fisheries, 2002. (Page 1 of 5)

A. SEASON OPTION DESCRIPTIONS		
OPTION I	**OPTION II**	**OPTION III**
North of Cape Falcon	**North of Cape Falcon**	**North of Cape Falcon**
Supplemental Management Information: 1. Overall non-Indian TAC: 150,000 chinook and 150,000 coho. Trade: No, but may be considered at the April Council meeting. 2. Recreational TAC: 70,000 chinook and 112,500 marked hatchery coho. 3. Neah Bay/La Push agreed coho allocation as per Amendment 14. 4. Area 4B add-on fishery of 0 coho. 5. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 20,000 coho. All retained coho must have a healed adipose fin clip.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 120,000 chinook and 120,000 coho. Trade: 3,500 chinook to non-Indian troll for 14,000 coho. 2. Recreational TAC: 54,500 chinook and 104,000 marked hatchery coho. 3. Neah Bay/La Push agreed coho allocation as per Amendment 14. 4. Area 4B add-on fishery of 4,000 coho (chinook nonretention) opens upon ocean closure. 5. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 25,000 coho. All retained coho must have a healed adipose fin clip.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 90,000 chinook and 90,000 coho. Trade: No, but may be considered at the April Council meeting. 2. Recreational TAC: 45,000 chinook and 67,500 marked hatchery coho. 3. Neah Bay/La Push agreed coho allocation as per Amendment 14. 4. Area 4B add-on fishery of 6,000 coho (chinook nonretention) opens upon ocean closure. 5. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 30,000 coho. All retained coho must have a healed adipose fin clip.
U.S.-Canada Border to Cape Falcon • U.S. Canada Border to Queets River: May 1 through May 24 (Sundays and Mondays); then U.S. Canada Border to Cape Falcon: May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week). Chinook salmon only; 2 fish per day. Closed south of the northern margin of the Columbia Control Zone (C.3.a).	**U.S.-Canada Border to Cape Falcon** • May 19 through earlier of June 9 or 10,000 chinook quota; 7 days per week. Chinook salmon only; 2 fish per day. Closed south of the northern margin of the Columbia Control Zone (C.3.a).	**U.S.-Canada Border to Cape Falcon** • No May/June chinook only fishery.
U.S.-Canada Border to Cape Alava (Neah Bay) • June 30 through earlier of Sept. 30 or 11,500 coho subarea quota; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,300 chinook.	**U.S.-Canada Border to Cape Alava (Neah Bay)** • July 7 through earlier of Sept. 8 or 10,000 coho subarea quota (adjusted for Area 4B add-on); 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during Council managed ocean fishery. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,100 chinook.	**U.S.-Canada Border to Cape Alava (Neah Bay)** • July 14 through earlier of Sept. 8 or 5,900 coho subarea quota (adjusted for Area 4B add-on); 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during Council managed ocean fishery. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,000 chinook.
Cape Alava to Queets River (La Push) • June 30 through earlier of Sept. 20 or subarea sub-quota of 2,700 coho; Sept. 21 through earlier of Oct. 13 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook.	**Cape Alava to Queets River (La Push)** • July 7 through earlier of Sept. 8 or 2,700 coho subarea quota (adjusted for Area 4B add-on); 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,500 chinook.	**Cape Alava to Queets River (La Push)** • July 14 through earlier of Sept. 8 or 1,850 coho subarea quota (adjusted for Area 4B add-on); 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,400 chinook.

TABLE 2. **Recreational** management options proposed by the Council for ocean salmon fisheries, 2002. (Page 2 of 5)

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Queets River to Leadbetter Pt. (Westport) • June 30 through earlier of Sept. 30 or 38,350 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 35,500 chinook.	**Queets River to Leadbetter Pt. (Westport)** • July 7 through earlier of Sept. 8 or 37,500 coho subarea quota (adjusted for Area 4B add-on). Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 31,000 chinook.	**Queets River to Leadbetter Pt. (Westport)** • June 23 through earlier of Sept. 8 or 26,000 coho subarea quota (adjusted for Area 4B add-on). Sun. through Thurs. prior to Sept. 1, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 31,600 chinook.
Leadbetter Pt. to Cape Falcon (Columbia River) • July 7 through earlier of Sept. 30 or 54,450 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 10,600 chinook.	**Leadbetter Pt. to Cape Falcon (Columbia River)** • July 7 through earlier of Sept. 8 or 51,325 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 9,900 chinook.	**Leadbetter Pt. to Cape Falcon (Columbia River)** • July 14 through earlier of Sept. 8 or 33,750 coho subarea quota; Sun. through Thurs. prior to Sept. 1, 7 days per week thereafter. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 9,000 chinook.
South of Cape Falcon	**South of Cape Falcon**	**South of Cape Falcon**
Cape Falcon to Humbug Mt • Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. No more than 6 fish in 7 consecutive days. See gear restrictions (C.2). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay. In 2003 the season will open April 1 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting. Selective fishery: • July 7 through earlier of July 31 or a landed catch of 25,000 coho; Sun. through Thurs. All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. No more than 6 fish in 7 consecutive days. See gear restrictions (C.2). **Note:** On closed days during the selective fishery, no angling for any species of salmon is allowed. Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 1 or attainment of the coho quota.	**Cape Falcon to Humbug Mt** • Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay. In 2003, same as Option I. Selective fishery: • July 15 through earlier of July 31 or a landed catch of 20,000 coho; Sun. through Thurs. All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. No more than 6 fish in 7 consecutive days. See gear restrictions (C.2). **Note:** On closed days during the selective fishery, no angling for any species of salmon is allowed. Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 1 or attainment of the coho quota.	**Cape Falcon to Humbug Mt** • Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay. In 2003, same as Option I. Selective fishery: • July 21 through earlier of Aug. 4 or a landed catch of 18,000 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. No more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

TABLE 2. **Recreational** management options proposed by the Council for ocean salmon fisheries, 2002. (Page 3 of 5)

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Humbug Mt. to Horse Mt. (KMZ) • May 25 through July 1 and Aug. 1 through Sept. 2. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).	**Humbug Mt. to Horse Mt. (KMZ)** • May 17 through June 30 and Aug. 1 through Sept. 2. All salmon except coho; 2 fish per day. From May 17 through June 30, no more than 4 fish in 7 consecutive days. Beginning Aug. 1 no more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).	**Humbug Mt. to Horse Mt. (KMZ)** • May 15 through June 30 and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 4 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).
Horse Mt. to Pt. Arena (Fort Bragg) • Feb. 16 through July 17 and Aug. 1 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).	**Horse Mt. to Pt. Arena (Fort Bragg)** • Same as Option I.	**Horse Mt. to Pt. Arena (Fort Bragg)** • Same as Option I.
In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.	In 2003, same as Option I.	In 2003, same as Option I.
Pt. Arena to Pigeon Pt. (San Francisco) • Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).	**Pt. Arena to Pigeon Pt. (San Francisco)** • Same as Option I	**Pt. Arena to Pigeon Pt. (San Francisco)** • Same as Option I
In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.	In 2003, same as Option I.	In 2003, same as Option I.
Pigeon Pt. to U.S.-Mexico Border • Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).	**Pigeon Pt. to U.S.-Mexico Border** • Same as Option I.	**Pigeon Pt. to U.S.-Mexico Border** • Same as Option I.
In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.	In 2003, same as Option I.	In 2003, same as Option I.

TABLE 2. **Recreational** management options proposed by the Council for ocean salmon fisheries, 2002. (Page 4 of 5)

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)		Chinook	Coho	Pink
North of Cape Falcon:		24.0	16.0	None
Cape Falcon to Horse Mt.		20.0	16.0	None, except 20.0 off CA
South of Horse Mountain:	Prior to May 1	24.0	-	20.0
	Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [**Note:** ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Between Cape Falcon, Oregon and Pt. Conception, California:* Anglers must use no more than 2 single point, single shank barbless hooks.

c. *Off California between Horse Mt. and Pt. Conception:* Single point, single shank, barbless **circle** hooks (see below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: **Options I and II** - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;
Option III - A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N lat., 124°06'50" W long.) and the green lighted Buoy #7 (46°15'09' N lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N lat. (approximately 6 nautical miles south of the Klamath River mouth).

TABLE 2. **Recreational** management options proposed by the Council for ocean salmon fisheries, 2002. (Page 5 of 5)

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

SALMON TECHNICAL TEAM

PRELIMINARY ANALYSIS OF TENTATIVE 2002 OCEAN SALMON FISHERY MANAGEMENT MEASURES

April 10, 2002

received 5:30pm

TABLE 1. STT preliminary analysis of tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002. (Page 1 of 4) **04/10/02 1654**

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 10,000 coho to recreational fishery for 2,500 chinook.
2. Non-Indian Troll TAC: 82,500 chinook and 25,000 coho.
3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in Jul. through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.

U.S.-Canada Border to Cape Falcon

May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). See gear restrictions (C.2). Cape Flattery and Columbia River Control Zones closed (C.4). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery; State regulations require that fishers fishing within this area and intending to land salmon south of Cape Falcon notify ODFW before they leave the area. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

Except as provided below during the selective fishery, the season will be: July 1 through earliest of Sept. 8 or 32,500 chinook quota (C.7). All salmon except coho. Cape Flattery and Columbia River Control Zones closed (C.4).Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery. Gear restricted to plugs 6 inches or longer between U.S.-Canada Border to Leadbetter Point (C.2). No more than four spreads per line between Cape Falcon and Leadbetter Point (C.2). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7).

Selective fishery for marked hatchery coho

Leadbetter Point to Cape Falcon - All salmon Aug. 1 through earliest of Sept. 8 or subarea quota of 5,000 marked coho (all retained coho must have a healed adipose fin clip). Fishery will remain open for all salmon except coho after the coho quota is reached, provided adequate chinook impacts remain on the 32,500 chinook quota.. Washington state regulations require fishers fishing within this subarea to land **coho** south of Leadbetter Point. Oregon state regulations require that fishers fishing within this subarea and intending to land **chinook or coho** south of this subarea notify ODFW before they leave the subarea at the following phone number (541) 867-0300 Ex. 252. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7).

South of Cape Falcon

Cape Falcon to Florence South Jetty

March 20 through July 15; Aug. 1 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. [**Note:** Incidental retention of halibut is not allowed until May 1.]

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Florence South Jetty to Humbug Mt.

March 20 through June 30; July 17 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2).

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

TABLE 1. STT preliminary analysis of tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002. (Page 2 of 4) **04/10/02 1654**

A. SEASON DESCRIPTION (Continued)

Humbug Mt. to OR-CA Border

March 20 through May 31. All salmon except coho. See gear restrictions (C.2).

June 1 through earlier of June 30 or 3,000 chinook quota; July 1 through earlier of July 31 or 1,500 chinook quota; Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; and Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 60 fish per trip. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

OR-CA Border to Humboldt South Jetty

Aug. 16 through the earlier of August 30 or 3,000 chinook quota and Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 40 fish per day. See gear restrictions (C.2). All fish must be landed within the area and within 24 hours of any closure of the fishery. When the fishery is closed between the OR-CA border and Humbug Mt. and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival. Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Klamath Control Zone closed (C.4.).

Horse Mt. to Pt. Arena (Fort Bragg)

July 20 through earlier of July 30 or 10,000 chinook quota; Aug. 1 through Aug. 30; and Sept. 1 through Sept. 30. All salmon except coho. All fish caught in this area in July and Aug. must be landed within the area. All fish caught in this area must be landed within 24 hours of any closure of the fishery. See gear restrictions (C.2).

Pt. Arena to Pigeon Point (San Francisco)

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

Oct. 1 through Oct. 18, Monday through Friday. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

Pigeon Pt. to U.S.-Mexico Border

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions in C.2.

B. MINIMUM SIZE (Inches)

	Chinook		Coho		
Area (when open)	Total Length	Head-off	Total Length	Head-off	Pink
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches total length (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *U.S. Canada Border to Leadbetter Point, July 1 to September 8:* Gear restricted to plugs with a one piece body that is at least six inches long, not including hooks or attachments.

c. *Leadbetter Point to Cape Falcon, July 1 to September 8*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

d. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

e. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined:

- Prior to July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- Effective July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°15'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

TABLE 1. STT preliminary analysis of tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002. (Page 4 of 4) **04/10/02 1654**

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 20,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 20,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 20,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

a. At the March 2003 meeting, the Council will consider inseason recommendations to open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon.

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE 2. STT preliminary analysis of tentative **Recreational** management measures for ocean salmon fisheries, 2002.
(Page 1 of 3) **04/10/02 1654**

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 2,500 chinook to non-Indian troll for 10,000 coho.
2. Recreational TAC: 67,500 chinook and 115,000 marked hatchery coho.
3. No Area 4B add-on fishery.
4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of about 20,000 coho. All retained coho must have a healed adipose fin clip.

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U.S.-Canada Border to Cape Falcon

May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week) (C.4.a). Chinook salmon only; 2 fish per day. Columbia Control Zone closed (C.3.a).

