

**DEPARTMENT OF COMMERCE****National Oceanic and Atmospheric Administration****50 CFR Part 223**

[Docket No. 070123015-7086-02; I.D. 031006D]

RIN 0648-AU43

**Endangered and Threatened Species: Final Listing Determination for Puget Sound Steelhead**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** We, NMFS, are issuing a final determination to list the distinct population segment (DPS) of steelhead (*Oncorhynchus mykiss*) in Puget Sound, Washington, as a threatened species under the Endangered Species Act (ESA). We intend to issue final protective regulations and propose critical habitat for this DPS in separate rulemakings.

**DATES:** The effective date of this rule is June 11, 2007.

**ADDRESSES:** NMFS, Protected Resources Division, 1201 NE Lloyd Boulevard, Suite 1100, Portland, OR 97232.

**FOR FURTHER INFORMATION CONTACT:** Steve Stone, NMFS, Northwest Region, at (503) 231-2317; or Marta Nammack, NMFS, Office of Protected Resources, at (301) 713 1401. Reference materials regarding these determinations are available upon request or on the Internet at <http://www.nwr.noaa.gov>.

**SUPPLEMENTARY INFORMATION:****Background***Steelhead Life History*

Steelhead is the name commonly applied to the anadromous form of the biological species *O. mykiss*. The present distribution of steelhead extends from Kamchatka in Asia, east to Alaska, and south along the Pacific coast to the U.S.-Mexico border (Busby *et al.*, 1996; 67 FR 21586; May 1, 2002). *O. mykiss* exhibit the most complex life-history of any species of Pacific salmonid. *O. mykiss* can be anadromous ("steelhead") or freshwater residents ("rainbow" or "redband" trout), and under some circumstances, they can yield offspring of the alternate life-history form. Anadromous *O. mykiss* can spend up to 7 years in fresh water prior to smoltification (the physiological and behavioral changes required for the transition to salt water), and then spend

up to 3 years in salt water prior to migrating back to their natal streams to spawn. *O. mykiss* may spawn more than once during their life span (iteroparous), whereas the Pacific salmon species generally spawn once and die (semelparous).

Within the range of West Coast steelhead, spawning migrations occur throughout the year, with seasonal peaks of activity. In a given river basin there may be one or more peaks in migration activity, and these "runs" are usually named for the season in which the peak occurs (e.g., winter, spring, summer, or fall steelhead). Steelhead can be divided into two basic reproductive ecotypes, based on the state of sexual maturity at the time of river entry and duration of spawning migration (Burgner *et al.*, 1992). The summer or "stream-maturing" type enters fresh water in a sexually immature condition between May and October, and requires several months to mature and spawn. The winter or "ocean-maturing" type enters fresh water between November and April with well-developed gonads and spawns shortly thereafter. In basins with both summer and winter steelhead runs, the summer run generally occurs where habitat is not fully utilized by the winter run, or where an ephemeral hydrologic barrier separates them, such as a seasonal velocity barrier at a waterfall. Summer steelhead usually spawn farther upstream than winter steelhead (Withler, 1966; Roelofs, 1983; Behnke, 1992).

The Puget Sound steelhead DPS includes more than 50 stocks of summer- and winter-run fish, the latter being the most widespread and numerous of the two run types (Washington Department of Fish and Wildlife (WDFW), 2002). Hatchery steelhead production in Puget Sound is widespread and focused primarily on the propagation of winter-run fish derived from a stock of domesticated, mixed-origin steelhead (the Chambers Creek Hatchery stock) originally native to a small Puget Sound stream that is now extirpated from the wild. Hatchery summer-run steelhead are also produced in Puget Sound; these fish are derived from the Skamania River in the Columbia River Basin. The majority of hatchery stocks are not considered part of this DPS because they are more than moderately diverged from the local native populations (NMFS, 2005). Resident *O. mykiss* occur within the range of Puget Sound steelhead but are not part of the DPS due to marked differences in physical, physiological, ecological, and behavioral

characteristics (71 FR 15666; March 29, 2006).

