
INTRODUCTION AND CALL FOR COMMENTS

This document has been prepared by the staff of the Pacific Fishery Management Council (Council) and the Salmon Technical Team (STT) to describe the Council's proposed ocean salmon management options for 2005 and characterize their expected impacts on ocean salmon fisheries and the stocks which support them. The Council solicits public comments on the proposed management options in preparation for adopting final management recommendations at its April meeting. This report is analogous to a draft National Environmental Policy Act (NEPA) analysis of a range of alternatives for 2005 ocean salmon management measures.

Oral and written comments may be presented at public hearings at the times and locations displayed on the inside front cover of this report. Additional comment will be accepted at the April Council meeting at the Sheraton Tacoma Hotel, Tacoma, Washington. Written comments received at the Council office by **March 29, 2005** will be copied and distributed to all Council members (Council staff cannot assure distribution of comments received after April 1).

SELECTION OF FINAL MANAGEMENT MEASURES

The Council's final ocean salmon season recommendations will be based on the range of options presented in this report and guidance received from deliberations at management fora such as the north of Cape Falcon planning process, sponsored by the States of Washington and Oregon and the treaty Indian tribes in that area; the Klamath Fishery Management Council; and from public hearings sponsored by the Council and the States of Washington, Oregon, and California. Final recommendations concerning catch quotas and exploitation rates may vary from the range of options presented in this report depending upon determination of allocations, allowable harvest levels, public comment, or the final impact analyses completed by the STT. Elements of the options may be recombined to alter season patterns; measures such as bag limits, days of fishing per week, special landing restrictions, and other specific regulatory details may also change. In addition, inseason modification of management measures may be used to ensure achievement of the Council's management objectives.

Specific details pertaining to season structure and special regulations for the treaty Indian troll fishery north of Cape Falcon are established in tribal regulations. Chinook and coho quota levels for the treaty Indian troll fishery may be adjusted if significant changes in incidental fishing mortality result from tribal regulations, preseason or inseason.

The impact analyses presented in this document reflect uncertainties and limitations of information available at the time of the March 2005 Council meeting. At this point in the planning cycle, the STT's impact assessments reflect four key assumptions: (1) abundance levels for Canadian chinook and coho stocks identical to 2004 forecasts; (2) 2005 catch levels for southeast Alaskan, north-central British Columbia, and West Coast Vancouver Island (WCVI) fisheries equal to 2004 catch ceilings established under the aggregate abundance based management provisions of the 1999 Pacific Salmon Treaty (PST) Agreement (WCVI sport catch assumed to equal the 2004 observed level), with minimum size limits identical to those in place for 2004; (3) 2004 observed catch levels and size limits for Canadian fisheries operating under individual stock based management regimes pursuant to the 1999 PST agreement; and (4) base packages for management of inside fisheries. In mid-March, U.S. and Canadian fishery managers will exchange information regarding preseason expectations for fisheries and the status of chinook and coho stocks. Following this exchange, the Pacific Salmon Commission's (PSC's) chinook model will be calibrated to determine the allowable catch ceilings under the 1999 PST agreement, abundances and fishery expectations will be adjusted in the Council's fishery planning models, and inside fisheries will be shaped by state and tribal co-managers. The adjustments of stock abundances and fishery expectations, and the shaping of inside fisheries, may result in estimated

stock impacts that differ from those presented in this report. The final regulations adopted by the Council in April will be consistent with guidance provided by the National Marine Fisheries Service (NMFS) and obligations under the PST.

SALMON TECHNICAL TEAM CONCERNS

1. Substantial deviations from historic patterns in Canadian Fisheries. The STT is concerned over increased uncertainty surrounding Canadian fishery impacts when those fisheries operate under regulations that differ markedly from those observed during the model base periods. For 2005, the STT has recommended that current planning modeling procedures not be modified, even though the Canadian WCVI troll fishery is expected to fish predominantly during winter months under a reduced size limit and in a manner that attempts to minimize impacts on stocks of conservation concerns to Canada. Should this fishing pattern continue, the STT recommends that the Council's Model Evaluation Workgroup (MEW), in conjunction with state and tribal co-managers and Canadian fishery managers, develop recommendations for the collection of data or modification of models or modeling procedures to improve the capacity to evaluate impacts of Canadian troll fisheries.
2. Rebuilding Exploitation Rates (RER). The STT is concerned that the an evaluation of the correspondence between RERs employed as jeopardy standards for certain Endangered Species Act (ESA) listed chinook stocks and exploitation rates estimated by the chinook Fishery Regulation Assessment Model (FRAM) has not been completed. In addition, the STT is concerned that for some stocks, the methods used to compute RERs are inconsistent with the biological characteristics of those stocks and recommends that state and tribal comanagers undertake a review to determine if those methods are still appropriate.
3. Need for abundance forecasts in terms of ocean abundance. The STT receives abundance forecasts in a variety of forms (e.g., ocean abundance, ocean escapements, Area 4B run sizes, etc.). These forecasts reflect a wide variety of data and methods, but must ultimately be converted to ocean abundance for the Council's models. The procedures to perform these conversions are prone to error, in large part because of the short time frame in which the Council must develop and adopt its recommendations for ocean fisheries. The STT strongly recommends that state and tribal co-managers be encouraged to provide abundance forecasts in terms of ocean abundance by age.
4. Need for landing requirements. The STT recommends that landing restrictions be employed to require landings within the area where the fish are caught. Unless such restrictions are adopted, fleet mobility increases the difficulty of inseason management, catch accountability, and collection of biological data such as coded-wire-tag (CWT) recoveries.