U.S.-Canada Border to Cape Alava (Neah Bay Area)

July 7 through earlier of Sept. 8 or 11,780 coho subarea quota, 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during the Council managed recreational ocean fishery in July through September. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,600 chinook.

Cape Alava to Queets River (La Push Area)

July 7 through earlier of Sept. 8 or 2,770 coho subarea quota; Sept. 21 through earlier of Oct. 6 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook.

Queets River to Leadbetter Pt. (Westport Area)

June 30 through earlier of Sept. 8 or 39,280 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 32,000 chinook.

Leadbetter Pt. to Cape Falcon (Columbia River Area)

July 7 through earlier of Sept. 30 or 55,700 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 11,200 chinook.

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South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting.

Selective fishery for marked hatchery coho:

July 7 through earlier of Aug. 4 or a landed catch of 25,000 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon (Continued)

Humbug Mt. to Horse Mt. (Klamath Management Zone)
May 15 through June 30; July 3 and 4; and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).

Horse Mt. to Pt. Arena (Fort Bragg)
Feb. 16 through July 7 and July 20 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pt. Arena to Pigeon Pt. (San Francisco)
Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pigeon Pt. to U.S.-Mexico Border
Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Between Cape Falcon , Oregon and Point Conception, California*: Anglers must use no more than 2 single point, single shank, barbless hooks.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Off California between Horse Mt. and Pt. Conception*: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined:
- Prior to July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- Effective July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

In addition, the following guidance is provided to NMFS:

a. In the overall recreational chinook quota north of Cape Falcon, 10,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 10,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 10,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

TABLE 7. STT preliminary analysis of expected coastwide Oregon coastal natural (**OCN**) and Rogue/Klamath (**RK**) coho **exploitation** rates by fishery for tentative ocean salmon fisheries, 2002. (Page 1 of 1)

	Exploitation Rate (Percent)					
	OCN					RK
Fishery	Jan-June	July	Aug	Sep-Dec	TOTAL	
SOUTHEAST ALASKA	0.0	0.0	0.0	0.0	0.0	0.0
BRITISH COLUMBIA	0.0	0.0	0.0	0.0	0.0	0.0
PUGET SOUND/STRAITS					0.1	0.0
NORTH OF CAPE FALCON						
Treaty Indian Troll	0.0	0.1	0.2	0.3	0.6	0.0
Recreational	0.1	0.7	0.6	0.0	1.4	0.1
Non-Indian Troll	0.1	0.1	0.4	0.0	0.7	0.0
SOUTH OF CAPE FALCON						
Recreational:						
Cape Falcon to Humbug Mt.	0.0	1.7	0.5	0.2	2.5	0.1
Humbug Mt. OR/CA border (KMZ)	0.1	0.0	0.3	0.0	0.5	0.5
OR/CA border to Horse Mt. (KMZ)	0.5	0.1	0.3	0.0	0.8	1.6
Fort Bragg	0.3	0.3	0.1	0.0	0.7	1.3
South of Pt. Arena	0.4	0.3	0.1	0.0	0.8	1.3
Troll:						
Cape Falcon to Humbug Mt.	0.4	0.2	0.5	0.4	1.4	0.1
Humbug Mt. OR/CA border (KMZ)	0.0	0.0	0.0	0.0	0.1	0.1
OR/CA border to Horse Mt. (KMZ)	0.0	0.0	0.1	0.0	0.1	0.6
Fort Bragg	0.0	0.2	0.1	0.0	0.4	0.6
South of Pt. Arena	0.8	0.2	0.0	0.0	1.1	1.1
BUOY 10	0.0	0.0	0.0	0.5	0.5	0.0
ESTUARY/FRESHWATER					1.0	0.2
TOTAL					12.5	7.7

<12.487

Exhibit B.5.b
Supplemental SAS Report
April 2002

SALMON ADVISORY SUBPANEL COMMENTS ON
CLARIFY COUNCIL DIRECTION ON 2002 MANAGEMENT MEASURES

CONSENSUS CHANGES TO FISHERIES IN SUPPLEMENTAL SALMON TECHNICAL TEAM REPORT
DATED APRIL 10, 2002

1. Remove July 1 and July 2 from Klamath Management Zone recreational fishery (top of page 6).

2. Remove 6 days in July from the Oregon Central Coast troll fishery (bottom of page 1).

3. Close the North of Falcon troll fishery on September 8 rather than September 30 (middle of page 1).

4. Trade 2,500 of the 7,500 coho in the Leadbetter-Falcon all-species troll fishery to the recreational fishery for 625 Chinook and delay the start of that fishery from July 1 until August 1 (middle of page 1).

PFMC
04/10/02

SALMON TECHNICAL TEAM

PRELIMINARY ANALYSIS OF TENTATIVE 2002 OCEAN SALMON FISHERY MANAGEMENT MEASURES

April 10, 2002

TABLE 1. STT collated tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002.
(Page 1 of 4) **04/09/02 1620**

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 150,000 coho.
   Trade: 10,000 coho to recreational fishery for 2,500 chinook.
2. Non-Indian Troll TAC: 82,500 chinook and 27,500 coho.
3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in Jul. through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.

U.S.-Canada Border to Cape Falcon

May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). See gear restrictions (C.2). Cape Flattery and Columbia River Control Zone closed (C.4). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery; State regulations require that fishers fishing within this area and intending to land salmon south of Cape Falcon notify ODFW before they leave the area. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

July 1 through earliest of Sept. 30 (or Sept. 8 if funding for fishery sampling can not be obtained) or 32,500 chinook quota (C.7). Cape Flattery Control Zone closed (C.4). Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7).

- U.S.-Canada Border to Leadbetter Point subarea - All salmon except coho. Gear restricted to plugs 6 inches or longer (C.2).
- Leadbetter Point to Cape Falcon subarea - All salmon. Sub area quota of 7,500 marked coho (all retained coho must have a healed adipose fin clip). Fishery will remain open for all salmon except coho after the coho quota is reached, provided adequate chinook impacts remain on the 32,500 chinook quota. No more than four spreads per line (C.2). Columbia River Control Zone closed (C.4). State regulations require fishers fishing within this subarea to land **coho** south of Leadbetter Point. State regulations require that fishers fishing within this subarea and intending to land **chinook or coho** south of this subarea notify ODFW before they leave the subarea (541) 867-0300 Ex. 252.

South of Cape Falcon

Cape Falcon to Florence South Jetty

March 20 through July 21; Aug. 1 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. [**Note:** Incidental retention of halibut is not allowed until May 1.]

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Florence South Jetty to Humbug Mt.

March 20 through June 30; July 11 through Aug. 29 and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2).

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

A. SEASON DESCRIPTION (Continued)

Humbug Mt. to OR-CA Border

March 20 through May 31. All salmon except coho. See gear restrictions (C.2).

June 1 through earlier of June 30 or 3,000 chinook quota; July 1 through earlier of July 31 or 1,500 chinook quota; Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 60 fish per trip. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

OR-CA Border to Humboldt South Jetty

Aug. 16 through the earlier of August 30 or 3,000 chinook quota; Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 40 fish per day. See gear restrictions (C.2). All fish must be landed within the area and within 24 hours of any closure of the fishery. When the fishery is closed between the OR-CA border and Humbug Mt. and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival. Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Klamath Control Zone closed (C.4.).

Horse Mt. to Pt. Arena (Fort Bragg)

July 20 through earlier of July 30 or 10,000 chinook quota; Aug. 1 to 30; Sept. 1 to 30. All salmon except coho. All fish caught in this area in July and Aug. must be landed within the area. All fish caught in this area must be landed within 24 hours of any closure of the fiahery. See gear restrictions (C.2).

Pt. Arena to Pigeon Point (San Francisco)

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

Oct. 1 through Oct. 18, Monday through Friday. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2).

Pigeon Pt. to U.S.-Mexico Border

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions in C.2.

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *U.S. Canada Border to Leadbetter Point, July 1 to September 8:* Gear restricted to plugs with a body that is at least six inches long.

c. *Leadbetter Point to Cape Falcon, July 1 to September 8*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

d. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

e. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined:

- Prior to July 7, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- Effective July 7, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°15'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

TABLE 1. STT collated tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002.
(Page 4 of 4) **04/09/02 1620**

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 20,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 20,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 20,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

a. At the March 2003 meeting, the Council will consider inseason recommendations to open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon.

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 150,000 coho.
   Trade: 2,500 chinook to non-Indian troll for 10,000 coho.
2. Recreational TAC: 67,500 chinook and 122,500 marked hatchery coho.
3. No Area 4B add-on fishery.
4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of about 20,000 coho. All retained coho must have a healed adipose fin clip.

U.S.-Canada Border to Cape Falcon
May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week) (C.4.a). Chinook salmon only; 2 fish per day. Columbia Control Zone closed (C.3.a).

U.S.-Canada Border to Cape Alava (Neah Bay Area)
July 7 through earlier of Sept. 8 or 12,560 coho subarea quota, 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during the Council managed recreational ocean fishery in July through September. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,600 chinook.

Cape Alava to Queets River (La Push Area)
July 7 through earlier of Sept. 8 or 2,960 coho subarea quota; Sept. 21 through earlier of Oct. 6 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook.

Queets River to Leadbetter Pt. (Westport Area)
June 30 through earlier of Sept. 8 or 42,060 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 32,000 chinook.

Leadbetter Pt. to Cape Falcon (Columbia River Area)
July 7 through earlier of Sept. 30 or 59,450 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within a guideline of 11,200 chinook.

South of Cape Falcon

Cape Falcon to Humbug Mt.
Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting.

Selective fishery for marked hatchery coho:

July 7 through earlier of Aug. 4 or a landed catch of 25,000 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon (Continued)

Humbug Mt. to Horse Mt. (Klamath Management Zone)
May 15 through July 4 and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).

Horse Mt. to Pt. Arena (Fort Bragg)
Feb. 16 through July 7 and July 20 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pt. Arena to Pigeon Pt. (San Francisco)
Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pigeon Pt. to U.S.-Mexico Border
Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2).

In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Between Cape Falcon , Oregon and Point Conception, California*: Anglers must use no more than 2 single point, single shank, barbless hooks.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Off California between Horse Mt. and Pt. Conception*: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined:

- Prior to July 7, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- Effective July 7, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

In addition, the following guidance is provided to NMFS:

a. In the overall recreational chinook quota north of Cape Falcon, 10,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 10,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 10,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

TABLE 7. STT preliminary analysis of expected coastwide Oregon coastal natural (**OCN**) and Rogue/Klamath (**RK**) coho **exploitation** rates by fishery for tentative ocean salmon fisheries, 2002. (Page 1 of 1)

	Exploitation Rate (Percent)					
	OCN					RK
Fishery	Jan-June	July	Aug	Sep-Dec	TOTAL	
SOUTHEAST ALASKA	0.0	0.0	0.0	0.0	0.0	0.0
BRITISH COLUMBIA	0.0	0.0	0.0	0.0	0.0	0.0
PUGET SOUND/STRAITS					0.1	0.0
NORTH OF CAPE FALCON						
Treaty Indian Troll	0.0	0.1	0.2	0.3	0.6	0.0
Recreational	0.1	0.7	0.8	0.0	1.5	0.1
Non-Indian Troll	0.1	0.1	0.3	0.1	0.7	0.0
SOUTH OF CAPE FALCON						
Recreational:						
Cape Falcon to Humbug Mt.	0.0	1.7	0.5	0.2	2.5	0.1
Humbug Mt. OR/CA border (KMZ)	0.1	0.1	0.3	0.0	0.5	0.6
OR/CA border to Horse Mt. (KMZ)	0.5	0.1	0.3	0.0	0.8	1.9
Fort Bragg	0.3	0.3	0.1	0.0	0.7	1.3
South of Pt. Arena	0.4	0.3	0.1	0.0	0.8	1.3
Troll:						
Cape Falcon to Humbug Mt.	0.4	0.3	0.5	0.4	1.5	0.1
Humbug Mt. OR/CA border (KMZ)	0.0	0.0	0.0	0.0	0.1	0.1
OR/CA border to Horse Mt. (KMZ)	0.0	0.0	0.1	0.0	0.1	0.6
Fort Bragg	0.0	0.2	0.1	0.0	0.4	0.6
South of Pt. Arena	0.8	0.2	0.0	0.0	1.1	1.1
BUOY 10	0.0	0.0	0.0	0.5	0.5	0.0
ESTUARY/FRESHWATER					1.0	0.2
TOTAL					12.9	8.0

CLARIFY COUNCIL DIRECTION ON 2002 MANAGEMENT MEASURES (IF NECESSARY)

Situation: If the Salmon Technical Team (STT) needs clarification of the tentative management measures before completing its analysis, the STT Chairman will address the Council in this agenda item.

Council Task:

1. **If requested, provide any needed guidance to assist the STT in its analysis of the tentative management measures.**

Reference Materials: None.