*Listing Determinations Under the ESA*

We exercise ESA jurisdiction over most marine and anadromous fishes, and are responsible for determining whether West Coast salmon and steelhead warrant listing as threatened or endangered species under the ESA (16 U.S.C. 1531 *et seq.*). Section 3 of the ESA defines "species" as including "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." The term "distinct population segment" is not recognized in the scientific literature. On February 7, 1996, we and the U.S. Fish and Wildlife Service adopted a joint policy for recognizing DPSs under the ESA (DPS Policy; 61 FR 4722). As described in our proposed rule (71 FR 15666; March 29, 2006), we apply the DPS policy in delineating species of West Coast *O. mykiss* for consideration under the ESA. The policy adopts criteria for determining when a group of vertebrates constitutes a DPS: the group must be discrete from other populations and it must be significant to its taxon. A group of organisms is discrete if it is "markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, and behavioral factors." Significance is evaluated with respect to the taxon (species or subspecies). See 70 FR 67132 (November 4, 2005; "Proposed Evaluation of Significance under the DPS Policy"), and 71 FR 836 (January 5, 2006; "General Comments on the Consideration of Resident *O. Mykiss*: Determination of Species")

On June 28, 2005, we published a new policy for the consideration of hatchery-origin fish in ESA listing determinations ("Hatchery Listing Policy;" 70 FR 37204). Under the Hatchery Listing Policy, hatchery stocks are considered part of a DPS if they exhibit a level of genetic divergence relative to the local natural population(s) that is no more than what occurs within the DPS (70 FR at 37215; June 28, 2005). If a DPS as a whole warrants listing as threatened or endangered, the hatchery stocks considered part of the DPS will be included in the listing determination.

The ESA requires us to determine whether any species is endangered or threatened because of any of the following five factors: (1) The present or threatened destruction, modification or curtailment of its habitat or range; (2)

overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; or (5) other natural or manmade factors affecting its continued existence (section 4(a)(1)(A)-(E)). The ESA defines an endangered species as one that is in danger of extinction throughout all or a significant portion of its range, and a threatened species as one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range. We are to make ESA listing determinations based solely on the best available scientific information after conducting a review of the status of the species and taking into account any efforts being made by states or foreign governments to protect the species.

When evaluating the ESA section 4(a)(1) factors we focus on whether and to what extent a given factor represents a threat to the future survival of the species. When we consider protective efforts we assess whether and to what extent they address the identified threats and so ameliorate a species' risk of extinction. The overall steps we follow in implementing this statutory scheme are to: (1) delineate the species under consideration; (2) review the status of the species; (3) consider the ESA section 4(a)(1) factors to identify threats facing the species; (4) assess whether certain protective efforts mitigate these threats; and (5) predict the species' future persistence.

As noted above, as part of our listing determinations we must consider efforts being made to protect a species, and whether these efforts ameliorate the threats facing the species and reduce risks to its survival. Some protective efforts may be fully implemented, and empirical information may be available demonstrating their level of effectiveness in conserving the species. Other protective efforts are new, not yet implemented, or have not demonstrated effectiveness. We evaluate such efforts using the criteria outlined in the Policy for Evaluating Conservation Efforts ("PECE"; 68 FR 15100; March 28, 2003) to determine their certainty of implementation and effectiveness.

