Mr. Mark Cedergreen, Chairman  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, Oregon 97220-1384

Dear Mr. Cedergreen:

The Pacific Coast Salmon Fishery Management Plan (Salmon FMP) requires that the Pacific Fishery Management Council (Council) develop management recommendations for fisheries under the Salmon FMP consistent with consultation standards developed by the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries) regarding actions necessary to protect species listed under the Endangered Species Act (ESA). This letter summarizes NOAA Fisheries’ consultation standards and provides guidance regarding the potential effects of the 2011 season on listed salmonid species. As in previous years, this letter is intended to offer NOAA Fisheries’ preliminary guidance regarding conservation needs for listed salmonid species; any ultimate ESA-determinations shall be provided when the applicable biological opinions for those species are completed. We also use this opportunity to comment on other subjects of general interest. We comment briefly on developing circumstances related to Southern Resident Killer Whales and our expectations for the genetic stock identification (GSI) sampling program in 2011. Because of circumstances in recent years and their relative importance to the fisheries, we also comment on the status of Sacramento River fall Chinook and Klamath River fall Chinook and our expectations for management of these stocks in 2011.

Southern Resident Killer Whales
NOAA Fisheries has recently incorporated new scientific information to develop a preliminary analysis of the effects of fisheries on Southern Resident killer whales. The new scientific information and preliminary analysis about the Southern Resident population and the extent of their reliance on salmon – particularly large Chinook salmon – strongly suggest that Chinook abundance is very important to the survival and recovery of Southern Residents. This relationship has potentially serious implications for activities that affect the abundance of Chinook salmon, including salmon fisheries. Already this information has affected the proposed term of the pending Puget Sound Chinook Resource Management Plan. Before taking further action, NOAA Fisheries will join with the Canadian Department of Fisheries and Oceans (DFO) to conduct a transparent and scientifically rigorous review of the analysis. We believe we can best accomplish this in a process that engages scientists with a broad range of scientific specialties. We therefore will publicly disseminate the preliminary data and analysis and
convene with DFO an independent scientific review panel to review the data and analysis. Should a management response in the fisheries be appropriate, NOAA Fisheries intends to reinitiate consultation under the ESA on all U.S. fisheries affecting the abundance of Chinook salmon in Puget Sound. As a result, NOAA Fisheries encourages the Council to monitor closely the scientific review in order to properly anticipate any management actions that may be appropriate in Council waters.

Please review our website for more information: http://www.nw.nwr.noaa.gov/Marine-Mammals/Whales-Dolphins-Porpoise/Killer-Whales/ESA-Status/KW-Chnk.cfm

Genetic Stock Identification Sampling Proposal
In 2010, NOAA Fisheries issued a Scientific Research Permit (SRP) to the Northwest and Southwest Fisheries Science Centers to conduct non-retention sampling of Chinook salmon in closed times and areas off the West Coast in 2010. While the principal investigators for the scientific research were the NWFSC and SWFSC, the overall effort was part of the West Coast Salmon Genetic Stock Identification Collaboration (WCGSI); a partnership of west coast fishermen’s organizations, universities, states, tribes, and NOAA Fisheries, formed in 2006 to explore potential uses of GSI for west coast salmon fisheries management. Combined sampling in open and closed areas under the SRP enabled the Centers to sample almost weekly from Santa Barbara to Cape Falcon, May through September. Impacts were less than those approved in the 2010 season setting process.

The data collected in 2010 are the first application of fine-scale GSI sampling over a broad geographic area for a full season. Data from the KMZ provide the best stock composition estimates from this area since the late 1980s. Results are being analyzed for a variety of purposes, including the potential for updating the Chinook FRAM model and improving the Sacramento and Klamath Ocean Harvest Models.

There are differing opinions about the potential applications of GSI data for fisheries management, as well as the feasibility and cost of collecting and incorporating such data in the long-term. To allow for an evaluation of the potential benefits and/or shortcomings of using such data for salmon assessment and management in the future, there is a need for continued experimental data collection and analysis. NOAA Fisheries recommends that the Council continue to support the sampling effort to build a database useful for analysis of management applications. NOAA Fisheries encourages communication between scientists, advisory committees, and the Council to help direct development of GSI technologies to best serve the needs of the Council.

In 2010 GSI sampling was conducted in closed areas which required set asides to account for associated impacts during the preseason process. In 2011 we do not anticipate sampling in closed areas because of funding limitations and our expectation of a more normal, open fishing season. As a consequence, there will be no need for the Council to anticipate impacts as the options are developed at the March meeting for GSI sampling in closed areas.
CHINOOK SALMON
Sacramento River Fall Chinook
Sacramento River fall Chinook (SRFC) is the primary stock contributing to the ocean salmon fisheries south of Cape Falcon, Oregon. In addition to ESA-listed stocks, the need to conserve SRFC has resulted in restricted ocean salmon fisheries south of Cape Falcon in recent years, owing to record-low returns of SRFC. Available data suggest SRFC fishery impacts north of Cape Falcon are negligible.