Agenda Order:

a. Agendum Overview	D. Simmons/C. Tracy
b. Reports and Comments of Advisory Bodies	
c. Public Comment	
d. Council Guidance and Direction	

PFMC
03/26/02

SALMON TECHNICAL TEAM

ANALYSIS OF TENTATIVE 2002 OCEAN SALMON FISHERY MANAGEMENT MEASURES

April 11, 2002

received 1:48pm

TABLE 1. STT analysis of tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002.
(Page 1 of 4)

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 10,000 coho to recreational fishery for 2,500 chinook.
2. Non-Indian Troll TAC: 82,500 chinook and 25,000 coho.
3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in Jul. through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.

U.S.-Canada Border to Cape Falcon

May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). See gear restrictions (C.2.a). Cape Flattery and Columbia River Control Zones closed (C.4.a, C.4.b). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery; State regulations require that fishers fishing within this area and intending to land salmon south of Cape Falcon notify ODFW before they leave the area at the following phone number (541) 867-0300 Ex. 252. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

phil correction

Aug-Sept.

Except as provided below during the selective fishery, the season will be: July 1 through earliest of Sept. 8 or 32,500 chinook quota (C.7.a). All salmon except coho, and no chum retention north of Cape Alava during July and August. Gear restricted to plugs 6 inches or longer between U.S.-Canada Border to Leadbetter Point (C.2.b). Cape Flattery and Columbia River Control Zones closed (C.4.a, C.4.b).Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon, and within 24 hours of any closure of this fishery. No more than four spreads per line between Cape Falcon and Leadbetter Point (C.2.c). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7.a).

Selective fishery for marked coho

Leadbetter Point to Cape Falcon - All salmon Aug. 1 through earliest of Sept. 8 or subarea quota of 5,000 marked coho (all retained coho must have a healed adipose fin clip). Fishery will remain open for all salmon except coho after the coho quota is reached, provided adequate chinook impacts remain on the 32,500 chinook quota.. Washington state regulations require fishers fishing within this subarea to land **coho** south of Leadbetter Point. Oregon state regulations require that fishers fishing within this subarea and intending to land **chinook or coho** south of this subarea notify ODFW before they leave the subarea at the following phone number (541) 867-0300 Ex. 252. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason.

South of Cape Falcon

Cape Falcon to Florence South Jetty

March 20 through July 15; Aug. 1 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. [**Note:** Incidental retention of halibut is not allowed until May 1.]

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Florence South Jetty to Humbug Mt.

March 20 through June 30; July 17 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d).

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

A. SEASON DESCRIPTION (Continued)

Humbug Mt. to OR-CA Border

March 20 through May 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d).

June 1 through earlier of June 30 or 3,000 chinook quota; July 1 through earlier of July 31 or 1,500 chinook quota; Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; and Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 50 fish per trip. See gear restrictions (C.2.a, C.2.d). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

OR-CA Border to Humboldt South Jetty

Aug. 16 through the earlier of August 30 or 3,000 chinook quota and Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 40 fish per day. See gear restrictions (C.2.a, C.2.e). All fish must be landed within the area and within 24 hours of any closure of the fishery. When the fishery is closed between the OR-CA border and Humbug Mt. and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival. Klamath Control Zone closed (C.4.c).

Horse Mt. to Pt. Arena (Fort Bragg)

July 20 through earlier of July 30 or 10,000 chinook quota; Aug. 1 through Aug. 30; and Sept. 1 through Sept. 30. All salmon except coho. All fish caught in this area in July and Aug. must be landed within the area. All fish caught in this area must be landed within 24 hours of any closure of the fishery. See gear restrictions (C.2.a, C.2.e).

Pt. Arena to Pigeon Point (San Francisco)

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2.a, C.2.e).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

Oct. 1 through Oct. 18, Monday through Friday. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2.a, C.2.e).

Pigeon Pt. to U.S.-Mexico Border

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2.a, C.2.e).

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches total length (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

TABLE 1. STT analysis of tentative **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002. (Page 3 of 4)

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *U.S. Canada Border to Leadbetter Point, July 1 to September 8:* Gear restricted to plugs with a one piece body that is at least six inches long, not including hooks or attachments.

c. *Leadbetter Point to Cape Falcon, July 1 to September 8*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

d. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

e. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined:

- Prior to July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- Effective July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°15'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 20,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 20,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 20,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

a. At the March 2003 meeting, the Council will consider inseason recommendations to open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon.

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE 2. STT analysis of tentative **Recreational** management measures for ocean salmon fisheries, 2002. (Page 1 of 3)

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 2,500 chinook to non-Indian troll for 10,000 coho.
2. Recreational TAC: 67,500 chinook and 115,000 coho.
3. No Area 4B add-on fishery.
4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of about 20,000 coho. All retained coho must have a healed adipose fin clip.

.....

U.S.-Canada Border to Cape Falcon

May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week) (C.4.a). Chinook salmon only; 2 fish per day. See gear restrictions (C.2.a). Columbia Control Zone closed (C.3.a).

Phil. correction Aug-Sept.

U.S.-Canada Border to Cape Alava (Neah Bay Area)

July 7 through earlier of Sept. 8 or 11,780 coho subarea quota, 7 days per week. All salmon, except during ~~July and August~~ no chum retention; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during the Council managed recreational ocean fishery in July through September. Inseason management may be used to sustain season length and keep harvest within a guideline of 2,600 chinook (C.4).

Cape Alava to Queets River (La Push Area)

July 7 through earlier of Sept. 8 or 2,770 coho subarea quota; Sept. 21 through earlier of Oct. 6 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook (C.4).

Queets River to Leadbetter Pt. (Westport Area)

June 30 through earlier of Sept. 8 or 39,280 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 32,000 chinook (C.4).

Leadbetter Pt. to Cape Falcon (Columbia River Area)

July 7 through earlier of Sept. 30 or 55,700 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 11,200 chinook (C.4).

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South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2.a, C.2.b). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting.

Selective fishery for marked coho:

July 7 through earlier of Aug. 4 or a landed catch of 22,500 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a, C.2.b). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon (Continued)

Humbug Mt. to Horse Mt. (Klamath Management Zone)
May 15 through June 30; July 3 and 4; and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2.a, C.2.b, C.2.c). Klamath Control Zone closed (C.3.b).

Horse Mt. to Pt. Arena (Fort Bragg)
Feb. 16 through July 7 and July 20 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pt. Arena to Pigeon Pt. (San Francisco)
Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pigeon Pt. to U.S.-Mexico Border
Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-waters fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Between Cape Falcon , Oregon and Point Conception, California*: Anglers must use no more than 2 single point, single shank, barbless hooks.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Off California between Horse Mt. and Pt. Conception*: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined:

- Prior to July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.
- Effective July 1, 2002, a hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle with no offset between the point and the shank.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

In addition, the following guidance is provided to NMFS:

a. In the overall recreational chinook quota north of Cape Falcon, 10,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 10,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 10,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

TABLE 4. STT analysis of chinook and coho **harvest quotas and guidelines** (*) for tentative 2002 ocean salmon fisheries (thousands of fish). (Page 1 of 1)

Fishery or Quota Designation	Chinook	Coho
NORTH OF CAPE FALCON		
TREATY INDIAN COMMERCIAL TROLL[a/]	60.0	60.0
NON-INDIAN COMMERCIAL TROLL		
Canada to Cape Falcon (May-June)	50.0	-
Canada to Cape Falcon (July-Sept.)[b/]	32.5	5.0
Subtotal Non-Indian Commercial Troll	82.5	5.0
RECREATIONAL (selective coho fisheries)[b/]		
Canada to Cape Falcon (May/June)[b/]	20.0	-
U.S.-Canada Border to Cape Alava[b/]	2.6*	11.8
Cape Alava to Queets River[b/]	1.7*	2.9
Queets River to Leadbetter Pt.[b/]	32.0*	39.3
Leadbetter Pt. to Cape Falcon[b/]	11.2*	55.7
Subtotal Recreational	67.5	109.7
TOTAL NORTH OF CAPE FALCON	210.0	174.7
SOUTH OF CAPE FALCON		
COMMERCIAL TROLL (all except coho)		
Humbug Mt. to OR-CA border (June-Sept.)	9.5	-
Oregon-California Border to Humboldt S. Jetty (Aug.-Sept.)	13.0	-
Horse Mt. to Pt. Arena (July)	10.0	-
Subtotal Troll	32.5	-
RECREATIONAL		
Cape Falcon to Humbug Mt.[b/]	-	22.5
TOTAL SOUTH OF CAPE FALCON	32.5	22.5

a/ For the Makah encounter rate study, legal sized fish retained in open periods will be included in the tribal quota.
b/ The coho quota is a landed catch of coho with a healed adipose fin clip.

TABLE 5. STT analysis of projected **key stock escapements** (thousands of fish) or management criteria for tentative ocean salmon fisheries, 2002.[a/]
(Page 1 of 3)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria	Spawner Objective or Other Comparative Standard as Noted	
CHINOOK			
Upper Columbia River Brights	273.8	57.3	Minimum ocean escapement to attain 43.5 adults over McNary Dam, with normal distribution and no mainstem harvest.
Mid-Columbia Brights	93.7	16.6	Minimum ocean escapement to attain 5.75 adults for Bonneville Hatchery and 2.0 for Little White Salmon Hatchery egg-take, assuming average conversion and no mainstem harvest.
Lower Columbia River Hatchery Tules	133.0	23.4	Minimum ocean escapement to attain 14.3 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Lower Columbia River Natural Tules	34.8%[c/]	≤49%	ESA guidance met by a total adult equivalent fishery exploitation rate of no more than 49.0% on Coweeman tules.
Lewis River Wild (threatened)	18.3	5.7	MSY spawner goal for North Lewis River.
Spring Creek Hatchery Tules	136.0	11.1	Minimum ocean escapement to attain 7.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Snake River Fall (threatened) SRFI	46.5%	≤70.0%	Of 1988-1993 base period exploitation rate for all ocean fisheries (ESA jeopardy standard).
Klamath River Fall	35.0	35.0	Minimum number of adult spawners to natural spawning areas.
Federally recognized tribal harvest	50%	50.0%	Equals 50.4 (thousand) fish for Yurok and Hoopa tribal fisheries
Age 4 ocean harvest rate	12.9%	≤16.0%	ESA jeopardy standard for threatened California coastal chinook.
KMZ sport fishery allocation	10.9%	-	None specified for 2002.
CA/OR troll fishery allocation	48.7%/ 51.3%	-	None specified for 2002.
River recreational fishery allocation	40.6%	≥15.0%	Agreed to by California Fish and Game Commission; Equals 20.5 (thousand) fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	Yes		Duration and timing of commercial and recreational seasons south of Point Arena do not differ substantially relative to those of 2000 and 2001.
Sacramento River Fall	298.5	122.0-180.0	Sacramento River fall natural and hatchery adult spawners.

TABLE 5. STT analysis of projected **key stock escapements** (thousands of fish) or management criteria for tentative ocean salmon fisheries, 2002[a/].
(Page 2 of 3)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria	Spawner Objective or Other Comparative Standard as Noted
COHO		
Interior Fraser (Thompson River)	9.1%[c/]	≤10% Total exploitation rate for all US fisheries south of the US/Canada border.
Skagit	38% (6.2%) 79.9	≤60% 2001 Annual management ceiling: total exploitation rate[d/] 30.0 MSP level of adult spawners Identified in FMP.
Stillaguamish	35% (7.8%) 14.5	≤35% 2001 Annual management ceiling: total exploitation rate[d/] 17.0 MSP level of adult spawners Identified in FMP.
Snohomish	34% (7.8%) 86.7	≤40% 2001 Annual management ceiling: total exploitation rate[d/] 70.0 MSP level of adult spawners Identified in FMP.
Hood Canal	44% (6.2%) 25.6	≤45% 2001 Annual management ceiling: total exploitation rate[d/] 21.5 MSP level of adult spawners Identified in FMP.
Strait of Juan de Fuca	17% (5.1%) 22.0	≤40% 2001 Annual management ceiling: total exploitation rate[d/] 12.8 MSP level of adult spawners Identified in FMP.
COASTAL NATURAL:		
Quillayute Fall	18.5	6.3-15.8 MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Hoh	6.9	2.0-5.0 MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Queets Wild	10.2	5.8-14.5 MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Queets Supplemental	1.6	-
Grays Harbor	50.3	35.4 MSP level of adult spawners. Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Oregon Coastal Natural (threatened)	12.3%	≤15.0% ESA jeopardy standard for marine and freshwater fishery exploitation rate. ≤12.5% To meet Council guidance for protection of Oregon state ESA endangered lower Columbia coho.
Northern California (threatened)	7.7%	≤13.0% ESA jeopardy standard for surrogate R/K hatchery coho marine fishery exploitation rate.
HATCHERY:		
Columbia River Early	98.3	38.7 Minimum ocean escapement to attain hatchery egg-take goal of 19.6 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Late	53.1	19.4 Minimum ocean escapement to attain hatchery egg-take goal of 15.2 late adult coho, with average conversion and no mainstem or tributary fisheries.

a/ Projections in the table assume a WCVI mortality of 2,000 coho; Southeast Alaska TAC of 370,000 chinook per PST agreement; WCVI troll catch of 97,500 chinook (includes chinook in the fall of 2001).

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spawner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. The escapement numbers provided for OCN coho are spawners in SRS accounting.

