
INTRODUCTION

This is the last in a series of three preseason reports prepared by the Pacific Fishery Management Council's (Council) Salmon Technical Team (STT) and staff. The reports document and help guide salmon fishery management in the exclusive economic zone (EEZ) from three to 200 nautical miles off the coasts of Washington, Oregon, and California, and within state territorial waters. This report summarizes the STT analysis of the 2004 ocean salmon fishery management measures adopted by the Council for submission to the U.S. Secretary of Commerce, and serves as the basis for the Preferred alternative included in the National Environmental Policy Act (NEPA) analysis of proposed management measures. A biological evaluation of expected impacts on stocks listed under the Endangered Species Act (ESA) is included in Appendix A.

ADOPTED MANAGEMENT MEASURES

The Council's recommendations for the 2004 ocean salmon fishery regulations meet or exceed the objectives of the *Pacific Coast Salmon Plan* (Salmon FMP), obligations under the Pacific Salmon Treaty (PST), and the level of protection required by all consultation standards for salmon species listed under the ESA. The following figures and tables describe the 2004 Council-adopted management measures:

- Table 1-Non-Indian commercial ocean salmon management measures, pages 8-11;
- Figure 1-geographic outline of commercial troll (non-Indian) ocean salmon seasons, page 12;
- Table 2-recreational ocean salmon management measures, pages 13-15;
- Figure 2-geographic outline of recreational ocean salmon seasons, page 16;
- Table 3-treaty Indian commercial ocean management measures, page 17; and
- Table 4-allowable catch quotas for chinook and coho, page 18.

In addition, Tables 5, 6, and 7 provide information on the biological impacts and landing estimates for the Council's management recommendations. Table 8 displays the expected mark (healed adipose fin clip) rate for coho encountered in mark-selective fisheries. Tables 9 and 10, and Figures 3 and 4 provide information on the economic impacts of the proposed fisheries.

The 2004 seasons are constrained primarily by (1) endangered Sacramento River winter chinook south of Point Arena, (2) Klamath River fall chinook south of Cape Falcon; (3) threatened Snake River fall chinook north of Cape Falcon, and (4) management goals for naturally produced coho salmon over the entire Council management area, including southern Oregon and California coastal stocks, which are listed as threatened under the ESA, and Puget Sound, Washington coastal, and Interior Fraser (British Columbia) naturally spawning coho populations subject to provisions of the PST. Both recreational and non-Indian commercial fisheries operate under restrictions that permit retention of coho with healed adipose fin clips, although there is a provision for inseason action to allow the non-Indian commercial troll fishery to retain all legal size coho in the area between Cape Falcon, Oregon and the Queets River, Washington during the month of September.

Regulations and expected fishing patterns for the treaty-Indian troll fisheries were developed by the Hoh, S'Klallam, Makah, Quileute, and Quinault tribes for their respective fisheries. The Council recommendations include continuation of the encounter rate study to be conducted by the Makah Tribe in the Cape Flattery area. The purpose of the study is to estimate encounter rates of chinook and coho salmon during troll fisheries directed at each species. All fish with healed adipose fin clips will be retained, and fish that are taken during periods when the treaty troll fishery is operating will be counted towards the treaty troll quota.

INSEASON MANAGEMENT

Some management measures may be modified through inseason action by National Marine Fisheries Service (NMFS) after consultation with the Council Chair, affected management agencies, and pertinent tribes and public (e.g., changing the days or number of days of fishing allowed per calendar week; or modifying open areas, bag limits, species retention limits, and quotas— including trades between commercial and recreational fisheries north of Cape Falcon). Inseason changes are made in order to meet the preseason intent of the management measures described in this document, but must also meet the Council's Salmon FMP goals, especially in regard to conservation and allocation goals, and federally-recognized Indian fishing rights.

It is anticipated the Oregon Department of Fish and Wildlife (ODFW) will permit late-season, chinook-only fisheries in certain areas within state waters in addition to the seasons shown in Tables 1 and 2. Potential seasons include commercial and recreational fisheries at the mouths of the Chetco and Elk Rivers and at the mouth of Tillamook Bay. The State of Washington may also establish limited recreational fisheries in state waters if additional impacts on critical coho and/or chinook stocks can be accommodated within management constraints.