The SRFC conservation objective is an escapement goal range of 122,000-180,000 adult spawners to hatcheries and natural areas. During the 2010 preseason process, the Pacific Fishery Management Council (PFMC) adopted fishery management recommendations to achieve a return of 180,000 SRFC adult spawners. Postseason estimates indicated 125,400 SRFC adults returned to spawn in 2010, successfully meeting the lower end of the conservation objective range.

SRFC natural and hatchery adult spawners
2006: 275,000
2007: 91,400
2008: 65,400
2009: 40,900
2010: 125,400

2010 jack escapement was substantially higher than the previous five years, suggesting that adult ocean abundance will increase in 2011. The 2011 Sacramento Index forecast has been projected to be 729,900 SRFC adults.

In 2009, postseason escapement of SRFC (40,900) was substantially less than the preseason projections (122,000) and below the lower end of the SRFC escapement goal range for the third consecutive year. As a result, an "overfishing concern" was triggered under the Salmon FMP. NMFS is required to report on the status of the stock consistent with MSA section 304(e)(1). In 2009, NMFS and the Council determined that the current FMP does not provide clear criteria with which to make stock status determinations. To address this, the Council directed that Amendment 16 to the FMP include revisions to the status determination criteria to provide clearer criteria for making "overfishing", "overfished", and "approaching overfished" determinations. In the meantime, if a stock fails to meet its conservation objective for three consecutive years, NMFS will report the stock as "overfished". Therefore, SRFC is reported as "overfished."

As a result, pursuant to the FMP, the PFMC directed the Salmon Technical Team to work with State and Tribal fishery managers to assess the factors that contribute to the escapement shortfall within one year, and in 2010, a formal overfishing assessment was begun to determine the causes of the shortfall. Updates to the overfishing team assessment will be presented at the March 2011 Council meeting. However, in light of the recent depressed status of SRFC, NMFS recommends
a more precautionary approach to managing the stock in 2011 by achieving a forecast escapement toward the upper end of the conservation objective goal range.

**Klamath River Fall Chinook**
The conservation objective for KRFC is a spawner reduction rate of no more than 67 percent, while achieving a minimum of 35,000 naturally spawning adults in any single year. KRFC did not meet its conservation objective in 2004, 2005, and 2006, triggering an “overfishing concern” under the Salmon FMP. Since 2007, KRFC has been reported as “not overfished – rebuilding.” Although NMFS has not yet approved a formal rebuilding plan for KRFC, the PFMC has recommended that the overfishing concern be ended when escapement of 35,000 natural-area spawners is achieved in three out of four consecutive years, or when an escapement of at least 40,700 naturally spawning adults is achieved in two consecutive years. During the period of the overfishing concern, the Council recommended achieving an escapement of 40,700 natural-area KRFC adult spawners until the overfishing concern is ended.

Postseason estimates indicated that 37,200 KRFC adults returned to spawn in natural-areas in 2010.

**KRFC natural-area adult escapement**
2007: 60,700  
2008: 30,900  
2009: 44,400  
2010: 37,200

Because the conservation objective of 35,000 natural area KRFC adult spawners has now been met for three out of four consecutive years (2007, 2009-2010), NMFS recommends returning to the FMP conservation objective of a spawner reduction rate of no more than 67 percent and an escapement of at least 35,000 naturally spawning KRFC adults.

**California Coastal Chinook Salmon**
The California Coastal (CC) Chinook salmon ESU has been listed as threatened under the ESA since 1999. The current consultation standard for CC Chinook is from a NOAA Fisheries biological opinion dated April 28, 2000. On June 13, 2005, NOAA Fisheries completed additional consultation on CC Chinook, and specified actions necessary to implement the RPAs of the 2000 biological opinion for this ESU.

The RPAs of the 2000 biological opinion stated that to ensure that CC Chinook are not subject to increasing harvest rates in the future, limits on the forecast KRFC age-4 ocean harvest rates would serve as the consultation standard. The 2005 reinitiation of consultation affirmed that management measures shall result in a forecast KRFC age-4 ocean harvest rate of no greater than 16 percent.
Sacramento River Winter Chinook Salmon

The Sacramento River winter Chinook salmon ESU (winter-run) was listed under the ESA as threatened in 1990 and relisted as endangered in 1994. The current consultation standard for winter-run is derived from a NOAA Fisheries biological opinion completed on April 30, 2010. The 2010 biological opinion found that the ocean salmon fishery, as managed under the Salmon FMP, is likely to jeopardize the continued existence of winter-run. This determination is based on the recent substantial declines in winter-run spawning returns, and the lack of analytical information and quantitative tools to establish appropriate harvest impact levels or an explicit management process to avoid or reduce impacts to winter-run when this stock is declining and/or facing increased extinction risks. In general, NOAA Fisheries believes that when winter-run returns are low or declining, fishing impacts may need to be reduced from previous levels. To avoid the likelihood of jeopardizing the existence of winter-run while enabling the continuation of the ocean salmon fishery, NOAA Fisheries has proposed a Reasonable and Prudent Alternative (RPA), which mandates the development of a new management framework for winter-run that is responsive to changes in stock status. The framework is expected to develop population status thresholds, impact rate targets, and the analytical tools needed to assess the impacts of various fishery management options. It is expected that this new framework will be implemented no later than the start of the 2012 ocean salmon fishing year.