TABLE 5. STT analysis of projected **key stock escapements** (thousands of fish) or management criteria for tentative ocean salmon fisheries, 2002 [a/]. (Page 3 of 3)

c/ Reported exploitation rates are for ocean fisheries only.
d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. Total exploitation rate includes Alaskan, Canadian, Council area, Puget Sound and freshwater fisheries, and is calculated as total fishing mortality divided by total fishing mortality plus spawning escapement.

TABLE 6. STT preliminary analysis of projectioned chinook and coho **harvest impacts** for tentative ocean salmon fisheries, 2002. (Page 1 of 1)

Area and Fishery	2002 Catch Projection	2002 Bycatch Mortality[a/] Projection	Observed in 2001 Catch	Observed in 2001 Bycatch Mortality
OCEAN FISHERIES:[b/]		**CHINOOK (thousands of fish)**		
NORTH OF CAPE FALCON				
Treaty Commercial Troll	60.0	7.7	28.1	5.3
Non-Indian Commercial Troll	82.5	20.9	26.5	15.5
Recreational	67.5	8.3	25.6	3.8
CAPE FALCON TO HUMBUG MT.				
Commercial Troll	140.0	15.4	267.0	29.3
Recreational	13.5	1.5	17.4	1.9
HUMBUG MT. TO HORSE MT.				
Commercial Troll	24.5	2.7	9.7	1.1
Recreational	21.0	2.3	19.9	2.2
SOUTH OF HORSE MT.				
Commercial	404.8	44.5	173.4	19.1
Recreational	130.9	14.4	84.5	9.3
TOTAL OCEAN FISHERIES				
Commercial Troll	711.8	91.2	504.7	70.3
Recreational	232.9	26.5	147.4	17.2
INSIDE FISHERIES:				
Buoy 10	NA	NA	12.7	2.3
OCEAN FISHERIES:		**COHO (thousands of fish)**		
NORTH OF CAPE FALCON				
Treaty Commercial Troll	60.0	3.2	57.5	2.8
Non-Indian Commercial Troll[c/]	5.0	21.2	17.5	5.3
Recreational[c/]	109.7	23.2	207.5	24.0
SOUTH OF CAPE FALCON				
Commercial Troll	0.0	8.9	-	25.1
Recreational[c/]	22.5	10.1	56.5	11.4
TOTAL OCEAN FISHERIES				
Commercial Troll	65.0	33.3	75.0	33.2
Recreational	132.2	33.3	264.0	35.4
INSIDE FISHERIES:				
Area 4B[c/]	NA	NA		
Buoy 10[c/]			132.0	11.9

a/ The bycatch mortality reported in this table consists of hook-and-release and drop-off mortality of chinook and coho salmon in fisheries which have special species retention restrictions (e.g., all-salmon-except-coho or all-salmon-except-chinook seasons, or selective fisheries for marked coho). In general, the bycatch mortality rate parameters used by the Council for both chinook and coho in fisheries using barbless hooks are:
Commercial - 26% of fish hooked-and-released plus 5% of total encounters (drop-off, predation, noncompliance, etc.).
Sport north of Pt. Arena - 14% of fish hooked-and-released plus 5% of total encounters (drop-off, etc.).
Sport south of Pt. Arena - 23% (weighted average of California style mooching and trolling) of fish hooked-and-released plus 5% of total encounters (drop-off, etc.).

b/ Includes Oregon territorial water, late season chinook fisheries.

c/ Includes one or more selective fishery options that allow only retention of hatchery coho with a healed adipose fin clip.

TABLE 7. STT analysis of expected coastwide Oregon coastal natural (**OCN**) and Rogue/Klamath (**RK**) coho **exploitation** rates by fishery for tentative ocean salmon fisheries, 2002. (Page 1 of 1)

	Exploitation Rate (Percent)					
	OCN					RK
Fishery	Jan-June	July	Aug	Sep-Dec	Total	Total
SOUTHEAST ALASKA	0.0	0.0	0.0	0.0	0.0	0.0
BRITISH COLUMBIA	0.0	0.0	0.0	0.0	0.0	0.0
PUGET SOUND/STRAITS					0.1	0.0
NORTH OF CAPE FALCON						
Treaty Indian Troll	0.0	0.1	0.2	0.3	0.6	0.0
Recreational	0.1	0.6	0.6	0.0	1.4	0.1
Non-Indian Troll	0.1	0.1	0.4	0.0	0.7	0.0
SOUTH OF CAPE FALCON						
Recreational:						
Cape Falcon to Humbug Mt.	0.0	1.4	0.5	0.2	2.2	0.1
Humbug Mt. OR/CA border (KMZ)	0.1	0.0	0.3	0.0	0.5	0.5
OR/CA border to Horse Mt. (KMZ)	0.5	0.1	0.3	0.0	0.8	1.6
Fort Bragg	0.3	0.3	0.1	0.0	0.7	1.3
South of Pt. Arena	0.4	0.3	0.1	0.0	0.8	1.3
Troll:						
Cape Falcon to Humbug Mt.	0.4	0.2	0.5	0.4	1.4	0.1
Humbug Mt. OR/CA border (KMZ)	0.0	0.0	0.0	0.0	0.1	0.1
OR/CA border to Horse Mt. (KMZ)	0.0	0.0	0.1	0.0	0.1	0.6
Fort Bragg	0.0	0.2	0.1	0.0	0.4	0.6
South of Pt. Arena	0.8	0.2	0.0	0.0	1.1	1.1
BUOY 10	0.0	0.0	0.0	0.5	0.5	0.0
ESTUARY/FRESHWATER					1.0	0.2
TOTAL					12.3	7.7

TABLE 8. STT analysis of **Expected mark rate** for areas with **selective coho fisheries**, 2002. (Page 1 of 1)

Area	Fishery	July	August	September	2001 Observed
	North of Cape Falcon				
Neah Bay (Area 4)	Recreational	53.2%	44.7%	-	39%
	Non-Indian Troll	-	-	-	NA
La Push (Area 3)	Recreational	47.7%	47.8%	-	31%
	Non-Indian Troll	-	-	-	NA
Westport (Area 2)	Recreational	64.7%	57.8%	-	58%
	Non-Indian Troll	-	-	-	44%
Columbia River (Area 1)	Recreational	81.3%	71.2%	-	78%
	Non-Indian Troll	68.7%	63.9%	63.0%	67%
Buoy 10	Recreational	-	69.5%	69.5%	69%
	South of Cape Falcon				
Cape Falcon to Humbug Mt.	Recreational	-	-	-	-
Tillamook	Recreational	64.9%	-	-	65%
Newport	Recreational	65.1%	-	-	68%
Coos Bay	Recreational	61.0%	-	-	72%

Exhibit B.6.c
Supplemental Tribal Comments
April 2002

Administrative Record

TESTIMONY OF
THE COLUMBIA RIVER TREATY TRIBES
BEFORE PACIFIC FISHERIES MANAGEMENT COUNCIL
April 11, 2002
Portland, Oregon

Good afternoon Mr. Chairman and members of the Council. My name is Harold Blackwolf. I am a member of the Fish and Wildlife Committee of the Warm Springs Tribes. I am here today to present comments on behalf of the four Columbia River treaty tribes: the Yakama, Warm Springs, Umatilla and Nez Perce tribes.

The 2002 fall chinook forecasts in the Columbia are improved this year which should provide for reasonable fishing opportunities in river this year.

The Council heard a presentation from the National Marine Fisheries Service on Tuesday concerning the disastrous flow and spill conditions in the Columbia in 2001. Because of this, the tribes are very concerned about whether we will have any fish in the next few years. Already spring chinook jack counts are considerably less than long term average counts for this time of year. This is simply the first indication of possible problems ahead because of NMFS' failure to ensure the hydro-system minimize juvenile mortality.

The benefits of power generation in the Columbia basin to the non-Indian population has been great. The cost of this has been enormous to Indian people, both culturally and economically.

The presentation on Tuesday should make it clear to everyone that the NMFS Biological Opinion on the Federal Hydropower System is already a complete failure. NMFS obviously only expects fishermen to pay the price of conservation. In the next few years, treaty and non-treaty fishermen will pay the price for NMFS' failure to ensure the Hydropower system do its part for conservation.

During the presentation on Tuesday, NMFS indicated that they anticipate what they term "full Bi-Op spill" in 2002. This is not entirely accurate. They are not proposing spill at Lower Monumental Dam because repairs are needed for the spill apron.

Even the term "full Bi-Op" spill is misleading. The spill levels proposed in the Bi-Op are inadequate to protect juvenile salmon. The Columbia River tribes have proposed a 2002 River Operation Plan that includes more protective levels of spill. The federal government has so far refused to consider it.

Over the years, the Columbia River Tribes have proposed numerous strategies to ensure the recovery of salmon to harvestable levels. The federal government has consistently ignored us and both treaty and non-treaty fishermen pay the price.

The Federal government has the legal obligation under federal law **to restrict other** activities that impact listed species **before** restricting the Columbia River treaty Indian fishery any further. This must be done to **comply** with the conservation principles established in *United States versus Oregon*. **Until everyone**, Indian and non-Indian, can resume fishing at its full potential, we can not forget the work that we have to do **together** to recover all salmon and steelhead runs for our future generations.

This concludes my statement. Thank You.

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The Council heard a presentation from the National Marine Fisheries Service on Tuesday concerning the disastrous flow and spill conditions in the Columbia in 2001. Because of this, the tribes are very concerned about whether we will have any fish in the next few years. Already spring chinook jack counts are considerably less than long term average counts for this time of year. This is simply the first indication of possible problems ahead because of NMFS' failure to ensure the hydro-system minimize juvenile mortality.

TESTIMONY OF TERRY COURTNEY, JR. Traditional fisherman, F/W commissioner,

The benefits of power generation in the Columbia basin to the non-Indian population has been great. The cost of this has been enormous to Indian people, both culturally and economically. To have harvest, we just should really be discussing fish restoration or supplementation. We hope all parties involved will be looking ahead to the future for the fish & fisherman.

The presentation on Tuesday should make it clear to everyone that the NMFS Biological Opinion on the Federal Hydropower System is already a complete failure. NMFS obviously only expects fishermen to pay the price of conservation. In the next few years, treaty and non-treaty fishermen will pay the price for NMFS' failure to ensure the Hydropower system do its part for conservation.

There are some people and organizations that could care less what actually happens to our fish and the Columbia River. The Columbia River is the life line to the Tribes of the Northwest. Thank You.

During the presentation on Tuesday, NMFS indicated that they anticipate what they term "full Bi-Op spill" in 2002. This is not entirely accurate. They are not proposing spill at Lower Monumental Dam because repairs are needed for the spill apron.

Even the term "full Bi-Op" spill is misleading. The spill levels proposed in the Bi-Op are inadequate to protect juvenile salmon. The Columbia River tribes have proposed a 2002 River Operation Plan that includes more protective levels of spill. The federal government has so far refused to consider it.

Over the years, the Columbia River Tribes have proposed numerous strategies to ensure the recovery of salmon to harvestable levels. The federal government has consistently ignored us and both treaty and non-treaty fishermen pay the price.

The Federal government has the legal obligation under federal law **to restrict other** activities that impact listed species **before** restricting the Columbia River treaty Indian fishery any further. This must be done to **comply** with the conservation principles established in *United States versus Oregon*. **Until everyone**, Indian and non-Indian, can resume fishing at its full potential, we can not forget the work that we have to do **together** to recover all salmon and steelhead runs for our future generations.

This concludes my statement. Thank You.

Draft

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The 2002 fall chinook forecasts in the Columbia are improved this year which should provide for reasonable fishing opportunities in river this year. However, due to ESA constraints, the Tribes will not be able to achieve a full harvestable share.

The Council heard a presentation from the National Marine Fisheries Service on Tuesday concerning the disastrous flow and spill conditions in the Columbia in 2001. Because of this, the tribes are very concerned about whether we will have any fish in the next few years. Already spring chinook jack counts are considerably less than long term average counts for this time of year. This is simply the first indication of possible problems ahead because of NMFS' failure to ensure the hydro-system minimize juvenile mortality.

The ~~cost~~ benefits of power generation in the Columbia basin to the non-Indian population has been ~~relatively small~~ great. This cost has been enormous to Indian people, both culturally and economically.

The presentation on Tuesday should make it clear to everyone that the NMFS Biological Opinion on the Federal Hydropower System is already a complete failure. NMFS obviously only expects fishermen to pay the price of conservation. In the next few years, treaty and non-treaty fishermen will pay the price for NMFS' failure to ensure the Hydropower system do its part for conservation.

During the presentation on Tuesday, NMFS indicated that they anticipate what they term "full Bi-Op spill" in 2002. This is not entirely accurate. They are not proposing spill at Lower Monumental Dam because repairs are needed for the spill apron.

Even the term "full Bi-Op" spill is misleading. The spill levels proposed in the Bi-Op are inadequate to protect juvenile salmon. The Columbia River tribes have proposed a 2002 River Operation Plan that includes more protective levels of spill. The federal government has so far refused to consider it.