Council intent generally advocates that state-water fisheries have the same basic regulations as adjacent Federal waters, particularly if open simultaneously; however, the Oregon State-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.

NEW MANAGEMENT MEASURES

South of Cape Falcon

Commercial Measures

In general, the commercial fishery measures for this area are similar to those for 2003. Changes in the measures include: in the Oregon portion of the Klamath Management Zone (KMZ), the chinook quotas in June and July are 2,600 and 1,600 fish, respectively; in the California portion of the KMZ, the chinook quota in September is 6,000 fish with a 28 inch total length minimum size limit; in the Fort Bragg area, the month of May is closed; the minimum size limit south of Horse Mountain is 27 inches total length beginning July 1 and increases to 28 inches total length in the Fort Bragg area in September. In 2005, from Cape Falcon to the OR/CA border, the minimum size limit will be 27 inches total length when the season opens March 15.

Recreational Measures

In general, the recreational fishery measures for this area are similar to those for 2003. Changes in the measures include: the extension of the coho selective fishery to the Oregon portion of the KMZ with an overall quota of 75,000 fish. This is the first coho retention fishery in the Oregon portion of the KMZ since 1993. Also, in 2005, the fisheries south of Point Arena will have a unified opening date of April 2 with a minimum size limit of 20 inches total length.

North of Cape Falcon

Commercial Measures

To protect threatened Puget Sound chinook stocks, the Cape Flattery Control Zone is in effect during all non-Indian commercial fisheries.

To limit impacts on Snake River Fall chinook, the treaty-Indian troll fishery chinook quota was distributed 22,500 during the May/June chinook-directed fishery and 26,500 during July through September 15 all salmon fishery. The non-Indian troll fishery chinook quota was distributed 29,800 during May and June and 14,700 during July through September 15.

To reduce impacts on Interior Fraser coho, the non-Indian troll fishery was restricted to a quota of 8,000 coho in the area north of the Queets River. For purposes of impact assessment, the treaty-Indian troll fishery was anticipated to harvest 55,000 coho in the area north of Cape Alava. In both fisheries, coho may be transferred between areas on an impact-neutral basis.

The non-Indian troll fishery is permitted to retain only coho with a healed adipose fin clip, except an inseason conference call may occur to consider allowing retention of all legal sized coho between Cape Falcon and the Queets River no earlier than September 1 on an impact neutral basis.

To protect threatened Hood Canal summer-run chum, retention of chum is prohibited north of Cape Alava in August and September.

Recreational Measures

To protect threatened Puget Sound chinook stocks, retention of chinook is allowed in Area 4B east of the Bonilla-Tatoosh line only prior to August 1, while the ocean fishery is open in Area 4 (Neah Bay area west of the Bonilla-Tatoosh line and north of Cape Alava).

The chinook minimum size limit is set at 26 inches total length and the season opening dates delayed until June 27 to improve the likelihood of extending the length of the season through Labor Day. The bag limit for 2004 is two fish, no more than one of which may be a chinook, with no chum retention in August and September north of Cape Alava.

Tillamook Head to Cape Falcon closes August 1 to reduce impacts on the northern component of Oregon Coastal Natural (OCN) coho.

ESTIMATED SALMON STOCK IMPACTS OF ADOPTED MANAGEMENT MEASURES

Procedures and assumptions employed in the evaluation of regulatory impacts are reviewed and maintained in records by the STT. In modeling non-retention and mark-selective fishery impacts, the Council has adopted hook-and-release mortality (HRM) rates of 26% for the commercial fishery, 14% for recreational fishery north of Point Arena, California, and 19% for the recreational fishery south of Point Arena. The HRM rate of 14% for the recreational fishery north of Point Arena was adopted in 2001 and is the result of a comprehensive review by the STT. The HRM rate of 19% for the recreational fishery south of Point Arena is based on the proportion of mooching and trolling gear used in the fishery during 2003 and the HRMs of 42.2% and 14% for these two respective gear types. In addition, a drop-off mortality impact is applied to all fisheries. Generally, this impact is calculated as 5% of the total encounters by hook-and-line fisheries.