New information suggests that the status of winter-run did not improve in 2010. Below is the approximate number of returning adult winter-run since 2006.

- 2006: 16,900
- 2007: 2,400
- 2008: 2,500
- 2009: 4,500
- 2010: 1,600

For the 2011 fishing year, NOAA Fisheries has determined that fishery impacts should continue to be constrained until the management framework required by the 2010 RPA has been implemented. Recent ocean fishery impact estimates, which are based upon cohort reconstructions and coded wire tag recoveries recently provided by the NOAA Fisheries Southwest Fisheries Science Center, and analyzed in the 2010 biological opinion, confirm that ocean fishery impacts continue to occur primarily on age-3 winter-run in the recreational ocean salmon fisheries south of Point Arena. As a result, the guidance options that were provided in 2010 (in the interest of providing flexibility to the PFMC in designing the 2010 fishing year) are deemed sufficient to meet the interim consultation standard to minimize fishery impacts for the 2011 fishing year. The options include time/area closures in the recreational fishery during periods that are expected to effectively minimize fishery impacts to winter-run. In addition, based on examinations of the size-at-age growth model and historical coded wire tag recoveries, NOAA Fisheries believes that a substantial portion of maturing winter-run would be required to be released, given the greater minimum total size limit during most of the fishing year. These protective measures are expected to contribute to increased spawning returns in the following year.
Consequently, NMFS offers the following guidance for the 2011 fishing year:

<table>
<thead>
<tr>
<th>Winter-Run Guidance for 2011 fishing year for South of Point Arena, CA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fishery</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Recreational*</td>
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<td></td>
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* In addition, the Council shall choose at least one of the following options for the recreational fishery south of Point Arena:
  - 24-inch minimum total size limit (May – August 2011; April 2012); 20 inches (Sept.-Nov.)
  - Close the recreational fishery for at least two consecutive months (any consecutive 61 day period) at some point from May 1 through August 31, which should apply to all areas south of Point Arena simultaneously.
  - Close either the San Francisco or Monterey management area for any 61 consecutive day period at some point from May 1 through August 31, while also implementing the 24-inch limit in the other areas south of Point Arena (May 1 - August 31, 2011; April 2012).

<table>
<thead>
<tr>
<th>Commercial</th>
<th>Between Point Arena and the U.S.-Mexico Border**</th>
<th>May 1</th>
<th>September 30</th>
<th>26 inches</th>
</tr>
</thead>
</table>

**Exception: Between Point Reyes and Point San Pedro, there may be an October fishery conducted Monday through Friday, but shall end no later than October 15.

For the 2010 ocean salmon fishing year, the Council selected the 24-inch size limit option over the 61-day time/area closure for the recreational fishery. Based on NMFS’ initial guidance provided to the Council in March 2010, a 24-inch minimum total size limit was discussed as an option for the entire year. Analyses demonstrate that a 24-inch size limit in April would be expected to result in substantial reductions in impacts to winter-run in the recreational fishery at that time. Therefore, NMFS has decided that a 24-inch size limit must be in place if the Council decides to recommend emergency action to open an April 2011 recreational fishery.

Additionally, since 1998, the California Department of Fish and Game and the PFMC have recommended certain terminal gear restrictions, including the use of circle hooks while mooching in the recreational fishery between Horse Mountain and Point Conception, California, which are designed to reduce hook-and-release mortality. Those restrictions should continue.

**Central Valley Spring Chinook Salmon**

The Central Valley spring Chinook Evolutionarily Significant Unit (ESU) was first listed as threatened in 1999. The current consultation standard for Central Valley spring Chinook is from the NOAA Fisheries biological opinion, dated April 28, 2000, on the effects of the ocean salmon fishery on Central Valley spring Chinook and California Coastal Chinook. The 2000 opinion
concluded that the ocean salmon fishery, as regulated under the Salmon FMP and NOAA Fisheries consultation standards for Sacramento River winter Chinook, is not likely to jeopardize the continued existence of Central Valley spring Chinook. As explained previously, a new opinion is being developed for Sacramento River winter Chinook and interim guidance has been provided for the 2011 fishing year. The Sacramento River winter Chinook interim guidance, along with other regulatory measures in the salmon FMP, provides sufficient protection for Central Valley spring Chinook in the 2011 fishing year.

In the fall of 2009, NOAA Fisheries initiated efforts to assemble the more recent coded wire tag data to update analyses on the impact of the Council’s fisheries on this ESU. NOAA Fisheries will update the Council with any new information as it becomes available. Until such time, we have determined that no further actions are required to supplement those specified in the 2000 biological opinion.

**Lower Columbia River Chinook Salmon**

In 2010 NOAA Fisheries completed a biological opinion that considered the effects of fisheries on LCR Chinook in 2010 and 2011. NOAA Fisheries relied on that opinion to develop the following guidance for management of fisheries in 2011.