DESCRIPTION AND OBJECTIVES OF PROPOSED OPTIONS

This report displays four regulatory options for 2005 commercial troll and recreational ocean salmon fisheries. Complete descriptions of the non-Indian commercial and recreational options are presented in Tables 1 and 2, respectively. Management measures for the treaty Indian ocean troll fishery are presented in Table 3. Quotas under the various options are summarized in Table 4.

North of Cape Falcon, Option I has seasons which are the most liberal and Options III the most conservative; Option IV is identical to Option III in this area for both commercial and recreational fisheries. The pattern of options is different south of Cape Falcon where the alternatives address the allocation of Klamath River fall chinook among the various fishery sectors and the need to limit impacts on stocks listed under the ESA. This arrangement demonstrates the trade-offs necessary to meet the constraints on limiting stocks south of Cape Falcon. For 2005, Options I and II assume an allocation of 15% of the non-Indian share of available Klamath River fall chinook to the Klamath River recreational fishery, as was the case in 2004. Option III assumes a 20% allocation, and Option IV a 10% allocation. The California Fish and Game Commission (CFGC) will make a recommendation for this allocation prior to the April Council meeting, and the selection and analysis of the options in this document were intended to provide perspective on that issue. A synopsis of management objectives for the 2005 options is presented below.

SOUTH OF CAPE FALCON

Projections of chinook and coho abundance relevant to harvest south of Cape Falcon are mixed in 2005 compared to the 2004 levels.

- C The 2005 Central Valley Index (CVI) forecast is the highest on record, 2.02 times the 2004 preseason forecast, and is capable of supporting large harvests, especially in the area south of Point Arena.
- C The 2005 Klamath River fall chinook forecast is 1.11 times the 2004 preseason forecast, but contains a weak age-4 component.
- C The 2005 Oregon Coastal Natural (OCN) coho forecast of 152,000 is slightly higher than the 2004 preseason forecast of 150,900.
- C The 2005 forecast for hatchery coho from the Columbia River and the coast south of Cape Falcon of 389,900 is 38% lower than the 2004 forecast of 623,900.

The abundance of OCN coho allows consideration of limited selective fisheries off Oregon and Washington for coho with a healed adipose fin clip and provides access to Columbia River hatchery coho.

Key items to note in the proposed options south of Cape Falcon include:

Oregon

- C The Oregon commercial chinook fisheries between Cape Falcon and the Oregon/California border and the recreational chinook fisheries between Cape Falcon and Humbug Mt. opened on March 15, 2005. At the March Council meeting the following inseason action was taken for the commercial fishery season: open March 15-25 and April 1-15 between Cape Falcon and the Oregon/California border; all fish caught between Cape Falcon and Humbug Mt. must be landed in the state of Oregon; all fish caught between Humbug Mt. and the Oregon/California border must be landed in Gold Beach, Port Orford, or Brookings, Oregon.

- C The commercial chinook fishery between Cape Falcon and Humbug Mt. have July and August closures in all options. All options include a minimum chinook size limit of 27 inches through April 15 and a 28 inch total length (TL) minimum size limit thereafter.
- C Retention of coho with a healed adipose fin clip is proposed for the recreational fishery between Cape Falcon and the Oregon/California border under quotas of 40,000 in Option I and 35,000 in Options II, III, and IV. All options have an opening date of June 18.

Klamath Management Zone

- C In the Oregon portion of the Klamath Management Zone (KMZ), commercial chinook fisheries are proposed from March 15-25 and April 1-15 in all options. For September, a 3,000 chinook quota fishery with a 28 inch TL minimum size limit is proposed in all options.
- In the California portion of the KMZ (Oregon/California border to Humboldt South Jetty), a September commercial fishery with a quota of 6,000 chinook is proposed in Options I, II, and IV, while the area is proposed to be closed in Option III.
- The KMZ recreational fishery is open May 21 through July 4 and August 14 through September 11 in all Options for Oregon, and in Options I and II for California. For Option III in California, the season is open May 21 through June 23, July 2-4, and August 15 through September 11. For Option IV in California, the season is open May 21 through July 4 and August 1 through September 11. All Options have a 24 inch minimum size limit.
- The Oregon portion of the KMZ will participate in a mark-selective recreational fishery for coho, if otherwise open for chinook as indicated above, beginning June 18 through July 31 or attainment of a 40,000 marked coho quota in Option I and a quota of 35,000 marked coho in Option II, III, and IV.