Over the years, the Columbia River Tribes have proposed numerous strategies to ensure the recovery of salmon to harvestable levels. The federal government has consistently ignored us and both treaty and non-treaty fishermen pay the price.

The Federal government has the legal obligation under federal law **to restrict other** activities that impact listed species **before** restricting the Columbia River treaty Indian fishery any further. This must be done to **comply** with the conservation principles established in *United States versus Oregon*. **Until everyone**, Indian and non-Indian, can resume fishing at its full potential, we can not forget the work that we have to do **together** to recover all salmon and steelhead runs for our future generations.

This concludes my statement. Thank You.

B. 6 Final

TABLE 1. Council Adopted **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2002. (Page 1 of 4)

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 10,000 coho to recreational fishery for 2,500 chinook.
2. Non-Indian Troll TAC: 82,500 chinook and 25,000 coho.
3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in Jul. through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.

U.S.-Canada Border to Cape Falcon

May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). See gear restrictions (C.2.a). Cape Flattery and Columbia River Control Zones closed (C.4.a, C.4.b). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery; State regulations require that fishers fishing within this area and intending to land salmon south of Cape Falcon notify ODFW before they leave the area at the following phone number (541) 867-0300 Ex. 252. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

Except as provided below during the selective fishery, the season will be: July 1 through earliest of Sept. 8 or 32,500 chinook quota (C.7.a). All salmon except coho, and no chum retention north of Cape Alava during August and Spetember. Gear restricted to plugs 6 inches or longer between U.S.-Canada Border to Leadbetter Point (C.2.b). Cape Flattery and Columbia River Control Zones closed (C.4.a, C.4.b).Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon, and within 24 hours of any closure of this fishery. No more than four spreads per line between Cape Falcon and Leadbetter Point (C.2.c). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7.a).

Selective fishery for marked coho

Leadbetter Point to Cape Falcon - All salmon Aug. 1 through earliest of Sept. 8 or subarea quota of 5,000 marked coho (all retained coho must have a healed adipose fin clip). Fishery will remain open for all salmon except coho after the coho quota is reached, provided adequate chinook impacts remain on the 32,500 chinook quota.. Washington state regulations require fishers fishing within this subarea to land **coho** south of Leadbetter Point. Oregon state regulations require that fishers fishing within this subarea and intending to land **chinook or coho** south of this subarea notify ODFW before they leave the subarea at the following phone number (541) 867-0300 Ex. 252. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason.

South of Cape Falcon

Cape Falcon to Florence South Jetty

March 20 through July 15; Aug. 1 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Florence South Jetty to Humbug Mt.

March 20 through June 30; July 17 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d).

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

A. SEASON DESCRIPTION (Continued)

Humbug Mt. to OR-CA Border

March 20 through May 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d).

June 1 through earlier of June 30 or 3,000 chinook quota; July 1 through earlier of July 31 or 1,500 chinook quota; Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; and Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 50 fish per trip. See gear restrictions (C.2.a, C.2.d). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

OR-CA Border to Humboldt South Jetty

Aug. 16 through the earlier of August 30 or 3,000 chinook quota and Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 40 fish per day. See gear restrictions (C.2.a, C.2.e). All fish must be landed within the area and within 24 hours of any closure of the fishery. When the fishery is closed between the OR-CA border and Humbug Mt. and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival. Klamath Control Zone closed (C.4.c).

Horse Mt. to Pt. Arena (Fort Bragg)

July 20 through earlier of July 30 or 10,000 chinook quota; Aug. 1 through Aug. 30; and Sept. 1 through Sept. 30. All salmon except coho. All fish caught in this area in July and Aug. must be landed within the area. All fish caught in this area must be landed within 24 hours of any closure of the fishery. See gear restrictions (C.2.a, C.2.e).

Pt. Arena to Pigeon Point (San Francisco)

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2.a, C.2.e).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

Oct. 1 through Oct. 18, Monday through Friday. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2.a, C.2.e).

Pigeon Pt. to U.S.-Mexico Border

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches. See gear restrictions (C.2.a, C.2.e).

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches total length (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *U.S. Canada Border to Leadbetter Point, July 1 to September 8:* Gear restricted to plugs with a one piece body that is at least six inches long, not including hooks or attachments.

c. *Leadbetter Point to Cape Falcon, July 1 to September 8*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

d. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

e. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°15'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 20,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 20,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 20,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

a. At the March 2003 meeting, the Council will consider inseason recommendations to open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon.

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE 2. Council adopted **Recreational** management measures for ocean salmon fisheries, 2002. (Page 1 of 3)

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 2,500 chinook to non-Indian troll for 10,000 coho.
2. Recreational TAC: 67,500 chinook and 115,000 coho.
3. No Area 4B add-on fishery.
4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of about 20,000 coho. All retained coho must have a healed adipose fin clip.

U.S.-Canada Border to Cape Falcon

May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week) (C.4.a). Chinook salmon only; 2 fish per day. See gear restrictions (C.2.a). Columbia Control Zone closed (C.3.a).

U.S.-Canada Border to Cape Alava (Neah Bay Area)

July 7 through earlier of Sept. 8 or 11,780 coho subarea quota, 7 days per week. All salmon, except during August and September no chum retention; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during the Council managed recreational ocean fishery in July through September. Inseason management may be used to sustain season length and keep harvest within a guideline of 2,600 chinook (C.4).

Cape Alava to Queets River (La Push Area)

July 7 through earlier of Sept. 8 or 2,770 coho subarea quota; Sept. 21 through earlier of Oct. 6 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook (C.4).

Queets River to Leadbetter Pt. (Westport Area)

June 30 through earlier of Sept. 8 or 39,280 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 32,000 chinook (C.4).

Leadbetter Pt. to Cape Falcon (Columbia River Area)

July 7 through earlier of Sept. 30 or 55,700 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 11,200 chinook (C.4).

South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2.a, C.2.b). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting.

Selective fishery for marked coho:

July 7 through earlier of Aug. 4 or a landed catch of 22,500 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a, C.2.b). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon (Continued)

Humbug Mt. to Horse Mt. (Klamath Management Zone)
May 15 through June 30; July 3 and 4; and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2.a, C.2.b, C.2.c). Klamath Control Zone closed (C.3.b).

Horse Mt. to Pt. Arena (Fort Bragg)
Feb. 16 through July 7 and July 20 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pt. Arena to Pigeon Pt. (San Francisco)
Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pigeon Pt. to U.S.-Mexico Border
Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches through April 30 and 20 inches thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-waters fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Between Cape Falcon , Oregon and Point Conception, California*: Anglers must use no more than 2 single point, single shank, barbless hooks.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Off California between Horse Mt. and Pt. Conception*: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

In addition, the following guidance is provided to NMFS:

a. In the overall recreational chinook quota north of Cape Falcon, 10,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 10,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 10,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

FINAL ACTION ON 2002 MANAGEMENT MEASURES

Situation: The Salmon Technical Team (STT) will briefly review its analysis of the tentative management measures and answer Council questions. Final adoption of management measures, including fishing gear definitions (Attachment 1 from Exhibit B.4, or as modified) will follow the comments of the advisors, tribes, agencies, and public.

This action is for submission to the U.S. Secretary of Commerce, and the final motions must be visible in writing. To avoid unnecessary delay and confusion in proposing final regulations, minor edits may be made to the STT analysis and other documents provided by the staff. If major deviations from existing documents are anticipated, Council members should be prepared to provide a written motion that can be projected on a screen or quickly photocopied. Please prepare your motion documents or advise Council staff of the need for, or existence of, additional working documents as early as possible before the final vote.

Council Action:

1. **Adopt final treaty Indian commercial troll and non-Indian commercial and recreational ocean salmon fishery management measures, including definitions for recreational and non-Indian commercial fishing gear (Exhibit B.4, Attachment 1) for submission to the U.S. Secretary of Commerce. *(Motions must be visible in writing prior to vote.)***
2. **Authorize Council staff, National Marine Fisheries Service, and STT to draft and revise the necessary documents to allow implementation of the recommendations in accordance with Council intent.**

Reference Materials:

1. Definitions of Fishing Gear (Exhibit B.4, Attachment 1).
2. STT Analysis of Tentative 2002 Ocean Salmon Fishery Management Measures (Exhibit B.6.b, Supplemental STT Report).

Agenda Order:

a.	Agendum Overview	Chuck Tracy
b.	Analysis of Impacts	Dell Simmons
c.	Comments of the KFMC	Dan Viele
d.	Reports and Comments of Advisory Bodies	
e.	Tribal Comments	Jim Harp, et. al.
f.	Public Comments	
g.	**Council Action:** Adopt Final Measures	

PFMC
03/26/02

Exhibit B-7.a
Supp. NMFS Report
April 2002

Sustainable Fisheries Division

Hatcheries & Inland Fisheries

Northwest Regional Office National Marine Fisheries Service

April 12, 2002 Appearance to Address the Following Questions Raised by the Pacific Fisheries Management Council

1. What is the history of the Mitchell Act program budget appropriations over the past 15 years? (See attached Mitchell Act funding graph)

➥ The funding for hatchery operations has only increased slightly from FY93 to FY02 ($10.3 M to $11.457 M)

➥ Construction money(referred to in the graph as screens and fishways) which covered both hatchery O&M and irrigation screening and fishway O&M was reduced to $4.7 M in FY96. Since 1996, this funding has covered irrigation screening and fishway O&M only. The major fishway and screening activities (primarily in Oregon and Idaho) were cut again when funding was further reduced in FY 00.

➥ Starting in FY97 funds were provided for mass marking. This peaked in FY 99 when $2.2 M was provided (in addition to actual marking, the funding included purchase of marking and electronic sampling equipment). This funding then declined through FY 01 when $0.3 M was provided and no money was budgeted for marking in FY 02.

➥ Starting in FY 01 $1.7 M was earmarked for hatchery monitoring, evaluation, and reform. This allocation amounts to 10% of the entire Mitchell Act program and it is the only funding set aside to support conservation initiatives.

2. What production programs have been reduced or lost in the last 10-year period because Mitchell Act has generally been flat funded? (See Mitchell Act Production Reductions Table) (See also the Map of Mitchell Act Hatcheries and the Information Table)

➥ The Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW), Idaho Department of Fish and Game (IDFG), and the U.S. Fish and Wildlife (USFWS) have done an extraordinary job of operating these programs on a shoestring and they are out of options to cover things as simple as maintenance and inflation and just maintain programs at the status quo level.

➥ Significant production cuts started in 1995 because of continued level funding and the inability to cover normal growth in costs (i.e., inflation and cost of living increases).

➥ Hatchery closures included Gnat Creek Hatchery, Klaskanine Hatchery, and Stayton Rearing Pond operated by ODFW and Grays River Hatchery and Beaver Creek Hatchery operated by WDFW. In addition, Abernathy Salmon Culture Technology Center operated in Washington by USFWS no longer has a production program.

➥ Major production reductions occurred at Bonneville Hatchery and Big Creek Hatcheries (ODFW) and Kalama Falls Hatchery, Elochoman Hatchery, and Ringold Hatchery (WDFW).

➥ Hatchery closures and production reductions totaled over 33 million fish which included fall chinook, spring chinook, and coho as well as both summer and winter steelhead.

3. What new constraints (i.e., mass marking, monitoring and evaluation, and reform measures) have been added to the Mitchell Act program as a result of recent Biological Opinions for Columbia River Hatchery production and for the Federal Columbia River Power System and how is funding for these actions being addressed?

➥ Mass marking of hatchery fish provides the opportunity for selective fisheries while providing a measure of protection for Endangered Species Act (ESA) listed fish. Maintaining viable sustainable fisheries is one of NOAA's missions. Mass marking is a necessary management tool ESA or not.

➥ The Mitchell Act is funding several monitoring, evaluation, and reform measures out of the FY 02 (see attached Monitoring, Evaluation, and Reform Projects in FY 2002 table).

➥ As conservation priorities are identified in the future, it is anticipated that they will be funded out of the $1.7 M monitoring, evaluation, and reform allocation.

4. What is the budgeting process that NMFS (i.e., bottom-up, top-down) goes through to present their request in the President's budget?

➥ Previous funding levels are the starting point for administration budgets.

➥ Production plans are developed to fully use the available funding.

➥ The President's budget for FY 03 includes a total of $16.522 M for the Mitchell Act program ($11.457 M for hatchery operations, $1.7 M for Monitoring, Evaluation, and Reform, and $3.365 for Screens and Fishways). This is precisely the same level of funding as FY 02. Note that there is no funding in the FY 03 budget for marking.

➥ NMFS has minimized charges for administering the Columbia River Fisheries Development Program by taking only 2.2% (in FY 2002) of the 5% that is allowed.

5. What is the level of funding need to fully meet the needs of Mitchell Act Program for the future from a bottom-up budget approach?

➥ The cooperating state fisheries agencies believe that a base program of at least $24.544 M is needed (see attached The Mitchell Act and Salmon Recovery table).

➥ At this level of funding (with adjustments for inflation) status quo production would be covered as would the other activities included in the table.