The LCR Chinook ESU is comprised of a spring component, a “far-north” migrating bright component, and a component of north migrating tules. The bright and tule components both have fall run timing. Of nine historical spring Chinook populations, four are considered extant. To achieve recovery targets, five populations are expected to be targeted to achieve high viability through recovery and reintroduction efforts, three to achieve moderate or low viability, and one to be maintained at high risk. The four extant spring stocks within the ESU include those in the Cowlitz, Kalama, and Lewis rivers on the Washington side, and in the Sandy River on the Oregon side. The historical habitat for the spring Chinook stocks on the Washington side is now largely inaccessible to salmon due to impassable dams. The remaining spring stocks are therefore dependent, for the time being, on the associated hatchery production programs. The Lower Columbia Salmon Recovery Plan\(^1\) specifies actions to be taken to facilitate recovery of spring Chinook populations in Washington State. The Cowlitz and Lewis hatcheries are being used, for example, for reintroduction of spring Chinook into the upper basin areas above existing dams. A supplementation program is being developed for the Kalama population. Spring Chinook in the Sandy River are also managed with an integrated hatchery supplementation program consistent with recovery plan recommendations in Oregon. Maintaining the hatchery brood stocks for these populations is therefore essential for implementation of specified recovery actions. The hatcheries have met their escapement objectives in recent years with few exceptions, and are expected to do so again in 2011 and for the foreseeable future, thus ensuring

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\(^1\) In 2006, NOAA approved an interim recovery plan for the Washington portion of the ESU (excluding the White Salmon basin). In June 2010, the Lower Columbia Fish Recovery Board adopted a revised version of that plan. In August 2010, the Oregon Fish and Wildlife Commission adopted a plan for the Oregon portion of the ESU. NMFS, working with local stakeholders, has drafted a plan for the White Salmon basin. NMFS is also drafting an ESU level plan based on the three local plans and will make the entire package available for public review and comment in summer or fall of 2011.
that what remains of the genetic legacy is preserved and can be used to advance recovery. NOAA Fisheries expects that the management agencies will continue to manage in-river fisheries to meet hatchery escapement goals, but no additional management constraints on Council fisheries are considered necessary at this time.

There are two extant natural-origin bright populations in the LCR Chinook ESU including the North Fork Lewis River and Sandy River populations. The North Fork Lewis River population is used as a harvest indicator for ocean and in-river fisheries. The escapement goal used for management purposes for this population is 5,700, based on estimates of maximum sustained yield derived from spawner-recruit analysis. Escapements have averaged 9,500 over the last ten years and have generally exceeded the goal by a wide margin since at least 1980. Escapement was below goal in 2007 and 2008. The shortfall is consistent with a pattern of low escapements for other far-north migrating stocks in the region and can likely be attributed to poor ocean conditions. Escapement in 2010 was 8,700 and thus again well above the escapement goal. The Sandy River population is considered in Oregon’s draft Recovery Plan to be at low risk and viable under current harvest conditions. Given the long history of healthy returns, and other management constraints that will be in place this year, NOAA Fisheries does not anticipate the need to take specific management actions in the ocean to protect the bright component of the LCR Chinook ESU in 2011. NOAA Fisheries does expect that the states of Washington and Oregon will continue to monitor the status of the LCR bright populations, and take the specific actions necessary through their usual authorities to deliver spawning escapement through the fisheries they manage sufficient to maintain the health of these populations.

There are twenty one separate populations within the tule component of the LCR Chinook ESU. Unlike the spring or bright populations of the ESU, LCR tule populations are caught in large numbers in Council fisheries, as well as fisheries to the north and in the Columbia River. Harvest on LCR tule Chinook has been reduced significantly since they were first listed in 1999. The exploitation rate was at first limited to 65%. From 2002 to 2006 the exploitation rate was limited to 49%. Harvest was reduced further to 42% in 2007, 41% in 2008, and 38% in 2009. These reductions were based on improved information and analyses developed over time, and had the intended beneficial effect of reducing exploitation rates on all comingled LCR tule populations. NOAA Fisheries is mindful of the effect to fisheries of these successive harvest reductions, but the accumulating information continues to underscore that these reductions are a necessary part of an overall strategy to achieve recovery.

The 2010 opinion helped clarify the status of the LCR tule populations. Some populations, including the Coweeman, East Fork Lewis, and Washougal, appear likely to be able to sustain harvest at current levels and remain at low risk. Other populations, including the Clatskanie, Scappoose, and Elochoman in the Coastal Major Population Group (MPG), appear likely to remain at very high risk even at very low harvest rates. The status of another set of populations is intermediate. All populations need to improve, but populations in the coastal MPG are most problematic.
The coastal populations are dominated by hatchery strays, are likely no longer genetically distinct as a result of past practice, and occupy habitat that is severely degraded. Other populations are similarly affected, although generally to a lesser degree. All of these factors contribute to the low productivity of these populations. Because of these circumstances the recovery plan calls for a coordinated and deliberate strategy that addresses each of the limiting factors and anticipates the need for transition as the habitat improves and the populations respond to their changing circumstance. The recovery plans set benchmarks for survival improvements for each of the limiting factors and described the sorts of actions required to achieve necessary improvements over time. Although the recovery plan provided the framework for recovery, details related to the implementation strategies were, in some cases, yet to be worked out. Conclusions related to harvest will depend in the long term on the efficacy of actions that address all limiting factors. As a result, the 2010 opinion was used to help flesh out details related to implementation of the overall recovery strategy. The opinion was limited to two years to provide more time to advance the comprehensive recovery strategy that was being developed through recovery planning process.