CHINOOK SALMON ASSESSMENT

Ocean chinook harvest quotas are summarized in Table 4. Table 5 lists expected escapements and other key chinook management criteria, including allocation of Klamath River fall chinook and data relevant to consultation standards for ESA-listed stocks. Expected ocean harvest and incidental non-retention mortality

are provided in Table 6. Further details of fishery impacts on stocks listed under the ESA are provided in Appendix A.

South of Cape Falcon

Considerations in shaping the chinook fisheries in this area include the protection of ESA listed Sacramento River winter and California Coastal chinook (Appendix A), and achievement of fall chinook spawning escapement goals for the Klamath, Sacramento, and Oregon coastal rivers. In 2004, chinook fisheries in this area are constrained primarily to meet the Klamath River fall chinook escapement goal and harvest allocation objectives, and to satisfy the ESA consultation standard for Sacramento River winter chinook (Table 5).

U.S./Mexico Border to Horse Mountain

Central Valley (primarily Sacramento River) fall chinook is the Council's primary management unit in this area. Under the adopted management measures, the projected spawning escapement for Sacramento River fall chinook is 457,500 adult fish. This is well above the spawner escapement goal range of 122,000 to 180,000 hatchery and natural fall chinook adults combined. Ocean commercial fisheries in this area are expected to land 317,300 chinook; a 39% decrease from the observed 2003 landings (Table 6). Ocean recreational fisheries in this area are expected to land 100,000 chinook; an 18% increase over the observed 2003 landings (Table 6).

Horse Mountain to Humbug Mountain

This area is designated as the KMZ because the primary stock of concern is Klamath River fall chinook. Ocean escapement of Klamath River fall chinook to the Klamath River in 2004 is projected to be 96,800 adults. After river tribal and recreational fishery impacts, the total number of spawners is expected to be 58,200 adults, of which 35,000 are expected to spawn in natural areas.

Management constraints for Klamath River fall chinook usually affect the shaping of many fisheries from central Oregon to central California, as well as inside tribal and recreational fisheries. Therefore, the Council, with assistance from the Klamath Fishery Management Council (KFMC), identifies several specific adult harvest allocation objectives for this stock (Table 5). The Council's adopted regulations are expected to result in:

- 50% (31,100 fish) of the available harvest to the Indian tribes of the Klamath-Trinity River Basin with federally-recognized fishing rights (Yurok and Hoopa Valley tribes);
- 15% (4,700 fish) of the non-Indian harvest to the Klamath River recreational fishery;
- 85% (26,500 fish) of the non-Indian harvest to the ocean fisheries;
- 14.1% (3,700 fish) of the ocean harvest to the KMZ recreational fishery; and
- 51% and 49% (11,000 and 10,300 fish) of the ocean commercial harvest to the States of California and Oregon, respectively.

Ocean commercial fisheries in the KMZ area are expected to land 16,900 chinook (all stocks); an 82% increase over the 2003 commercial landings (Table 6). Ocean recreational fisheries in the KMZ area are expected to land 29,200 chinook (all stocks); a 106% increase over the 2003 recreational landings (Table 6).

Humbug Mountain to Cape Falcon

The primary chinook stocks of concern for this area originate in California and Oregon coastal river systems. Klamath and Sacramento River fall chinook also contribute significantly to the harvest. The ocean escapement of these stocks in 2004 is expected to be sufficient to provide for estuary and freshwater fisheries and meet spawner escapement goals.