California

- Coho retention is prohibited for both commercial and recreational fisheries off California.
- The Fort Bragg commercial season is September 1-30 in Options II, III, IV, but closed in Option I.
- The San Francisco commercial fishery opens May 1 in all options and opens again continuously from July 16 (Options I and IV) or July 21 (Options II and III) through September 30. The primary difference among the options are the days open in May and June. In Option I, May is only open 16 days with two mid-month closures (7- and 8-days, respectively) and June has a mid-month 6-day opening. In Options II and IV, May is open the entire month, and June is closed. In Option III, the fishery is open only through May 22 and closed in June. In all options, there is a Point Reyes to Point San Pedro fishery open October 3-14, Monday through Friday only. All options have a minimum size limit of 26 inches total length except Option I, which has a 27 inches total length minimum size through September 30, then decreases to 26 inches for the October fishery.
- In the Monterey area from Pigeon Point to Point Sur, the commercial seasons are identical to the San Francisco area, except the May season runs through May 24 in Option III rather than May 22.
- South of Monterey from Point Sur to U.S./Mexico border, the commercial seasons is from May 1 through September 30 in all options, with the only difference being a minimum size limit of 26 inches total length for all options except Option I, which is 27 inches.

- The Fort Bragg recreational fishery runs continuously from February 12 through November 13 in Options I and IV. Option II has two 5-day closures in July, and Option III is closed for the last 18 days of July. All options have a 20 inch minimum size limit and will open on February 18, 2006 with a 20 inch minimum size limit.
- The San Francisco recreational fishery runs continuously from April 2 through November 13 in Options I, II, and IV. In Option III, the fishery is closed July 1-11. All options have a 20 inch TL minimum size limit and will reopen on April 1, 2006.
- The Monterey recreational fishery options are identical to the San Francisco options except for the closing date of September 25 rather than November 13.

Chinook Salmon Management

Key chinook salmon management objectives shaping the 2005 options are:

- For Sacramento River winter chinook (ESA-endangered), limitations on the duration and timing of the commercial and recreational fisheries south of Point Arena were provided by NMFS in a March 5, 2004 letter to the Council, which stated the following:

Recreational Seasons South of Point Arena, California: The recreational season between Point Arena and Pigeon Point shall open no earlier than the first Saturday in April and close no later than the second Sunday in November; the recreational season between Pigeon Point and the U.S./Mexico Border shall open no earlier than the first Saturday in April and close no later than the first Sunday in October. The minimum size limit shall be at least 20 inches total length.

Commercial Seasons South of Point Arena, California: Commercial seasons between Point Arena and the U.S./Mexico border shall open no earlier than May 1 and close no later than September 30, with the exception of an October season conducted Monday through Friday between Point Reyes and Point San Pedro, which shall end no later than October 15. The minimum size limit shall be at least 26 inches total length.

- For Klamath River fall chinook: adult natural spawning escapement of no fewer than 35,000 fish; 50:50 tribal:non-tribal sharing of adult harvest; a range of 10% to 20% of the non-tribal adult harvest to the river recreational fishery is contained among the four options; and an adult ocean harvest sharing between the California:Oregon commercial fisheries of approximately 51:49.
- An age-4 ocean harvest rate no greater than 16.0% on Klamath River fall chinook to protect California coastal chinook (ESA-threatened, NMFS ESA consultation standard).
- Sacramento River fall chinook adult spawning escapement of between 122,000 and 180,000 fish.
- The total adult equivalent (AEQ) exploitation rate on Snake River fall chinook age-3 and age-4 over all ocean fisheries, including Alaska and Canada (Snake River Fall Index; Snake River fall chinook index [SRFI]), is not to exceed 70.0% of the 1988-1993 average rates (NMFS ESA consultation standard). Under the assumptions used in this report, Option I is not predicted to meet the consultation standard. Snake River fall chinook are also impacted by fisheries south of Cape Falcon, which may require further shaping prior to final adoption of 2005 management measures if negotiations in the North of Falcon forum or final preseason catch expectations for Canadian and Alaskan fisheries do not result in an SRFI at or below 0.700.

Coho Salmon Management

Key coho salmon management objectives shaping the 2005 options are:

- C Under the harvest matrix in the Pacific Coast Salmon Fishery Management Plan (salmon FMP), the management objective is combined marine/freshwater exploitation rate no greater than 20% on OCN coho. Based on its review of salmon FMP Amendment 13, the OCN Coho Work Group modified this matrix, and this modified matrix was accepted by the Council as expert biological advice at the November, 2000 Council meeting. The modified matrix provides for a combined marine/freshwater exploitation rate no greater than 15%.
- C A marine exploitation rate no greater than 13.0% on Rogue/Klamath (RK) hatchery coho to protect Southern Oregon/Northern California coho (ESA-threatened, NMFS ESA consultation standard).
- C Prohibit retention of all coho off California to protect Central California Coast coho (ESA-threatened, NMFS ESA consultation standard).

NORTH OF CAPE FALCON

Projections of chinook and coho abundance relevant to fisheries north of Cape Falcon in 2005:

- C Production of Columbia River hatchery tules (Lower River Hatchery and Spring Creek Hatchery stocks) is predicted to be 13% less than the 2004 preseason expectations, resulting in a range of chinook quotas similar to or less than that adopted for 2004.
- C Production of hatchery coho from the Columbia River is predicted to be 38% less than the 2004 preseason levels. The Columbia River early coho forecast is 9% lower than last year, while the Columbia River late coho forecast is 72% lower than last year, resulting in consideration of considerably smaller coho quotas than what was adopted in 2004.