In 2010, the exploitation rate for LCR tule Chinook was limited to 0.38. For 2011, the opinion limited the exploitation rate to 0.36, but allowed for an increase to 0.37 if certain tasks were adequately addressed. The tasks were designed to reduce uncertainties in key elements of the overall recovery strategy. Four of the tasks addressed habitat activities. The other tasks focused on hatchery and harvest reforms and methods for improving our understanding of the escapement of primary tule populations. Tasks A through H were listed in the 2010 opinion and are provided here for your information:

A. Describe the primary funding sources for habitat improvement projects, and existing data bases and/or summaries of all past and present projects that benefit LCR tule populations. The report should include an assessment of the feasibility and utility of developing a more coordinated and centralized reporting system. The report will also comment on how to best improve coordination and reporting of all future projects.

B. Identify the amount and distribution of extant marsh type habitats currently inaccessible for juvenile rearing. The report will focus specifically on lower tributary and mainstem Columbia juvenile rearing habitats used by Lower Columbia River tule Chinook populations. The report should also identify ongoing efforts to gather additional data on current and potential juvenile rearing habitat distribution in the Lower Columbia River.

C. Identify milestones or expected trends in improved habitat conditions in high priority tributary and intertidal areas for tule Chinook populations.

D. Describe a recovery plan implementation schedule that identifies specific actions for a 3 to 5 year period, potential implementing entities, costs, location and duration of actions, funding sources, VSP and limiting factors affected, and linkages to milestones for improved habitat conditions.
E. Describe the transition strategy for reducing the proportion of hatchery fish in natural spawning areas for primary tule Chinook populations in a manner that addresses short term demographic risks while promoting progress to recovery objectives.

F. Analyze options for implementing mark selective fisheries. The report should include an analysis of the feasibility of mark selective fisheries, the magnitude of differential harvest impacts to marked and unmarked fish, and the relative benefits of efforts to reduce the harvest mortality to natural origin fish and reduce the proportion of hatchery fish on the spawning grounds. The report should also provide a schedule for assessing selective fishing gear and mortality rates of released fish.

G. Analyze options for incorporating abundance driven management principles into Lower Columbia tule Chinook management.

H. Review and update existing escapement estimate time series for selected primary tule populations with particular attention to estimates of hatchery contribution. The report should also describe current escapement monitoring programs and how they are designed to address key uncertainties.

Work groups were formed and worked over the last year to address each task. The work groups included staff with the necessary expertise from the state fishery management agencies, those directly involved with recovery planning, and from NOAA Fisheries’ Northwest Regional Office and Science Center. Reports were completed that address each task. These reports are posted on NOAA Fisheries website at http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Domains/Willamette-Lower-Columbia/LC/BO-tasks.cfm. NOAA Fisheries reviewed these reports and concluded that each task was addressed and that the condition of the 2010 biological opinion was satisfied. Although we will not comment here on the substance of the task reports, we encourage the Council and others to review them now and rely on them in the future as they each describe the way forward for a diverse set of issues that are important to overall recovery. NOAA Fisheries appreciates the work of all of those involved in recovery planning for tule fall Chinook and, in particular, those who have contributed to the significant focus on tule Chinook recovery during the past two years.

NOAA Fisheries also considered the potential consequences to Southern Resident Killer Whales of the choice between a 0.36 and 0.37 exploitation rate for LCR tule Chinook. The recent analysis of Southern Resident Killer Whales has focused on the abundance of large Chinook in inside waters of Puget Sound during the summer months. An analysis of the one percent difference in overall exploitation rate suggests that inside abundance would be reduced by less than one tenth of one percent if fisheries were managed subject to the 0.37 exploitation rate. As indicated above, NOAA Fisheries will undertake a comprehensive review of all U.S. fisheries affecting the abundance of Chinook salmon in Puget Sound if, following the proposed review process, further actions are deemed necessary.
Based on the above consideration and consistent with the terms of the biological opinion, NOAA Fisheries concludes that all fisheries below Bonneville Dam should be managed subject to a total exploitation rate of 0.37.

In 2012 and beyond, NOAA Fisheries will continue to focus on implementation of a comprehensive transitional strategy described in the recovery plan that links harvest actions to progress on the suite of actions necessary to achieve long term recovery. In that regard, NOAA Fisheries continues to urge that all parties emphasize the need to recovery tule Chinook spawning and rearing habitat as hatchery reforms are implemented in order to avoid significant harvest constraints in the future.

**Upper Columbia River Spring Chinook Salmon**
**Upper Willamette River Chinook Salmon**
**Snake River Spring/Summer Chinook Salmon**

NOAA Fisheries has considered the effects of Council area fisheries on spring stocks from the Upper Columbia River and Upper Willamette River Basins and spring/summer stocks from the Snake River in prior biological opinions. These stocks are rarely caught in Council fisheries. NOAA Fisheries has determined that management actions designed to limit catch from these ESUs beyond what will be provided by harvest constraints for other stocks are not necessary.