Chinook impacts in this area are primarily associated with the commercial fisheries as recreational fishing effort is generally focused on coho. Recreational coho fishing was closed from 1994 to 1998 and reopened to limited mark-selective harvest of coho with a healed adipose fin clip in 1999. For 2004, the commercial chinook fishery opened March 15 and continues through October 31, with closed periods in July and August and increases to the minimum size limits. The closures and size limit changes were necessary to meet the KFMC-recommended sharing of Klamath River fall chinook ocean commercial harvest between the States of Oregon and California. Additionally, the closure of two days at the end of August assists in accurately accounting for Klamath River fall chinook impacts occurring prior to September 1. After August, most mature fall chinook in this area are no longer available to ocean fisheries, and impacts at that time primarily affect ocean escapement in the following year. Ocean harvests after September 1 are counted against the allowable harvest for the following year. Thus, the increased size limits in the September through October period should reduce the Klamath River fall chinook harvest counted toward the 2005 allowable harvest and allocation of these fish. As in recent years, commercial troll gear restrictions have also been recommended to reduce coho impacts (Table 1).

North of Cape Falcon

Management objectives for chinook fisheries in this area are to comply with NMFS ESA consultation standards established for ESA-listed stocks, meet treaty Indian sharing obligations, and to the extent possible, provide for viable ocean and inriver fisheries while meeting natural stock escapement objectives and hatchery fall chinook brood stock needs. Lower Columbia River and Bonneville Pool hatchery fall chinook have historically been the major contributors to ocean fishery catches in the Council area north of Cape Falcon. This year impact limits on ESA-listed Snake River wild fall chinook constrained ocean fisheries in this area. All NMFS consultation standards for ESA-listed stocks are expected to be met.

The 2004 non-Indian chinook quotas in this area provide for landings of 44,500 in the commercial troll and 44,500 in the recreational fisheries. The 2003 actual non-Indian chinook landings were 69,775 in the commercial troll and 36,536 in the recreational fishery.

The treaty-Indian commercial troll fishery is constrained by a quota of 49,000 chinook in ocean management areas and Area 4B combined (Table 3). The fishery consists of a chinook-directed fishery in May and June with a quota of 22,500 chinook and an all-salmon season beginning in July with a 26,500 chinook quota. There is no roll-over of any chinook that are not harvested during the May/June chinook-directed fishery. The observed chinook harvest in 2003 was 34,674 (Table 6).

COHO SALMON ASSESSMENT

Ocean coho harvest quotas are summarized in Table 4. Table 5 lists expected escapements and other key coho management criteria, including data relevant to meeting consultation standards for ESA-listed stocks. Expected coho harvest and incidental non-retention mortality are shown in Table 6. Table 7 provides a detailed accounting of impacts on OCN and Rogue/Klamath (RK) hatchery coho by fishery. Further details of the fishery impacts on stocks listed under the ESA can be found in Appendix A. Table 8 provides estimates of the percentage of marked coho expected to be encountered in mark-selective fisheries.

South of Cape Falcon

All natural coho stocks originating south of Cape Falcon have been listed under the Federal ESA, although there is no Federal protection under the ESA for Oregon Coastal coho at this time as a result of the February 24, 2004, decision by the Ninth Circuit Court of Appeals. NMFS guidance is that the three northern OCN coho stock components be managed in accordance with Amendment 13 of the salmon FMP and the OCN Coho Work Group 2000 report (adopted by the Council as “expert biological advice to help guide Council management of OCN coho”). For 2004, both the Work Group report and exploitation rate matrix in Amendment 13 require that the exploitation rate in marine and freshwater fisheries combined be no more than 15%. For Southern Oregon/Northern California Coastal coho, the NMFS ESA consultation standard requires that the ocean exploitation rate on RK hatchery stocks be no more than 13%. For the Central California Coastal coho, the NMFS consultation standard prohibits retention of coho in California ocean fisheries.

Under the adopted management measures, the combined marine and freshwater OCN coho exploitation rate is projected to be 14.7% (Table 7). The number of OCN coho spawners in 2004 is projected to be 129,500 adults. This compares with 238,000 adults observed in 2003. The marine exploitation rate for RK hatchery coho is projected to be 8.6%. At present, there are no preseason spawner projections for either Southern Oregon/Northern California Coastal or Central California Coastal coho. Ocean escapement of the early and late hatchery stocks of Columbia River coho are expected to be sufficient to meet hatchery egg-take goals (Table 5).