Key items to note in the proposed options north of Cape Falcon include:

- C None of the options contain preseason trades between non-Indian commercial troll and recreational fisheries. However, trades may be considered at the April Council meeting.
- C All non-Indian commercial troll options provide chinook only quota fisheries in May and June. Additional fisheries allowing the retention of all salmon species, including selective retention of coho with a healed adipose fin clip, start in July. In Options II and III, there are at least partial gear restrictions for plugs 6 inches or longer in the all-species fisheries. In Option III, there is a coho sub-quota of 5,000 for the area south of Leadbetter Point beginning August 2, and gear restrictions are lifted in that area at that time as well.
- C All recreational options provide for selective retention of coho with healed adipose fin clips beginning in June or early July.
- C In non-Indian commercial troll Option II and in recreational Option III, inseason conference calls late in the season are possible to consider non-mark-selective coho retention.
- C All recreational options for the La Push area include a small set aside fishery in late September and early October with quotas of 100 chinook or 100 coho. The fishery is restricted to the area defined by a northern boundary of 48°00'00" N latitude and a southern boundary of 47°50'00" N latitude line.

Option I includes a western boundary of 3 nautical miles from shore, Options II and III have no western boundary.

- C Recreational Option III includes an Area 4B add-on fishery for coho with a healed adipose fin clip with a 6,000 coho quota.
- C All treaty Indian troll options include May-June chinook directed fisheries and July-September all species fisheries. In addition, the options allow for a ceremonial and subsistence fishery for the Quileute Tribe from September 15-October 15; fish taken during this fishery are to be counted against treaty troll quotas established for the 2005 season.

Chinook Salmon Management

The key chinook salmon management objectives shaping the 2004 options are:

- C The total AEQ exploitation rate on Snake River fall chinook age-3 and age-4 over all ocean fisheries, including Alaska and Canada (SRFI), is not to exceed 70.0% of the 1988-1993 average rates (NMFS ESA consultation standard). Under the assumptions about Canadian stock abundances and catch levels used in this report (same as 2004 forecasts and catch ceilings), Option I is not predicted to meet the consultation standard. Snake River fall chinook are impacted by fisheries north of Cape Falcon, which may require further shaping prior to final adoption of 2005 management measures if negotiations in the North of Falcon forum or final preseason catch expectations for Canadian and Alaskan fisheries do not result in an SRFI at or below 0.700.
- C The total AEQ exploitation rate on lower Columbia River tule chinook (ESA threatened) over all ocean (including Alaska and Canada) and freshwater fisheries not to exceed the rebuilding exploitation rate (RER) of 49.0% (NMFS ESA consultation standard). This is not expected to be a limiting factor for 2005.
- C Beginning in 2004, fisheries impacting threatened naturally produced chinook from Puget Sound and the Strait of Juan de Fuca were exempted from ESA take limitations by virtue of being managed under a Resource Management Plan (RMP) submitted under Limit 6 of the 4(d) rule. This exemption is applicable until the biological consultation is reinitiated. The RMP provides a two tiered harvest regime depending on abundance of individual Puget Sound stocks, and includes a mixture of escapement goals and RERs. NMFS provided guidance to the Council in its March meeting (see table below) consistent with the objectives of the RMP. It is anticipated that the fishery regime developed by the state and tribal managers during the preseason planning process will be consistent with these goals.

Coho Salmon Management

The key coho salmon management objectives shaping the 2005 options are:

- C An exploitation rate limit in southern U.S. fisheries of 10.0% for Interior Fraser (Thompson River) coho established under the Southern Coho Management Plan adopted by the PSC in February 2002. All of the options are projected to exceed this limit under the inside harvest regime assumed in this analysis. Fisheries will need to be restructured in the North of Falcon forum to result in a total exploitation rate in U.S. fisheries south of the U.S./Canada border of no more than 10.0% as required by the 2002 PSC agreement.
- C Under the harvest matrix in the salmon FMP, the management objective is combined marine/freshwater exploitation rate no greater than 20% on OCN coho. Based on its review of Amendment 13, the OCN

Coho Work Group modified this matrix, and this modified matrix was accepted by the Council as expert biological advice at the November, 2000 Council meeting. The modified matrix provides for a combined marine/freshwater exploitation rate no greater than 15%.

- C Minimum escapement of 50% of Upper Columbia coho above Bonneville Dam (*U.S. v. Oregon* annual management agreement).
- C Providing sufficient escapement of Columbia River late coho to meet hatchery egg take goals and inriver harvest impacts.

SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

NMFS, in a March 4, 2005, letter to the Council, provided guidance on protective measures for species listed under the ESA during the 2005 fishing season. The letter summarized the requirements of NMFS' biological opinions (BOs) on the effects of potential actions under the salmon FMP on listed salmon and provided the anticipated consultation standards of the BOs in preparation for the 2005 management season, as well as further guidance and recommendations for the 2005 management season.