**Snake River Fall Chinook Salmon**

NOAA Fisheries completed a biological opinion on the new Pacific Salmon Treaty Agreement in 2008 where we again considered the effects of fisheries, including Council area fisheries, on Snake River fall Chinook. In that opinion we evaluated the effect of fisheries, in part, by using the guidance standard for ocean fisheries used over the last several years. We concluded that the existing standard continued to provide a necessary and appropriate level of protection for Snake River fall Chinook. NOAA Fisheries’ guidance with respect to Snake River fall Chinook is therefore unchanged from that of the last several years. NOAA Fisheries requires that the Southeast Alaskan, Canadian, and Council fisheries, in combination, achieve a 30.0% reduction in the age-3 and age-4 adult equivalent total exploitation rate relative to the 1988-1993 base period. The Council fisheries therefore must be managed to ensure that the 30.0% base period reduction criterion for the aggregate of all ocean fisheries is achieved.

**Puget Sound Chinook Salmon**

Procedurally, the Council and associated North of Falcon processes provide the appropriate forums for doing the necessary management planning. Under the current management structure, Council fisheries are included as part of the suite of fisheries that comprise the fishing regime negotiated each year by the co-managers under U.S. v. Washington to meet management objectives for Puget Sound and Washington Coastal salmon stocks. The comprehensive nature of the management objectives and the management planning structure strongly connect Council and Puget Sound fisheries. Therefore, in adopting its regulations, the Council must determine that its fisheries, when combined with the suite of other fisheries impacting this ESU, meet the management targets set for stocks within this ESU. Ideally, as it has for the past several years, NOAA Fisheries would issue guidance for the full suite of Council and Puget Sound fisheries.
consistent with the nature of the planning process. Therefore, since 2001, our guidance has relied on a series of comprehensive, joint Resource Management Plans (RMP) developed by the Washington Department of Fish and Wildlife and the Puget Sound Treaty Tribes (Puget Sound co-managers). The most recent RMP and the ESA take limit for fisheries implemented under the terms of that RMP expired May 1, 2010. Because of the timing of events NOAA Fisheries anticipated a gap between the time the previous RMP expired and when NOAA Fisheries would make its determination on the new RMP. In the interim, NMFS issued two biological opinions on the impacts to listed species for the 2010 fishing year (May 1, 2010 through April 30, 2011).

NOAA Fisheries is currently evaluating a new RMP provided by the co-managers, but may not complete its evaluation until after the April Council meeting. Similar to previous RMPs governing management of Puget Sound Chinook, the scope of the RMP encompasses salmon fisheries in Puget Sound, but its management framework is based on conservation objectives for Puget Sound Chinook that include harvest-related mortality in other fisheries including those under the Council’s jurisdiction. Therefore, NOAA Fisheries provides the following guidance for fisheries managed under the PFMC and describes its expectations for the full suite of southern U.S. fisheries that will affect Puget Sound Chinook stocks in 2011.

Although Council and Puget Sound fisheries are intertwined, impacts on Puget Sound Chinook stocks in Council fisheries are generally quite low. Exploitation rates on Puget Sound spring Chinook and fall Chinook stock aggregates have been less than one percent and four percent on average, respectively, in recent years. In 2004, NOAA Fisheries issued a biological opinion on the anticipated effects of PFMC fisheries on the listed Puget Sound Chinook ESU for 2004 and future fishing years (NMFS 2004). The 2004 opinion found that exploitation rates in Council Area fisheries within the range observed for brood years 1991-1998 would not jeopardize the continued existence of the species. Consistent with the findings of that opinion, the 2011 Council fisheries should be managed such that exploitation rates on Puget Sound spring and fall Chinook populations do not exceed 3 and 6 percent, respectively.

While NOAA Fisheries is providing formal guidance for the PFMC fisheries for 2011, we acknowledge the importance of and continue to strongly support the integrated management structure between the Council and North of Falcon planning processes. As mentioned previously, the Puget Sound co-managers have provided a draft joint Puget Sound Chinook harvest management plan to NOAA Fisheries for consideration under the ESA to replace the expired RMP. The form and structure of the new RMP under consideration is similar to that of the previous RMP. The management approach consists of a two tiered harvest regime (normal and critical), depending on stock status. The harvest objectives in the RMP are a mixture of total and southern U.S. exploitation rates and escapement goals. Under conditions of normal abundance, the exploitation rates and escapement goals, listed on the left of Table 1, apply. However, when a particular management unit is 1) not expected to meet its low abundance threshold, or, 2) if the anticipated northern fisheries exploitation rate is projected to exceed the difference between a management unit’s Exploitation Rate Ceiling and the Critical Exploitation Rate Ceiling (CERC), the co-managers will constrain their fisheries such that either the Exploitation Rate Ceiling is not exceeded, or the CERC, listed on the right of Table 1, is not
exceeded. Management actions taken to meet conservation objectives will occur primarily in the Puget Sound fisheries, but since impacts in all fisheries are considered in meeting the co-managers objectives, ocean fisheries are potentially subject to constraint to ensure impacts are consistent with the limits defined by the proposed RMP.