➥ This level of funding would not cover major facility maintenance/upgrade/retrofit. Large projects (i.e., reconstruction of a hatchery adult holding and spawning area to accommodate development of local broodstocks, development of pathogen free water supplies, and replacement of obsolete or deteriorated raceways) would have to be addressed individually, and be funded either through a special appropriation or by other sources (e.g., by Bonneville Power Administration under the Federal Columbia River Power System Biological Opinion).

6. What is the timing for getting FY 04 budget package built and through the OMB and President's budget development process?

➥ Development of the FY 04 Budget is well underway. It is anticipated that the President will announce it in February or March of 2003. At this stage, there is no indication that Mitchell Act will be increased.

➥Under this funding scenario future and substantial cuts in production should be anticipated.

For further information, contact:

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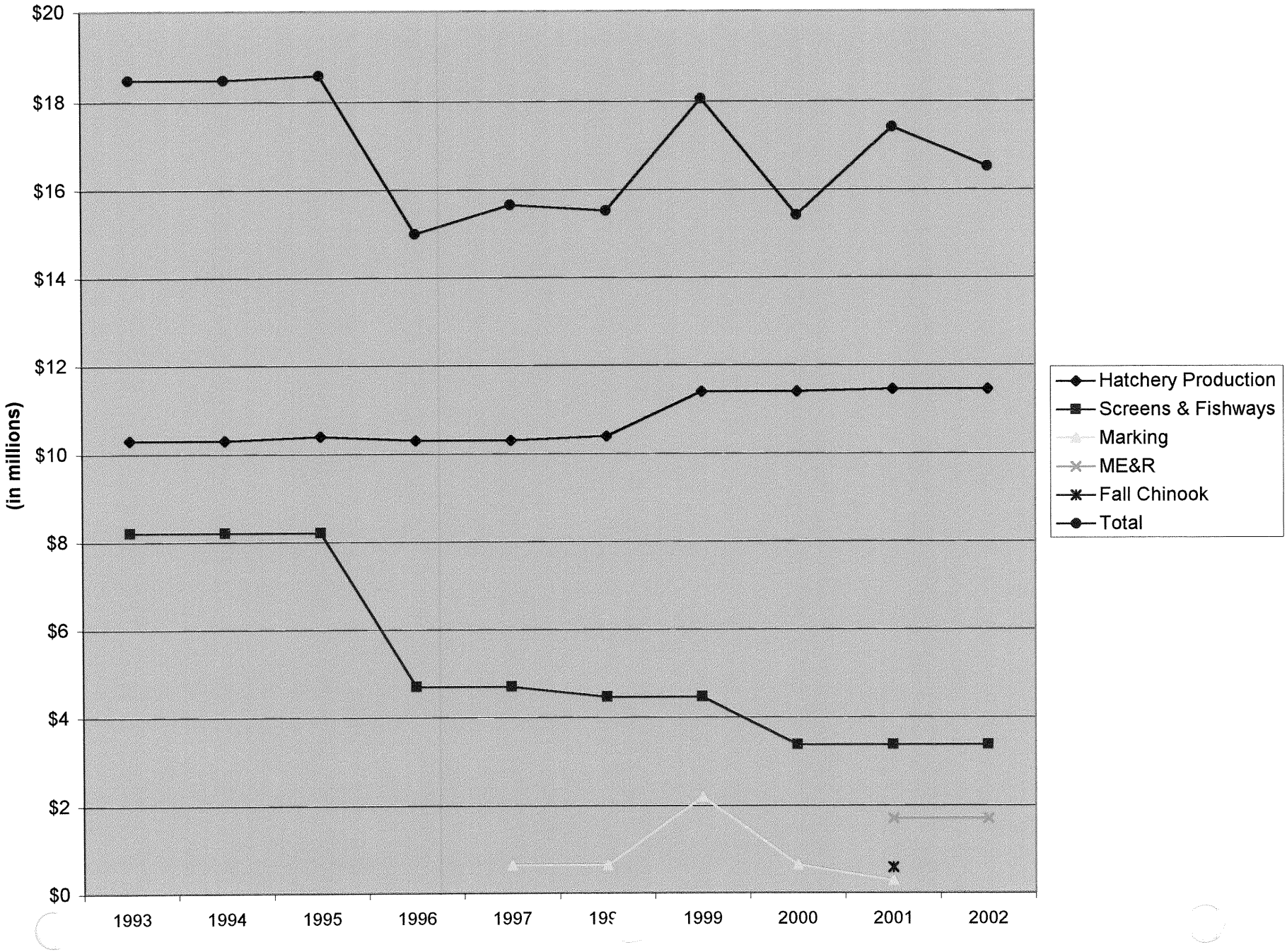
RZ Smith- Director- Columbia River Fisheries Development Program
503-231-2009 rz.smith@noaa.gov

Mitchell Act Funding 1993-2002



Mitchell Act Production Reductions
1995-2001 (in millions)

	F. Chinook	S. Chinook	Coho	W.Steelhead	S.Steelhead	Total
Below Bonneville						
ODFW	25.200	0.000	0.385	0.551	(0.080)	26.056
USFWS	1.600	0.000	0.300	0.220	0.000	2.120
WDFW	0.000	0.000	1.600	0.190	0.137	1.927
	26.800	0.000	2.285	0.961	0.057	30.103
Above Bonneville						
ODFW	0.000	0.000	0.000	0.000	0.000	0.000
USFWS	0.000	0.500	0.000	0.000	0.000	0.500
WDFW	0.000	1.000	2.000	0.000	0.000	3.000
	0.000	1.500	2.000	0.000	0.000	3.500

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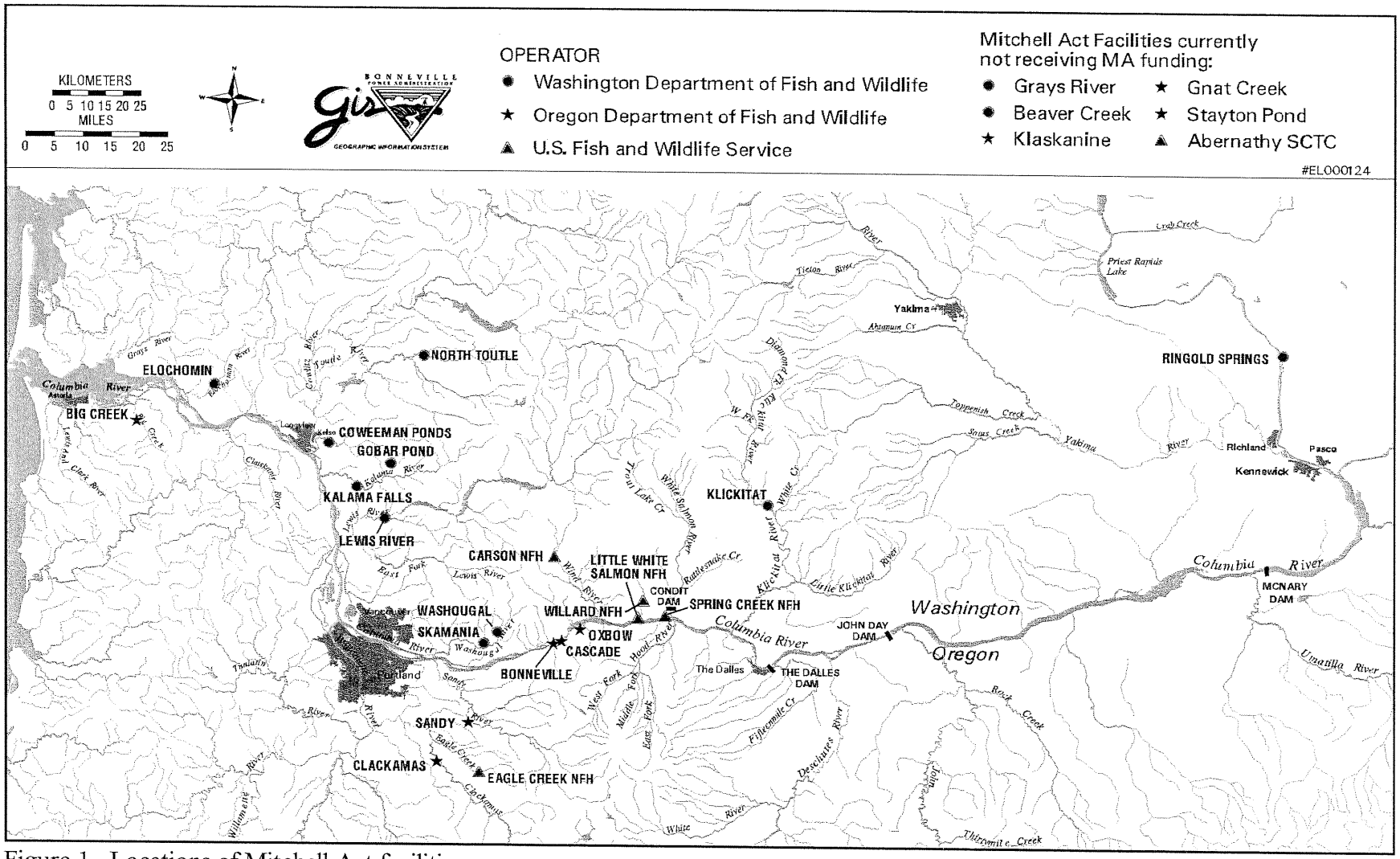

Figure 1. Locations of Mitchell Act facilities.

Columbia River Fisheries Development Program Hatcheries

Complex/ Hatchery	General Location	Congressional District	Operating Agency	Funding Agency [a b]	Species Reared 1990-99 [c]	Manager/ Contact	Phone	Address
Washington								
Abernathy SCTC	Longview	3rd	USFWS	USFWS, NMFS [1]	fc	Carl Burger	(360)425-6072	1440 Abernathy Rd. Longview, WA 98632
Carson NFH	Carson	3rd	USFWS	NMFS, USFWS	sc	Bill Thorson	(509)427-5905	Carson, WA 98610
Cowlitz Complex						Don Peterson	(360)864-6135	
	North Toutle	3rd	WDFW	NMFS	fc,sc,co,sh		(360)274-7757	11285 Spirit Lake Highway Toutle, WA 98649
Lower Columbia Complex						Mark Johnson	(360)673-2098	
Beaver Creek	Cathlamet	3rd	WDFW	NMFS [2]	fc,sh,src		(360)795-3620	28 Beaver Creek Road Cathlamet, WA 98612
Elochoman	Cathlamet	3rd	WDFW	NMFS	fc,co		(360)795-3608	1318 Elokomin Valley Rd. Cathlamet, WA 98612
Fallert Creek	Kalama	3rd	WDFW	NMFS [3]	fc,sc,co		(360)673-4400	1404 Kalama River Road Kalama, WA 98625
Grays River	Grays River	3rd	WDFW	NMFS [4]	fc,co,sh,ch		(360)465-2446	436 Shannon Rd Grays River, WA 98621
Kalama Falls	Kalama	3rd	WDFW	NMFS	fc,sc,co		(360)673-4825	Box 3900, Kalama River Rd. Kalama, WA 98625

[1] Abernathy SCTC is no longer in production. NMFS provides caretaker costs only.

[2] Due to funding limitations, Beaver Creek Hatchery no longer receives NMFS funds. Some of the hatchery programs were shifted to Elochoman Hatchery.

[3] Due to funding limitations, Fallert Creek Hatchery no longer receives NMFS funds. Some of the hatchery programs were shifted to Kalama Falls Hatchery.

[4] Due to funding limitations, Grays River Hatchery no longer receives NMFS funds. Some of the hatchery programs were shifted to Elochoman Hatchery.