The ESA consultation standards, exploitation rates, and other criteria, projected for the 2005 management measures are presented below. Some listed stocks are either rarely caught in Council fisheries (e.g., spring chinook from the upper Columbia River) or already receive sufficient protection from other salmon FMP and ESA standards (e.g., Central Valley spring chinook). NMFS has determined that management actions designed to limit catch from these evolutionarily significant units (ESUs), beyond what will be provided by harvest constraints for other stocks, are not necessary.

Listed ESUs of species managed by the Council, NMFS consultation standards, and NMFS guidance to the Council for the 2005 season.

ESU	Stock Representation in FMP	Consultation Standard	Council Guidance for 2005
Central Valley spring chinook - threatened	C Sacramento River spring	No consultation standard.	Same as winter chinook guidance.
Sacramento River winter chinook - endangered	C Sacramento River winter	Open recreational fishery south of Point Arena no earlier than first Saturday in April and close no later than the first Sunday in October south of Pigeon Point, and no later than the second Sunday in November from Point Arena to Pigeon Point, with a minimum size limit no less than 20 inches. Open commercial fishery south of Point Arena no earlier than May 1 and close no later than Sept 30, except Point Reyes to Point San Pedro to close no later than Oct 15, with a minimum size limit no less than 26 inches.	Same as consultation standard.
California Coastal chinook - threatened	C Eel, Mattole, and Mad Rivers	# 16.0% age-four ocean harvest rate on Klamath River fall chinook.	Same as consultation standard.
Lower Columbia River chinook - threatened	C Sandy, Cowlitz, Kalama, Lewis spring C Sandy, Cowlitz, Kalama, fall C North Fork Lewis River fall	C No consultation standard. C # 49.0% brood year adult equivalent exploitation rate on Coweeman tule fall chinook. C 5,700 MSY level adult spawning escapement.	C Meet hatchery escapement goals. C Same as consultation standard. C Same as consultation standard.
Upper Willamette chinook - threatened	C Upper Willamette River spring	No specific requirements. Rare occurrence in Council fisheries.	Same as consultation standard.
Upper Columbia River spring chinook - endangered	C Upper Columbia River spring	No specific requirements. Rare occurrence in Council fisheries.	No additional constraints. Council area ocean fishery impacts are very minor.
Snake River fall chinook - threatened	C Snake River fall	At least a 30.0% reduction from the 1988-1993 average adult equivalent age-3/age-4 exploitation rate for all ocean fisheries.	Same as consultation standard.
Snake River spring/summer chinook - threatened	C Snake River spring/summer	No specific requirements. Rare occurrence in Council fisheries.	Same as consultation standard.
Puget Sound chinook - threatened	C Western JDF C Elwha summer/fall C Dungeness summer/fal C Mid-Hood Canal summer/fall C Skokomish summer/fall C Nooksack spring C Skagit summer/fall C Skagit spring C Stillaguamish summer/fall C Snohomish summer/fall C Lake Washington summer/fall C Green River summer/fall C White River spring C Puyallup summer/fall C Nisqually River summer/fall	NMFS guidance to the Council for shaping the 2005 fishing seasons is to manage fisheries consistent with the RMP covering the 2004-2009 fishing seasons.	C 10.0% S.U.S. E.R. C 10.0% S.U.S. E.R. C 10.0% S.U.S. E.R. C 12.0% PT S.U.S. E.R. C 15.0% PT S.U.S. E.R. C 7.0% S.U.S. E.R. C 50.0% Total E.R. C 38.0% Total E.R. C 15.0% S.U.S. E.R. C 15.0% S.U.S. E.R. C 15.0% PT S.U.S. E.R. C 15.0% PT S.U.S. E.R. C 20.0% Total E.R. C 50.0% Total E.R. C 1,100 spawners
Central California Coast coho - threatened	Not yet represented.	No retention of coho in commercial and recreational fisheries off California.	Same as consultation standard.

Listed ESUs of species managed by the Council, NMFS consultation standards, and NMFS guidance to the Council for the 2005 season.

ESU	Stock Representation in FMP	Consultation Standard	Council Guidance for 2005
S Oregon/N California Coastal coho - threatened	C S. Oregon coast natural C Northern California	# 13.0% marine exploitation rate on Rogue/Klamath hatchery coho.	Same as consultation standard.
Oregon Coast coho - threatened	C S. Central OR coast C N. Central OR coast C N. Oregon coast natural	On Feb. 4, 2004, the Ninth Circuit Court of Appeals dismissed appeals in the <i>A/sea Valley Alliance</i> case. Consequently, for 2005 there are no ESA protections in effect for OCN coho.	15.0% combined marine/freshwater exploitation rate (Expert advise of the OCN Workgroup).
Lower Columbia River Coho - proposed threatened	Not yet represented.	No consultation standard.	15.0% combined marine/freshwater exploitation rate.