Therefore, in addition to the guidance provided for the PFMC fisheries themselves, NOAA Fisheries expects that the final option adopted at the April Council meeting will, when combined with Puget Sound fisheries negotiated during the North of Falcon process, meet the escapement goals and exploitation rates for each Puget Sound Chinook management unit included in Table 1, after applying the appropriate regime to the status of each management unit anticipated in 2011.

This guidance for Puget Sound Chinook is based on the best information available to NOAA Fisheries at this time. However, it is possible that new information may arise in the course of completing our determination that may refine our guidance. Should that occur, we will make every effort to provide that information to the Council and Puget Sound co-managers as quickly as possible.
Table 1. Conservation objectives proposed by the co-managers in the draft 2010 Puget Sound Chinook Resource Management Plan for 2011

<table>
<thead>
<tr>
<th>Management Unit/Population</th>
<th>Normal Abundance Regime</th>
<th>Minimum Fishing Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exploitation Rate Ceiling</td>
<td>Escapement Goal</td>
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<tr>
<td></td>
<td>Total</td>
<td>Southern US (PT=Preterminal)</td>
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<tr>
<td>Nooksack spring</td>
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</tr>
<tr>
<td>NF Nooksack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF Nooksack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skagit Summer/Fall</td>
<td>50.0%</td>
<td></td>
</tr>
<tr>
<td>Upper Skagit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Skagit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Sauk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skagit Spring</td>
<td>38.0%</td>
<td></td>
</tr>
<tr>
<td>Suiattle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Sauk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Sauk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skagit Spring</td>
<td>25.0%</td>
<td></td>
</tr>
<tr>
<td>Stillaguamish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NF Stillaguamish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF Stillaguamish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snohomish</td>
<td>21.0%</td>
<td></td>
</tr>
<tr>
<td>Skykomish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snoqualmie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Washington</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Cedar River</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>15.0% PT</td>
<td>5,800</td>
</tr>
<tr>
<td>White River</td>
<td>20.0%</td>
<td></td>
</tr>
<tr>
<td>Puyallup</td>
<td>50.0%</td>
<td></td>
</tr>
<tr>
<td>Nisqually</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Skokomish</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Mid-Hood Canal</td>
<td>15.0% PT</td>
<td>400</td>
</tr>
<tr>
<td>Dungeness</td>
<td>10.0%</td>
<td></td>
</tr>
<tr>
<td>Elwha</td>
<td>10.0%</td>
<td></td>
</tr>
</tbody>
</table>

1 When escapement is expected to be less than the goal, the co-managers will take additional management measures with the objective of meeting or exceeding the goal.

2 Expected Southern US rate will not exceed 7.0% in 4 out of 5 years and 9.0% in 1 out of 5 years.

3 Threshold expressed as natural-origin spawners.

4 The total southern U.S. exploitation rate is expected to fall within the range of 23% to 27%.

5 Anticipated hatchery or natural escapements below these spawner abundances trigger specific additional management actions.
COHO SALMON
Oregon Coast Coho Salmon
The ESA listing status of Oregon Coast (OC) coho has changed over the years. On February 11, 2008 NOAA Fisheries again listed OC coho as threatened under the ESA (73 FR 7816 February 11, 2008). Regardless of their listing status, the Council has managed OC coho consistent with the terms of Amendment 13 of the Salmon FMP as modified by the expert advice of the 2000 ad hoc Work Group. NOAA Fisheries approved the management provisions for OC coho through its section 7 consultation on Amendment 13 in 1999, and has since supported use of the related expert advice. For the 2011 season, the applicable spawner status is in the "high" category, but marine survival index is in the "low" category. Under this circumstance, the Work Group report requires that the exploitation rate be limited to no more than 15%.

Lower Columbia River Coho
Lower Columbia River (LCR) coho are caught primarily in fisheries off the Washington and Oregon coast, and in the Columbia River in the area below Bonneville Dam. Lower Columbia River coho were listed as threatened under the ESA on June 25, 2005. NOAA Fisheries’ most recent biological opinion regarding the effects of Council fisheries and fisheries in the Columbia River on LCR coho was completed in 2008. The 2008 opinion provides the basis for our guidance in 2011.

The states of Oregon and Washington have focused on use of a harvest matrix for LCR coho, developed by Oregon, following their listing under Oregon’s State ESA. Under the matrix the allowable harvest in a given year depends on indicators of marine survival and brood year escapement. The matrix has both ocean and inriver components which can be combined to define a total exploitation rate limit for all ocean and inriver fisheries. Generally speaking, NOAA Fisheries supports use of management planning tools that allow harvest to vary depending on the year-specific circumstances. Conceptually, we think Oregon’s approach is a good one. However, NOAA Fisheries took a more conservative approach for LCR coho in its 2008 opinion because of unresolved issues related to application of the matrix. NOAA Fisheries relied on the matrix, but limited the total harvest impact rate to that allowed for ocean fisheries. Given the particular circumstances regarding marine survival and escapement, the allowable exploitation rates in recent years has ranged from 8% to 20%.