Complex/ Hatchery	General Location	Congressional District	Operating Agency	Funding Agency [a b]	Species Reared 1990-99 [c]	Manager/ Contact	Phone	Address
L. White Salmon NFH Complex	Cook	3rd	USFWS	NMFS,USFWS	sh,src	Speros Doulos	(509)538-2755	P.O. Box 17 Cook, WA 98605
Willard NFH	Cook	3rd	USFWS	NMFS,USFWS	co	Paul Hayduk	(509)538-2305	Star Route Cook, WA 98605
Priest Rapids Complex						Ted Anderson	(509)773-6731	
Klickitat	Glenwood	4th	WDFW	NMFS	fc,sc,co		(509)364-3310	Route 2, Box 90 Glenwood, WA 98619
Ringold	Mesa	4th	WDFW	NMFS, CE	fc,sh		(509)765-7714	HC-01, Box 189 Meda, WA 99343
Spring Creek NFH	Underwood	3rd	USFWS	NMFS, CE, USFWS	fc	Ed Lamotte	(509)439-1730	61552 SR 14 Underwood, WA 98652
Washougal Complex						Dick Johnson	(360)837-1020	MP 0.39-L Steelhead Road Washougal, WA 98671
Skamania	Washougal	3rd	WDFW	NMFS	sh,src		(360)837-3131	MP 0.39-L Steelhead Road Washougal, WA 98671
Washougal	Washougal	3rd	WDFW	NMFS	fc,co		(360)837-3311	Route 2, Box 443 Washougal, WA 98671
Oregon								
Big Creek	Knappa	1st	ODFW	NMFS	fc,co,sh,src	Alan Meyer	(503)458-6512	Route 4, Box 594 Astoria, OR 97103
Bonneville	Cascade Locks	2nd	ODFW	NMFS, CE	fc,co,sc,smc,sk	Scott Lusted	(541)374-8393	Star Route B, Box 12 Cascade Locks, OR 97014
Cascade	Cascade Locks	2nd	ODFW	NMFS	co	Loren Jensen	(541)374-8381	Star Route B, Box 526 Cascade Locks, OR 97014
Clackamas	Estacada	5th	ODFW	NMFS, ODFW, PGE, COP	sc,sh	Bryan Zimmerman	(503)630-7210	24500 S. Entrance Road Estacada, OR 97023

Complex/ Hatchery	General Location	Congressional District	Operating Agency	Funding Agency [a b]	Species Reared 1990-99 [c]	Manager/ Contact	Phone	Address
Eagle Creek NFH	Estacada	5th	USFWS	NMFS, USFWS	co,sc,sh	Doug Dysart	(503)630-6270	Route 1, Box 610 Estacada, OR 97023
Gnat Creek [5]	Westport	1st	ODFW	CE (NMFS)	sh,src,sc	Roger Warren	(503)455-2234	Route 2, Box 2198 Clatskanie, OR 97016
Klaskanine [6]	Astoria	1st	ODFW	Oregon	fc,co,sh	Bobby Bevans	(503)325-3653	Route 1, Box 764 Astoria, OR 97103
Oxbow	Cascade Locks	2nd	ODFW	NMFS	co (fc,sc)	Duane Banks	(541)374-8540	Star Route, Box 750 Cascade Locks, OR 97014
Sandy	Sandy	3rd	ODFW	NMFS	co	Ken Bourne	(503)668-4222	39800 SE Fish Hatchery Rd Sandy, OR 97055
Stayton Pond [7]								

a. USFWS= US Fish and Wildlife Service, NMFS= National Marine Fisheries Service, WDFW= Washington Department of Fish and Wildlife, CE= US Army Corps of Engineers, PGE= Portland General Electric, COP= City of Portland, ODFW= Oregon Department of Fish and Wildlife, Oregon= State of Oregon.

b. The USFWS provides cyclic maintenance money for USFWS operated hatcheries.

c. fc= fall chinook, sc=spring chinook, sm=summer chinook, co=coho, sk=sockeye, sh=steelhead, src=searun cutthroat, ch=chum

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[5] Gnat Creek is not currently being funded by NMFS. It is being used for other, non-Mitchell Act programs.

[6] Klaskanine is not currently being funded by NMFS. It is being funded with State of Oregon supporting the CEDC net pen program.

[7] Stayton Pond was mothballed in 1996.

Monitoring, Evaluation, and Reform Projects Funded In FY 2002

M,E,&R Activity	Budget	Description
ODFW Sockeye Study	$83,208	As part of the overall effort to restore the Endangered Snake River sockeye salmon, a portion of the eggs taken through the captive brood program are hatched and reared at Bonneville Hatchery operated by ODFW in Oregon. After marking, sockeye smolts are transferred from Bonneville Hatchery to release sites near Red Fish Lake in Idaho.
WDFW Kalama Study	$301,628	Applied research on steelhead in the Lower Columbia River for the purpose of refining hatchery production protocols for steelhead, and maximizing the success of both hatchery and wild steelhead, including genetic evaluation, residualization, and hatchery/wild interactions.
WDFW EDT & DNA	$48,514	Ecosystem Diagnosis and Treatment (EDT model is being used to evaluate habitat conditions affecting the survival of each life stage. DNA typing is being used to assess the relative fitness of wild and hatchery origin steelhead in the Kalama River.
WDFW Residual Study	$25,000	Develop a method to reduce residualism of hatchery-reared wild-broodstock steelhead; assess growth, physiological status, and migration/residualism of juvenile steelhead to determine mechanism promoting residual behavior; and compare growth, physiological status, migration pattern, and residualism in offspring of wild and domesticated broodstock.
IDFG Screen Evaluations	$47,462	Evaluate the effectiveness of screens designed to the current screening criteria that have been installed on irrigation diversions in Idaho.
ODFW Marking	$204,696	Mass marking of production at ODFW hatcheries to allow for selective fisheries and CWT marking of a representative sample of the hatchery production for evaluation purposes.
WDFW Marking	$409,257	Mass marking of production at WDFW hatcheries to allow for selective fisheries and CWT marking of a representative sample of the hatchery production for evaluation purposes.
USFWS Marking	$333,693	Mass marking of production at USFWS hatcheries to allow for selective fisheries and CWT marking of a representative sample of the hatchery production for evaluation purposes.
WDFW- Winter Steelhead Eval.	$124,541	Develop broodstocks for winter and summer steelhead from wild adults at the Kalama Hatchery.
WDFW- Fish Weir/Trap on Little Washougal R.	$123,001	Evaluate the methods necessary to allow reduction in the passage of hatchery origin fish above hatchery in the Washougal River System.

THE MITCHELL ACT AND SALMON RECOVERY *

Maintaining viable fisheries and protecting regional salmon recovery efforts

(Review of funds needed in FY 2002)

	ACTIVITY	WDFW	ODFW	IDFG	USFWS	TRIBAL	TOTAL
1	BROODSTOCK REFORM	200,000	200,000	0	150,000	100,000	650,000
2	CONSERVATION MARKING[1]	1,604,000	143,000	0	310,000	0	2,057,000
3	SPECIES REINTRODUCTION [2]	100,000	100,000	0	0	500,000	700,000
4	RELEASE REPROGRAMMING	200,000	400,000	0	0	100,000	700,000
5	FACILITIES REFORM [3,4]	500,000	500,000	0	350,000	0	1,350,000
6	MONITORING & EVALUATION	190,000	140,000	0	170,000	0	500,000
7	BASE HATCHERY O&M [5]	6,093,000	4,001,000	0	3,470,000	168,000	13,732,000
8	SCREENS & FISHWAYS [6]	549,000	2,138,000	1,668,000	0	0	4,355,000
9	NMFS ADJUSTMENT	0	0	0	0	0	500,000
	TOTAL	9,436,000	7,622,000	1,668,000	4,450,000	868,000	24,544,000

Annual inflation factor or annual justification by program will require annual appropriation adjustment.

* Table created by WDFW with input from ODFW and IDFG

[1] Includes Klickitat fall chinook, coho, spring chinook steelhead and other fall chinook programs. Klickitat fall chinook marking is all under WDFW but will be shared with ODFW and USFWS depending on the final marking scenario.

[2] Initiates construction and O&M of acclimation ponds for existing Mitchell Act production being released at above and below Bonneville Dam release sites.

[3] Proposes a base of $1,250,000 per year for a 10-year period of retrofit/rehabilitation. Includes retrofitting existing facilities to integrate new technologies/programs as well as repair of existing facilities.

[4] $1,000,000 emergency funding in FY2001 to address sediment load into Eagle Creek NFH, potential violation of DEQ sediment discharge, need settling pond between intake and raceways.

[5] Hatchery O&M based on FY 1999 funding plus 5% to cover increasing costs of fish food and increased overhead.

[6] Screens & Fishways increased 10% over FY 1999 as continued ESA listings expand the range itical habitat in the Columbia River Basin..

(Amended) Mitchell Act Production Reductions
1995-2001 (in millions)

	F. Chinook	S. Chinook	Coho	W.Steelhead	S.Steelhead	Total
Below Bonneville						
ODFW	23.160	0.000	3.025	0.551	(0.080)	26.656
USFWS	1.600	0.000	0.300	0.220	0.000	2.120
WDFW	0.000	0.000	1.600	0.190	0.137	1.927
	24.760	0.000	4.925	0.961	0.057	30.703
Above Bonneville						
ODFW	0.000	0.000	0.000	0.000	0.000	0.000
USFWS	0.000	0.500	0.000	0.000	0.000	0.500
WDFW	0.000	1.000	2.000	0.000	0.000	3.000
	0.000	1.500	2.000	0.000	0.000	3.500

C:\wpdocs\wp4.02\compare.wpd

Exhibit B.7.b
Supplemental Tribal Comments
April 2002

* For Administrative Record

Testimony of the Columbia River Treaty Tribes Before the Pacific Fishery Management Council April 12, 2002 Portland, Oregon

Good Morning Mr. Chairman and members of the Council. My name is Terry Courtney Jr. I am a member of the Fish and Wildlife Committee of the Warm Springs Tribes. I am here today to present comments on behalf of the four Columbia River treaty tribes; the Yakama, Warm Springs, Umatilla and Nez Perce Tribes.

The Mitchell Act was originally enacted in 1938 to "provide for the conservation of the fishery resources of the Columbia River"[1]. The Mitchell Act originated to mitigate for the production lost due to the construction of dams on the Columbia River. It is important to remember that this mitigation responsibility does not go away as long as the dams are in place.

As the Council considers its response to the letter from Congressman Dicks, the Columbia River Tribes request that the following points be included in the Council's response:

The Mitchell Act needs to be fully funded but also reformed. In 2001, the tribes supported funding the hatchery program at 36 million dollars. The tribes consider this amount a minimum appropriate level of funding. This money should be provided to the states and tribes as co-managers to jointly reform the Mitchell Act program using only jointly agreed marking programs. Nine million dollars or 25% of enacted funding should be contracted to the tribes for new or expanded supplementation projects. Additionally the Mitchell Act screening program should be funded at 20.6 million dollars for screens and passage

1. P.L. 75-502, 52 Stat. 345, May 11 1938.

programs as identified in the Federal Caucus Plan. Funding at any amount less that the tribes' 2001 recommendation would be inadequate to meet the needs of treaty and non-treaty fishermen dependent on these programs.

The tribes want Mitchell Act funds to produce fish "In Kind - In Place". By this we mean that funds should not simply be used for lower river programs. Most of the Mitchell Act hatcheries have been built in the lower river. In order to mitigate for lost up-river natural production, fish need to be produced in all parts of the basin. Additionally hatchery operations need to be reformed so that they can aid in restoration and utilize production to supplement natural runs. The last significant changes to the Mitchell Act program have come from tribal coho programs that were included in the Columbia River Fish Management Plan back in 1988. These coho programs have assisted in the restoration of naturally spawning coho in the Yakima, Umatilla, Klickitat, and Clearwater Rivers. These coho provide benefits to treaty and non-treaty fishermen alike.

Mitchell Act funds should be used for conservation and restoration purposes. Funds should not be used to mass mark fish so they can be caught in non-Indian selective fisheries. All fishermen, treaty and non-treaty should be able to benefit from this production.

In closing the tribes hope the Council recognizes the critical importance the Mitchell Act plays in almost all Council area fisheries. By supporting the tribal position on Mitchell Act funding, the Council can help ensure that all fishermen can share in the benefits of the program and the Council can help work towards restoration of salmon populations.

Thank you.

This concludes my statement.

1. P.L. 75-502, 52 Stat. 345, May 11 1938.

Exhibit B.7.b
Supplemental USFWS Comments
April 2002

United States Department of the Interior

FISH AND WILDLIFE SERVICE
911 NE. 11th Avenue
Portland, Oregon 97232-4181

IN REPLY REFER TO:
AFR

APR 1 1 2002

RECEIVED
APR 1 2 2002
PFMC

Dr. Hans Radtke
Chairman, Pacific Fisheries Management Council
7700 N.E. Ambassador Place
Suite 200
Portland, Oregon 97220

Dear Chairman Radtke:

Thank-you for the opportunity to discuss the impacts of current Mitchell Act funding levels on Fish and Wildlife Service (Service) operated hatcheries. We appreciate the concerns of the Pacific Fisheries Management Council (Council) and share your interest in seeking remedies that minimize short term impacts to hatchery programs. But more importantly, the Service is deeply concerned about the long term impacts of flat funding and its effect on hatchery programs, harvest opportunities, and recovery of listed stocks. In this letter we outline immediate impacts to Service hatcheries funded under the Mitchell Act. We also suggest you consider an important factor which has contributed to Mitchell Act funding problems - the lack of specific program goals identified in the Act. We hope the Council finds our suggestions helpful, and takes serious note of our concerns for the continuance of the Mitchell Act program.

Congress recognized the tremendous harvest of salmon, that occurred in the late 1800s, and early 1900s from the Columbia River, it could not last unless actions were taken to preserve and conserve this resource. Therefore, in 1938, Congress passed the Mitchell Act. This Act was intended to help remedy the salmon's decline, particularly from the negative effects from the construction of Bonneville Dam and planned hydro system development on the Columbia River. In 1946, the Act was amended by Congress to authorize the transfer of funds to the states for specific projects to develop salmon resources (i.e. hatcheries). In 1947, the Columbia River Fisheries Development Program was formed to plan and coordinate the use of Mitchell Act funds. This program was administered by the Service until being transferred to the National Marine Fisheries Service (NMFS) in 1970.