Additional listed salmonid ESUs found within the Council area, but not significantly impacted by Council managed fisheries, include:

Sockeye

Snake River (endangered)

Ozette Lake Sockeye (threatened)

Chum

Columbia River (threatened)

Hood Canal summer (threatened)

Steelhead

Southern California (endangered)
South-central California coast (threatened)
Upper Columbia River (endangered)
Middle Columbia River (threatened)
Snake River Basin (threatened)

Central Valley, California (threatened)
Central California coast (threatened)
Upper Willamette River (threatened)
Lower Columbia River (threatened)
Northern California (threatened)

Council fisheries do not have identifiable impacts on any of the listed sockeye, chum, or steelhead ESUs. Of the listed chinook and coho, Council-managed fisheries have the most significant impact on Sacramento River winter chinook, Central Valley spring chinook, California Coastal chinook, Snake River fall chinook, lower Columbia River fall chinook, and all of the coho stocks. Other listed chinook stocks are not significantly impacted in Council area fisheries. (Further discussion of ocean fishery impacts on all listed stocks will be provided in Preseason Report III).

OBLIGATIONS UNDER THE PACIFIC SALMON TREATY

Chinook Salmon Management

Under the 1999 PST Agreement, Council fisheries are subject to the Individual Stock Based Management (ISBM) provisions of Annex 4, Chapter 3. These provisions require the AEQ harvest rate by all U.S. fisheries south of the U.S./Canada border be reduced by 40.0% from the 1979-1982 base period for chinook stocks failing to achieve escapements at or above levels associated with maximum sustainable harvest as adopted by the PSC.

Chinook stocks of concern to the Council are affected by fisheries off Canada and Alaska. Allowable catches by Aggregate Abundance Based Management (AABM) fishery complexes off the WCVI, Northern British Columbia, and southeast Alaska are determined through the annual calibration of the PSC Chinook Model. Canadian fisheries that are not included in AABM complexes are managed under ISBM constraints which require a 36.5% reduction in AEQ harvest rates on chinook stocks that are not expected to achieve spawning

escapement goals relative to the 1979-1982 base period. Once the PSC Chinook Model calibration and manager-to-manager information exchanges are completed in late March, expectations for Canadian and Alaskan fisheries will be incorporated into Chinook FRAM for use during the remainder of the Council's preseason management planning.

Key considerations for Canadian domestic fishery management for chinook in 2005 include, (a) meeting domestic conservation obligations for WCVI and Strait of Georgia stocks; (b) chinook harvests by native fisheries; and (c) incidental impacts during commercial and native fisheries directed at chinook, sockeye, pink, and chum. It is anticipated that the details of the fishery regulatory package off WCVI will be driven by levels of allowable impact on WCVI and Strait of Georgia chinook and Interior Fraser (Thompson River) coho.

Coho Salmon Management

On February 14th, 2002, the PSC adopted a management plan for coho salmon originating in Washington and southern British Columbia river systems. The plan is directed at the conservation of key management units, four from southern British Columbia (Interior Fraser, Lower Fraser, Strait of Georgia Mainland, Strait of Georgia Vancouver Island) and nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Under the plan, exploitation rate limits for intercepting fisheries are established for individual management units through formulas specified in the 2002 PSC Coho Plan, based on total allowable fishery exploitation rates. Based on preseason abundance forecasts, total allowable exploitation rates for U.S. management units are summarized in the table below.

Summary of 2005 total exploitation rate constraints (all U.S. and Canadian fisheries combined) for U.S. coho management units.

U.S. Management Unit	Total Exploitation Rate Constraint^{a/}	Categorical Status^{b/}
Skagit	35.0%	Moderate
Stillaguamish	50.0%	Abundant
Snohomish	60.0%	Abundant
Hood Canal	65.0%	Abundant
Strait of Juan de Fuca	40.0%	Moderate
Quillayute Fall	15.0%-66.0% (41.0%)	Moderate-Abundant
Hoh	34.0%-73.0% (54.0%)	Moderate-Abundant
Queets ^{c/}	15.0%-70.0% (40.0%-47.0%)	Moderate-Abundant
Grays Harbor	61.0%	Abundant

a/ Preliminary, total mortality exploitation rate ceilings. Constraints will ultimately be determined through preseason planning processes. For Puget Sound management units, the exploitation rate constraints reflect application of draft Comprehensive Coho rules. For the Quillayute, Hoh, and Queets management units, exploitation rate constraints represent the potential range associated with escapement goal ranges (the values in parentheses reflect the exploitation rate associated with the mid-point of the spawning escapement goal range).

b/ Category titles correspond to the general exploitation rate ranges depicted in paragraph 3(a) of the 2002 PSC Coho Agreement or the exploitation rate status determinations exchanged during the negotiations that culminated in the 2002 Agreement. For Puget Sound management units, the categorical status categories reflect application of draft Comprehensive Coho rules. No formal status classification system has yet been developed for Washington coastal management units; the categorical status levels are based on exploitation rate values depicted in parentheses.

c/ The maximum exploitation rates is computed assuming that supplemental fish are counted toward achievement of the lower end of the escapement range. The minimum exploitation is computed assuming that supplemental fish are not counted toward achievement of the upper end of the escapement range.