Coho retention is prohibited for the commercial and recreational fisheries south of Cape Falcon, except for a mark-selective recreational fishery of 75,000 coho with healed adipose fin clips between Cape Falcon and the Oregon/California border, opening June 19 and closing no later than August 31. In 2003, the mark-selective fishery was limited to 88,000 coho with healed adipose fin clips between Cape Falcon and Humbug Mountain.

In addition to the recreational quota for 75,000 coho marked with healed adipose fin clips, the estimated non-retention (drop-off plus hook-and-release) mortality for non-Indian ocean commercial and recreational fisheries in the area south of Cape Falcon is 12,600 and 24,700 coho, respectively (Table 6).

North of Cape Falcon

Coho fisheries north of Cape Falcon are constrained by management objectives and treaty-Indian obligations for individual stock management units. For 2004, the Salmon FMP limits the exploitation rate on OCN coho in marine and freshwater fisheries combined to 15% or less. Additionally, ocean and Puget Sound fisheries were structured to constrain total exploitation rates on Interior Fraser coho to 10% or less in accordance with the provisions of the southern coho management plan adopted by the Pacific Salmon Commission in February 2002. Ocean escapements for the pertinent coho stocks under the proposed regulations are presented in Table 5. Ocean escapement levels for all natural coho stocks north of the Columbia River are expected to meet or exceed their long-term spawner escapement goals and comply with the management objectives adopted by state and tribal co-managers. The actual spawner escapements will be determined by the combined impact of ocean and inside fisheries. Management objectives in 2004 for these stocks have been agreed to by state and tribal co-managers under the terms of U.S. District Court orders. Ocean escapements of early and late Columbia River hatchery stocks are projected to be sufficient to meet normal egg-take goals, treaty Indian obligations, and to allow some harvest opportunity for Columbia River non-Indian fisheries.

For 2004, retained coho in all non-Indian troll and recreational ocean fisheries north of Cape Falcon must have healed adipose fin clips, except an inseason conference call may occur to consider allowing retention of all legal sized coho between Cape Falcon and the Queets River no earlier than September 1 in the non-

Indian troll fishery. Non-Indian commercial and recreational fisheries in this area will be constrained by coho quotas of 67,500 and 202,500 fish with healed adipose fin clips, respectively. The total allowable harvest by the non-Indian commercial and recreational fisheries for coho in 2004 is 270,000, compared to 300,000 in 2003. The 2003 non-Indian commercial and recreational catches of coho were 15,700 and 168,800, respectively (Table 6).

The coho quota for the treaty-Indian troll fishery in ocean management areas, including Washington State statistical area 4B for the May to September period, is 75,000 coho, a decrease from the 2003 quota of 90,000. If the treaty Indian troll catch taken from Areas 4/4B is projected inseason to exceed 55,000 coho, the total treaty Indian troll quota will be adjusted to ensure the exploitation rate impact of the treaty Indian troll fishery on Interior Fraser coho does not exceed the level anticipated under the assumptions employed for impact assessment. Actual coho catch by the treaty Indian troll fishery in 2003 was estimated at 11,000.

SOCIOECONOMIC IMPACTS OF PROPOSED REGULATIONS

This section provides economic impact estimates for expected non-Indian fishing activities under the Council's proposed ocean commercial and recreational fishery regulations. Economic costs and benefits associated with changes in levels of ocean escapement (costs and benefits of spawner escapement and inside harvest) are not included. No attempt is made to estimate the economic value of the treaty-Indian commercial catch, although these landings do generate personal income for the local and state economies. The procedures and methods used to analyze the economic impacts follow those documented in previous preseason reports and the annual reviews of ocean salmon fisheries.

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, and Table 10 shows recreational impacts in terms of trips generated and coastal community personal income expected to be 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 3 and 4 show estimated coastal community income impacts for both the troll and recreational options compared to historic impacts in real (inflation adjusted) dollars.