For the past 10 years, Mitchell Act funding has been static, resulting in negative impacts to hatchery programs. In 1993 Mitchell Act funded 23 hatcheries and two large rearing ponds in the Columbia River basin. In total, these hatcheries produced over 110 million fish per year. Starting in 1996, five of these hatcheries and the two rearing ponds were closed due to inadequate funding to support all the Mitchell Act funded facilities (one Fish and Wildlife Service and four state facilities). This resulted in a 40% reduction in annual production to 65 million fish per year. Budgets for fiscal year (FY) 2003 and FY 2004 are projected to again be flat and will likely require additional reductions in programs or hatchery closures. Aside from maintenance which can be deferred for a short period of time, there are increased costs associated

with fish food, utilities, and salaries. Additionally, hatcheries need to respond to requirements of the Endangered Species Act (ESA), to reduce impacts to listed species and reform and update hatchery practices. Restrictive Mitchell Act funding not only means production programs will be reduced or eliminated, but they will also have difficulty complying with the expectations of the ESA.

Facing funding shortfalls in FY 2002, FY 2003 and FY 2004, the Service is working with the NMFS and co-managers to address potential impacts to production programs. For FY 2002, the Service's funding through Mitchell Act is 11 percent less than needed to maintain current programs. To address this shortfall the Service will reduce spring Chinook production programs at Carson and Little White Salmon NFHs by 50 percent starting with the 2002 brood year, (this means 1.2 million less fish will be produced from these hatcheries). Additionally, no mass marking of coho or steelhead will occur at Mitchell Act funded Service hatcheries. Further reductions will also be necessary in FY 2003 and FY 2004.

Funding shortfalls in FY 2003 and 2004 become more difficult to address. Reductions in production provide savings in fish food, utilities, marking (since there is only a limited amount of money for marking spring Chinook this year, savings from reductions in marking programs will be minimal), and some reduction in personnel. If we assume a reasonable rate of inflation in the costs for utilities, fish food, and personnel at five percent per year, the situation quickly becomes untenable without facility closures. (It should be noted that deferred maintenance costs at Service operated, Mitchell Act funded facilities, are not funded through the NMFS, but are funded by the Service.)

The Service believes the failure of the Mitchell Act program is due to a lack of clearly identified goals and objectives whereby performance of the program can be measured, including funding adequacy. Since there are no numerical goals or objectives identified in the Mitchell Act legislation, performance standards are lacking and any funding level can be deemed appropriate for the program. Developing goals and objectives for the Mitchell Act program is most appropriately the responsibility of the U.S. v. Oregon co-manager parties and should be an integral part of the new Columbia River Fish Management Plan renegotiation process, which currently has a time line for being completed by December 31, 2003.

Once the goals and objectives for the Mitchell Act program are clearly defined, a budgeting process, coordinated by the NMFS with the co-managers, will help to build an appropriate budget to meet the total needs of the program. These budgets should include all costs for the marking, monitoring, evaluation, and reform measures identified in the NMFS's most recent Biological Opinions. NMFS can then carry this budget forward for annual and longer term budgeting cycles.

Without some reasonable level of sustainable fishery opportunity for tribal and other public fisheries, that provide harvest strategies needed for protection of listed species, public support for actions needed for the recovery of listed salmon are likely to wane. The Mitchell Act program plays a vital role in maintaining those harvest opportunities, and is therefore integral to recovery of listed stocks. If you have any questions about the contents of this letter please contact Mr. Lee Hillwig or Mr. Rich Johnson of my staff, or myself at (503) 872-2763.

Sincerely,

ACTING Assistant Regional Director, Fishery Resources

Exhibit B.7.c
Supplemental Congressional Comment
April 2002

NORM DICKS
6TH DISTRICT, WASHINGTON
COMMITTEE:
APPROPRIATIONS
SUBCOMMITTEES:
INTERIOR
RANKING DEMOCRATIC MEMBER
DEFENSE
MILITARY CONSTRUCTION

Congress of the United States
House of Representatives

2467 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-4706
PHONE: (202) 225-5916

DISTRICT OFFICES:
SUITE 2244
1717 PACIFIC AVENUE
TACOMA, WA 98402-3234
PHONE: (253) 593-6536

SUITE 301
500 PACIFIC AVENUE
BREMERTON, WA 98337
PHONE: (360) 479-4011

http://www.house.gov/dicks/

March 29, 2002

Dr. Donald McIssac
Executive Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384

Dear Dr. McIssac:

The hatchery chinook production from Mitchell Act funded facilities on the Columbia River is vital to the well being of the economies of communities along the Washington coast and the Columbia River basin. The fish produced from these hatcheries are an important contributor to maintaining healthy commercial and recreational fisheries and they provide a cornerstone to the business community that depends on commercial and recreational fishing activity. The harvest of these fish has provided jobs in both rural and metropolitan areas that border their migration path. I am writing to the Council at this time to express my deep concern relative to the future funding base for Mitchell Act hatcheries. I would be very interested in your thoughts and opinions about the production levels from these facilities in recent years and the relative importance these fish have on future fishing opportunities under your jurisdiction.

As you know, funding for these facilities has been stagnant for nearly ten years. I am concerned about the cuts in production that have occurred and the corresponding effects on important commercial and recreational fisheries. I would like your assistance in quantifying the decreases in production and your views about what the future effects on fisheries will be if level funding is continued over the next five years.

This is an important issue to the citizens of Washington State and I want you to know that I am committed to working with you to address the challenges that lie ahead. I look forward to hearing from you in the near future and discussing your thoughts in response to these questions.

Sincerely,

Norm Dicks

NORM DICKS
Member of Congress

Exhibit B.7.c
Supplemental SAS Report
April 2002

SALMON ADVISORY SUBPANEL COMMENTS ON MITCHELL ACT HATCHERY AND BUDGET REVIEW

The future of a viable salmon fishery on the Washington/Oregon Coast and inside the Columbia River depends upon many factors. These include:

- Sustaining natural salmon populations at levels where their continued survival is ensured;
- A freshwater environment conducive to nurturing juvenile salmon through the early part of their lives;
- Hatchery systems that produce salmon for harvest while minimizing detrimental impacts on natural stocks;
- Ocean conditions that maximize survival during the later part of the salmon's lives; and
- Precautionary management combined with good science and fishery monitoring;

Not all of these factors are within the realm of our control. In fact, only management is within the Council's authority. Hundreds of millions of dollars are being spent on sustaining natural production and improving the freshwater environment. Ocean survival conditions appear to be turning positive after over 20 years of poor conditions. The management process up and down the coast has been refined through ongoing upgrades in the science and cooperation among harvester groups. What is missing is a long-term, coordinated strategy for a stable, continually funded mitigation program for habitat and resource losses.

The dams on the Columbia River have provided relatively inexpensive hydroelectric power for the entire West Coast. They provided cheap power for the production of aluminum, which has bettered American lives in countless ways. They provided for irrigation systems for farming. They provided inland waterways for product transportation and recreation, but all of this came with a severe price tag: the extinction of millions of salmon.

In 1938 the Mitchell Act was enacted by Congress to mitigate for the loss of those salmon and their habitat, due to construction and operation of the Columbia River Hydropower System. Even though that mitigation came nowhere close to compensating for the loss, we were, and are, far better off than we would be without it. Unfortunately, we may be headed in the direction of being without it. Continued and increased funding of the Mitchell Act is essential to the survival of the salmon industry. The funding level, adjusted for annual inflation increases, must be high enough to include full production of salmon, adequate marking programs, comprehensive monitoring, and hatchery improvements.

The Salmon Advisory Subpanel exhorts the Council and the states to do everything within their power to provide needed information, both technical and socioeconomic, and apply political pressure on the government agencies and Congress to put Mitchell Act funding up to the levels required to maintain viable fisheries for the future.

PFMC
04/11/02

Exhibit B.7.d
Supplemental Public Comment
April 2002

CITY OF FORKS

500 East Division Street • Forks, Washington 98331-8618

(360) 374-5412 • Fax: (360) 374-9430 • Web: www.forkswashington.org

April 10, 2002

President George W. Bush
The White House
1600 Pennsylvania Avenue
Washington D.C. 20510

RE: Mitchell Act Funding

Dear President Bush:

On Monday, March 25, 2002, The Forks City Council voted unanimously to support continued Federal funding of the Mitchell Act. This Act was adopted in 1938 to offset the loss of salmon spawning grounds to the Columbia River dams. The need for this Federal assistance to northwest salmon production is as vital today as it was in 1938.

The hydropower/irrigation dams on the Columbia River are a positive contribution to our entire Nation's economy and well-being. The Mitchell Act funding for salmon mitigation is only a tiny amount compared to the total economy supported by these dams. Yet the Mitchell Act funds are paramount to the continued rebuilding of northwest salmon stocks and the economy of coastal communities.

As you know, the City of Forks and the Westside of the Olympic Peninsula have been hard hit by the economic impacts from the Endangered Species Act (i.e., Spotted Owl regulations). To lose the Salmon resource opportunities that are supported by the Mitchell Act would be an additional economic burden on all coastal communities and tribal cultures.

We gratefully ask for your support of continued funding for the Mitchell Act. Thank you in advance for your kind consideration of our request for continued support of this vital program.

Sincerely,

Nedra Reed
Mayor
City of Forks

cc: US Congressman Norm Dicks
US Senator Patty Murray
US Senator Maria Cantwell
US Secretary of Commerce Donald L. Evans

Exhibit B.7.d
Supplemental Public Comment
April 2002

CITY OF FORKS

500 East Division Street • Forks, Washington 98331-8618

(360) 374-5412 • Fax: (360) 374-9430 • Web: www.forkswashington.org

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We gratefully ask for your support of continued funding for the Mitchell Act. Thank you in advance for your kind consideration of our request for continued support of this vital program.

Sincerely,

Nedra Reed
Mayor
City of Forks

cc: US Congressman Norm Dicks
US Senator Patty Murray
US Senator Maria Cantwell
US Secretary of Commerce Donald L. Evans

Exhibit B.7
Attachment 1
April 2002

REQUEST FOR MITCHELL ACT PROGRAM AND BUDGET REVIEW AT THE APRIL PACIFIC FISHERY MANAGEMENT COUNCIL MEETING

1. What is the history of the Mitchell Act program budget appropriation's over the past 15 years?

2. What production programs have been reduced or lost in the last 10-year period, because Mitchell Act has generally been flat funded?

3. What new constraints (i.e., mass marking, monitoring and evaluation, and reform measures) have been added to the Mitchell Act program as a result of recent Biological Opinions for Columbia River Hatchery production and for the Federal Columbia River Power System, and how is funding for these actions being addressed?

4. What is the budgeting process that NMFS (i.e., bottom-up, top-down) goes through to present their request in the President's budget?

5. What is the level of funding needed to fully meet the needs of the Mitchell Act Program for the future from a bottom-up budgeting approach?

6. What is the timing for getting fiscal year 2004 budget package built and through the Office of Management and Budget and President's budget development process.

PFMC
03/26/02

Exhibit B.7
Situation Summary
April 2002

MITCHELL ACT HATCHERY AND BUDGET REVIEW

Situation: National Marine Fisheries Service (NMFS) will report on the status of Mitchell Act funding and related issues affecting ocean salmon fishery management. Continued level funding of Mitchell Act programs is approaching the point of requiring closure of facilities and/or elimination of mass marking programs, which will result in reduced availability of salmon for Council area and other fisheries.

Council Action:

1. Consider need for formal comments and make assignments as appropriate.

Reference Materials:

1. Request for Mitchell Act program and budget review at the April Pacific Fishery Management Council Meeting (Exhibit B.7, Attachment 1).

Agenda Order:

a. NMFS Report — Rob Jones
b. Tribal and Agency Comments and Recommendations
c. Reports and Comments of Advisory Bodies
d. Public Comment
e. **Council Action:** Consider Issues and Need for Formal Comments

PFMC
03/27/02

Exhibit B.8
Situation Summary
April 2002

CLARIFICATION OF FINAL ACTION ON 2002 MANAGEMENT MEASURES (IF NECESSARY)

Situation: If the Salmon Technical Team (STT) needs clarification of the final management measures before completing its analysis, the STT Chairman will address the Council in this agenda item.

Council Action:

1. **If necessary, provide clarification to assist the STT in its analysis of the final management measures.**

Reference Materials: None.

Agenda Order:

a. Agendum Overview — Chuck Tracy
b. Reports and Comments of Advisory Bodies
c. Public Comments
d. **Council Action:** Clarify Final Management Measures ***(If Necessary)***

PFMC
03/26/02

2-22

Agenda item B4.I. (Tentatively Adoption of Management measures: Tribal Recommendations)

April 2002

Modeling Guidance To Salmon Technical Team

Our guidance to the STT is to model Alaskan and Canadian fisheries consistent with the recent information provided by Canada and the PSC Chinook Technical Committee. During the March Manager-to-Manager meeting, Canada provided projected catch information for southern British Columbia chinook and coho fisheries that should be used as model inputs. In addition, information was recently obtained from the PSC Chinook Technical Committee for fisheries in Alaska and North/Central British Columbia that should be used for modeling purposes. The participants of the North of Falcon process have also agreed to use these model inputs.

statement by Jim Harp
For Administrative Record