The status of Canadian coho management units has not been officially provided to the U.S.; however, preliminary information received from the Canadian Department of Fisheries and Oceans indicates continuing concerns for the condition of Strait of Georgia and Interior Fraser coho. Specifically, the Interior Fraser (including Thompson River) management unit is expected to continue to be in *low* status. Consequently, it is anticipated that the total exploitation rate for all 2005 U.S. fisheries south of the U.S./Canada border on the Interior Fraser management unit will be constrained to a maximum of 10.0%.

The annual status of coho management units and fishery expectations will be discussed during a manager-to-manager meeting scheduled for mid-March. Once the information exchange is completed, expectations for Canadian fisheries will be incorporated into Coho FRAM for use during the remainder of the Council's pre-season management planning.

Key considerations for Canadian fishery management for coho in 2005 are expected to include, (a) meeting domestic conservation obligations for Interior Fraser (Thompson River) coho; (b) coho harvests by native fisheries; (c) incidental impacts during commercial and native fisheries directed at chinook, sockeye, pink, and chum; and (d) the desire to provide increased opportunity for sport fisheries through mark-selective retention regulations. It is anticipated that the details of the Canadian fishery regimes affecting coho will be driven by allowable impacts on the Thompson River component of the Interior Fraser management unit.

IMPACT ASSESSMENT OF PROPOSED OPTIONS

Ocean chinook and coho harvest quotas are summarized in Table 4. The STT's preliminary analyses of the harvest impacts of 2005 management options, including projected ocean escapements, landings, and bycatch, and bycatch mortality are summarized in Tables 5 and 6. Table 7 provides a breakdown of the OCN and RK coho impacts by fishery. Table 8 presents the expected mark rates for coho in fisheries proposed for selective retention of hatchery coho with a healed adipose fin clip.

The nonretention mortality rate on coho for commercial fisheries is estimated at 26% of the fish hooked-and-released, plus 5% of total encounters to account for drop-off (e.g., predation loss), and allowances for noncompliance derived from observations in previous years. The nonretention mortality rate for mark selective recreational fisheries is estimated at 14% of the unmarked fish hooked-and-released, plus 5% of total encounters to account for drop-off and allowances for noncompliance derived from observations in previous years. Information on the procedures and assumptions employed in making these assessments can be obtained from the STT at the April Council meeting and will be available in the annual STT model summary available from the Council.

ACHIEVEMENT OF STOCK MANAGEMENT GOALS SOUTH OF CAPE FALCON

Chinook Salmon

All options satisfy the NMFS 2004 ESA guidance to the Council with respect to the duration and timing of commercial and recreational fisheries south of Point Arena.

All options are expected to meet the NMFS ESA consultation standard established for California Coastal chinook: an age-4 ocean harvest rate no greater than 16.0% on Klamath River fall chinook (Table 4). In 2004, the final management measures adopted by the Council were projected to achieve a Klamath age-4 ocean harvest rate of 15%, but the preliminary postseason estimate is 52%. The STT views this as an anomaly caused by unexpectedly high contact rates across a broad spectrum of fisheries. In 2005, because of low projected abundance of Klamath fall Chinook, constraints on ocean fisheries south of Cape Falcon to

meet the 35,000 natural spawning escapement floor, all options have projected impacts less than 50% of the ESA consultation standard.

Options II, III, and IV meet NMFS ESA consultation standard for Snake River fall chinook, however Option I does not. Stock forecasts for some Canadian stocks, and the actual PST limits on Canadian fisheries are not known at this time, and preliminary values have been used in the analyses presented in this report. These forecasts and landings limits will be available prior to the April Council meeting and may result in lower impacts on Snake River fall chinook than those presented here. Fisheries south of Cape Falcon have only minor impacts on Snake River fall chinook; however, if updated analyses do not result in compliance with the NMFS consultation standard, Option I will not be a viable option, and impacts in Council-area fisheries will need to be reduced to bring the impacts into compliance.

All options are expected to meet the Klamath River fall chinook management objectives: an adult spawning escapement in natural areas of at least 35,000 fish; 50:50 tribal:non-tribal sharing of adult harvest; a range of 10% to 20% of the non-tribal adult harvest to the river recreational fishery; and an adult ocean harvest sharing between the California:Oregon commercial fisheries of, approximately, 51:49 (Table 5). These objectives are the primary constraint on fisheries south of Cape Falcon, Oregon.

All options are expected to result in a Sacramento River fall chinook adult spawner escapement well above the escapement goal range of 122,000 to 180,000 adult spawners (Table 5). This objective was not a constraint on fisheries south of Cape Falcon, Oregon.

Coho Salmon

All options satisfy the NMFS ESA consultation standards for ESA-listed coho. Retention of coho is not allowed south of the Oregon/California border, but limited mark selective recreational fisheries allowing retention of hatchery coho with healed adipose fin clips are proposed between Cape Falcon and the Oregon/California border.

The marine exploitation rate on RK hatchery coho ranges from 5.6% to 4.6% across the options, below the NMFS ESA consultation standard of 13.0%, and less than that expected for OCN coho (Table 5).