The harvest matrix for LCR coho is keyed to the status of Clackamas and Sandy populations. However, NOAA Fisheries believes it is appropriate to reconsider whether reliance on these two indicators is adequately protective of other populations in the ESU. We also think that it is appropriate to review the information related to seeding capacity that sets the abundance criteria in the matrix for each population. Recovery Plans for the Oregon and Washington portions of the LCR coho ESU are in final draft form and have been submitted to NOAA Fisheries for review. Both plans also call for reconsideration of the current harvest rate matrix. NOAA Fisheries concurs with the recovery plan recommendations, including reconsideration of current harvest rates, and offers to work with the states to develop and assess alternatives to the current matrix. It is clear, however, that outstanding questions related to the matrix will remain
unresolved for 2011. As a result, NOAA Fisheries will continue to apply the matrix as we have in the past, which includes limiting the total harvest to that allowed for the ocean fisheries.

Guidance to the Council for 2011 depends on the matrix and the particular circumstances for the indicator populations. In 2011 abundance indicators are mixed. The Clackamas and Sandy are in the low and high status categories, respectively based on brood year escapements. The marine survival index is in the low category. Given these circumstances ocean salmon fisheries under the Council’s jurisdiction in 2011, and commercial and recreational salmon fisheries in the mainstem Columbia River, including select area fisheries (e.g., Youngs Bay), should be managed subject to a total exploitation rate limit on LCR coho for all fisheries not to exceed 15%.

**Southern Oregon/Northern California Coastal Coho Salmon**
The Southern Oregon/Northern California Coastal coho ESU (SONCC coho) has been listed as threatened under the ESA since 1997. The current consultation standard for SONCC coho is from a NOAA Fisheries biological opinion on April 28, 1999. The Rogue/Klamath coho hatchery stock is used as an indicator of fishery impacts on SONCC coho. The 1999 biological opinion requires that management measures developed under the Salmon FMP achieve an ocean exploitation rate on Rogue/Klamath coho hatchery stocks of no more than 0.13.

**Central California Coastal Coho Salmon**
The Central California Coastal coho ESU (CCC coho) was listed as threatened under the ESA in 1996 and relisted as endangered in 2005. The current consultation standard for CCC coho is from a NOAA Fisheries biological opinion on April 28, 1999. Information on past harvest or non-retention mortality rates is lacking for CCC coho. In the absence of more specific information, the 1999 biological opinion requires that directed fishing for coho and retention of coho in Chinook-directed fisheries be prohibited off California.

**CHUM SALMON**
**Hood Canal Summer Chum**
Chum salmon are not targeted and rarely are caught in Council salmon fisheries. However, the Pacific Coast Salmon FMP requires fisheries to be managed consistent with NOAA Fisheries’ ESA standards for listed species, which includes the Hood Canal summer-run chum salmon ESU. The Summer Chum Salmon Conservation Initiative (PNPTC and WDFW 2000), approved by NOAA Fisheries under Limit 6 of the ESA 4(d) Rule describes the harvest actions that must be taken to protect listed Hood Canal summer-run chum salmon both in Washington fisheries managed under the jurisdiction of the PFMC and Puget Sound fisheries managed by the state and tribal fishery managers.

Under the terms of the Conservation Initiative, chum salmon must be released in non-treaty sport and troll fisheries in Washington catch Area 4 from August 1 through September 30. The Conservation Initiative does not require release of chum salmon in tribal fisheries in catch Area 4 during the same period, but does recommend that release provisions be implemented. As in previous years, tribal managers will discuss implementation of these provisions during the North of Falcon planning process.
SOCKEYE SALMON
Snake River Sockeye Salmon
Ozette Lake Sockeye Salmon
Sockeye salmon are rarely caught in Council salmon fisheries. In previous biological opinions, NOAA Fisheries determined that PFMC fisheries were not likely to adversely affect Snake River or Ozette Lake sockeye salmon. Therefore, management constraints in ocean fisheries for the protection of listed sockeye salmon are not considered necessary.

STEELHEAD
NOAA Fisheries has listed two Distinct Population Segment (DPS) of steelhead as endangered and nine DPSs as threatened in Washington, Oregon, Idaho, and California. All eleven listed DPSs have been considered in biological opinions on the effects of PFMC fisheries.

Steelhead are rarely caught in ocean fisheries and retention of steelhead in non-treaty fisheries is currently prohibited. Based on currently available information, NOAA Fisheries concludes that considers ocean fishery management actions beyond those already in place that seek to shape fisheries to minimize impacts to steelhead are not necessary. The Council and states should continue to prohibit the retention of steelhead with intact adipose fins in ocean non-treaty fisheries and encourage the same in treaty tribal fisheries to minimize the effect of whatever catch may occur.

We appreciate that this will be another difficult year. We are committed to working with the Council to address the issues outlined in this letter.

Sincerely,

[Signature]
William W. Stelle, Jr.
Regional Administrator
Northwest Region

[Signature]
Rodney R. McInnis
Regional Administrator
Southwest Region