#### *Previous ESA Reviews and Findings*

In 1996 we reviewed the status of West Coast steelhead. As part of this review we determined that steelhead in Puget Sound did not warrant listing under the ESA (61 FR 41541; August 9, 1996). Subsequently we received and accepted a petition to re-evaluate the status of Puget Sound steelhead (70 FR 17223; April 5, 2005). We reviewed the new information and on March 29,

2006, published a proposed rule to list the Puget Sound steelhead DPS as threatened under the ESA (71 FR 15666). The DPS was proposed to include all naturally spawned anadromous winter-run and summer-run steelhead populations, in streams in the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington, bounded to the west by the Elwha River (inclusive) and to the north by the Nooksack River and Dakota Creek (inclusive), as well as the Green River natural and Hamma Hamma winter-run steelhead hatchery stocks. This proposal was informed by the conclusions of scientists on the Biological Review Team (BRT) who assessed the overall viability of this DPS. Based on this assessment, the BRT concluded that Puget Sound steelhead are likely to become endangered within the foreseeable future throughout all of their range. We also concluded that, at present, protective efforts in Puget Sound do not substantially mitigate the factors threatening the DPS's future viability, nor do they ameliorate the BRT's assessment of extinction risk. Additional details pertaining to these findings and the information reviewed for this DPS can be found in the documents cited above as well as agency status reviews (Busby *et al.*, 1996; NMFS, 2005).

On February 7, 2007 (72 FR 5648), we proposed to issue protective regulations for Puget Sound steelhead under section 4(d) of the ESA. For species listed as threatened, section 4(d) of the ESA requires the Secretary of Commerce (Secretary) to issue such regulations as are deemed necessary and advisable to provide for the conservation of the species. Such 4(d) protective regulations may prohibit, with respect to threatened species, some or all of the acts that section 9(a) of the ESA prohibits with respect to endangered species. Both the section 9(a) prohibitions and section 4(d) regulations apply to all individuals, organizations, and agencies subject to U.S. jurisdiction. The 4(d) regulations we proposed are contingent on a final listing decision, and any finalized 4(d) rule may prohibit the take of Puget Sound steelhead except for specified categories of activities determined to be adequately protective of these fish.

#### **Summary of Comments Received in Response to the Proposed Rule**

We solicited public comment on the proposed listing of Puget Sound steelhead for a total of 238 days and held one public hearing in Seattle, Washington (71 FR 15666, March 29, 2006; 71 FR 28294, May 16, 2006). We also sought technical review of the

scientific information underlying the proposed listing determination from seven independent experts. In response to the proposed listing we received over 30 comments by fax, standard mail, and e-mail. The majority of comments received were from interested individuals who submitted e-mails or letters. Comments were also submitted by federal, state and tribal natural resource agencies, fishing groups, environmental organizations, conservation organizations, and individuals with expertise in Pacific salmonids. The vast majority of respondents supported listing Puget Sound steelhead under the ESA. We also received comments from four of the independent experts from whom we had requested technical review of the scientific information underlying the March 2006 proposed listing determination. Copies of the full text of comments received are available upon request (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

Below we address the comments received that pertain to the listing determination for Puget Sound steelhead. The issues raised and our responses are organized into six general categories: (1) General Comments; (2) Comments on the Consideration of Hatchery Steelhead; (3) Comments on the Consideration of Resident *O. mykiss*; (4) Comments on the Assessment of Extinction Risk; (5) Comments on the Factors Affecting the Species; and (6) Comments on the Consideration of Protective Efforts/Mitigating Factors.

#### *General Comments and Comments on Process*

*Comment 1:* Most commenters supported listing Puget Sound steelhead under the ESA, and many expressed concern over the species' decline and the potential impacts of that decline on business and recreation. Some comments expressed concern over the fact that the current status review for Puget Sound steelhead was completed only 10 years after the previous review which found that a listing determination was not warranted.

*Response:* The BRT status review describes the various types of new information that are available since the review by Busby *et al.* (1996). In addition, there have been considerable scientific findings and policy development regarding the role of resident and hatchery *O. mykiss* in steelhead DPSs (see 70 FR 37204, June 28, 2005; 70 FR 67131, November 4, 2005; 71 FR 834, January 5, 2006). All of these considerations have been factored into this updated status review and support our determination that

Puget Sound steelhead now warrant listing as a threatened species under the ESA.