The combined marine/freshwater exploitation rate on OCN coho is projected to be 11.6% and 10.4% in Options I and II, respectively. The exploitation rate for Options III and IV is projected to be 9.2%. All options are below the 20% limit under the salmon FMP, and the 15% limit under the OCN Work Group matrix.

In a letter dated March 4, 2005, NMFS recommended a combined marine/freshwater exploitation rate of no more than 15.0% on OCN coho as a surrogate for lower Columbia River natural coho, which are proposed for ESA listing as threatened. All options satisfy this criteria, with OCN marine/freshwater exploitation rates ranging from 7.8% to 10.2%.

Under all options, ocean escapement of Columbia River early and late coho is expected to be sufficient to meet the combined egg-take goal for Columbia River hatcheries, provided inriver fisheries targeting more abundant stocks are carefully shaped. All options also meet *U.S. v. Oregon* management agreement requirements for sharing of upriver origin Columbia River coho.

ACHIEVEMENT OF STOCK MANAGEMENT GOALS NORTH OF CAPE FALCON

Chinook Salmon

Ocean escapement objectives for lower Columbia River hatchery (LRH), Spring Creek hatchery (SCH), upper Columbia River bright (URB), and mid-Columbia River bright (MCB) fall chinook are expected to be met under all options (Table 5). Lewis River wild and Coweeman River tule fall chinook stocks are key fall chinook indicators for the lower Columbia River chinook ESU (ESA threatened), and both stocks meet their respective management objectives.

Options II, III, and IV meet NMFS ESA consultation standard for Snake River fall chinook, however Option I does not. Stock forecasts for some Canadian stocks, and the actual PST limits on Canadian fisheries are not known at this time, and preliminary values have been used in the analyses presented in this report. These forecasts and landings limits will be available prior to the April Council meeting and may result in lower impacts on Snake River fall chinook than those presented here. If updated analyses do not result in compliance with the NMFS consultation standard, Option I will not be a viable option, and impacts in Council-area fisheries will need to be reduced to bring the impacts into compliance.

Council-area fisheries have a minor impact on ESA-listed Puget Sound chinook and negligible impacts on most chinook stocks subject to the 1999 PST Agreement. At this point there appears to be sufficient flexibility within Council and inside area fisheries as a whole to achieve protection for the Puget Sound chinook ESU.

Coho Salmon

The combined marine/freshwater exploitation rate on OCN coho is projected to be 11.6% and 10.4% in Options I and II, respectively. The exploitation rate for Options III and IV is projected to be 9.2%. All options are below the 20% limit under the Salmon FMP, and the 15% limit under the OCN Work Group matrix.

In a letter dated March 4, 2005, NMFS recommended a combined marine/freshwater exploitation rate of no more than 15.0% on OCN coho as a surrogate for lower Columbia River natural coho, which are proposed for ESA listing as threatened. All options satisfy this criteria, with OCN marine/freshwater exploitation rates ranging from 7.8% to 10.2%.

Under all options, ocean escapement of Columbia River early and late coho is expected to be sufficient to meet the combined egg-take goal for Columbia River hatcheries, provided inriver fisheries targeting more abundant stocks are carefully shaped. All options also meet *U.S. v. Oregon* management agreement requirements for sharing of upriver origin Columbia River coho.

Under all options, ocean escapements of Washington coastal natural coho stocks are sufficient to meet escapement objectives while providing for inside fishery harvest opportunity (Table 5).

As allowed under the salmon FMP, Washington Department of Fish and Wildlife (WDFW) and affected treaty tribes have established limits on total mortality exploitation rates for all fisheries combined as annual management objectives for Puget Sound coho stocks in 2005. Table 5 presents projected exploitation rates for Council options and for total exploitation rates for ocean fisheries anticipated under preliminary expectations for inside fishery regimes. When considered with preliminary plans for inside fisheries, all options meet exploitation rate constraints for key Puget Sound coho stocks; however, when combined with

impacts from preliminary inside fisheries, all options fail to meet total exploitation rate constraints for Interior Fraser (Thompson River) coho.

Through the preseason planning process, regimes for ocean and inside fisheries will be adjusted so that, (a) total exploitation rates on Puget Sound coho do not exceed the levels specified by WDFW and treaty tribes; and (b) the total exploitation rate by U.S. fisheries south of the Canadian border does not exceed 10.0% on Interior Fraser coho, and (c) 50.0% of the coho bound for areas above Bonneville Dam will be passed through ocean and lower Columbia River fisheries.

SOCIOECONOMIC IMPACTS OF PROPOSED OPTIONS

The economic effects of the proposed options for non-Indian fisheries are shown in Tables 9 and 10. Table 9 shows troll impacts expressed in terms of estimates of potential exvessel value. Table 10 shows recreational impacts in terms of trips generated and coastal community personal income impacts associated with the recreational fishery under each option. The exvessel values provided for the troll fishery options in Table 9 and income impact values provided for the recreational fishery options in Table 10 are not directly comparable.

Figures 1 and 2 show estimated coastal community income impacts for the commercial troll and recreational options, respectively, compared to historic impacts in real (inflation adjusted) dollars.