We recognize that steelhead are a prized gamefish in Puget Sound and that their decline has affected businesses and recreational pursuits. We will work with all stakeholders to help ensure that recovery planning proceeds apace so that Puget Sound steelhead continue to provide the spectrum of ecological, cultural, and economic benefits that underscore their status as the state fish of Washington.

*Comment 2:* Two commenters argued against listing steelhead at this time and instead recommended that we make a finding that listing is warranted but precluded or classify this DPS as a species of concern. One contended that because other ESA-listed species in Puget Sound (e.g., Chinook salmon) share habitat with this DPS, an additional listing in the region would add another layer of regulation with little resultant benefit to the species. Additionally, this commenter believed that listing steelhead would divert resources away from implementing a recovery plan for Chinook salmon.

*Response:* Our decision to list Puget Sound steelhead is based on the required assessments identified in section 4 of the ESA and guided by agency policies such as the PECE (68 FR 15100; March 28, 2003). Once a species has been proposed for listing, section 4(b)(6)(A) of the ESA does not allow us to issue a warranted but precluded finding. Such a finding is only permissible at the time of a proposed rule (see section 4(b)(3)(B)), not a final rule. Species of concern are those about which we have concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. This is not the case for Puget Sound steelhead, as evidenced by the findings of the BRT, and our assessment of the factors contributing to the decline of steelhead and efforts being made to protect the species.

We recognize that steelhead and threatened Puget Sound Chinook salmon share many streams and that actions benefitting one species would in many cases benefit the other. However, this fact did not alter our conclusions based upon our analysis of the threats facing West Coast steelhead under section 4(a)(1) of the ESA. Also, the species' overlap is not complete and there are a substantial number of independent streams, and upstream and tributary habitats in major river systems where only steelhead reside. In addition, steelhead use habitats differently and at different times than

other salmonids. As noted elsewhere in this final rule, we expect that the recently adopted recovery plan for Puget Sound Chinook (Shared Strategy Development Committee, 2007) will accrue benefits to steelhead as well as expedite recovery planning for this DPS. Listing steelhead could divert some resources in the short term; however, comments and information received from WDFW, Indian tribes, and other co-managers and stakeholders have made it clear that there is a strong commitment to improving steelhead populations and their management in Puget Sound and statewide. We too are committed to helping find and provide the resources needed to help foster active recovery planning for all Puget Sound salmonids.

*Comment 3:* One commenter suggested that the final rule would be more useful if it used a different format addressing the DPS's historic condition, current status with respect to viable salmonid population (VSP) parameters (McElhany *et al.*, 2000), management action impacts (past and projected), and which management actions are needed to improve DPS viability. This commenter believed that this would provide a more accurate and informative discussion of issues that are fundamental to developing any eventual recovery plan.

*Response:* Because this final rule is a listing determination and not a recovery plan, we have chosen instead to structure this rule in a manner that is consistent with the statutory framework and previous ESA listing decisions for West Coast salmonids. However, in our listing analysis we have identified current threats to the species' viability and considered the efficacy of efforts being made to protect the species. This has given us and Puget Sound stakeholders, many of whom actively participated in developing the recovery plan for Puget Sound Chinook (Shared Strategy Development Committee, 2007), a head start on recovery planning for Puget Sound steelhead. We also understand that the watershed-based resource management plans for steelhead currently under development in Puget Sound (WDFW, 2007) will incorporate VSP parameters and provide the detail required to identify management actions needed to promote recovery of steelhead.

*Comment 4:* One commenter recommended that we solicit the views of the British Columbia Ministry of Environment.

*Response:* We notified the British Columbia Ministry of Environment of the proposed ESA listing of Puget Sound steelhead but did not receive

comments or information from them. However, one of the peer reviewers of the BRT's status review is a fisheries scientist with British Columbia's Ministry of Water, Land and Air Protection and an expert on steelhead biology.

*Comment 5:* One commenter felt that the proposed listing fails to fully consider the tribes' role as managers and overlooks the significant costs on tribal resource management agencies and harvest opportunities associated with listing Puget Sound steelhead under the ESA.

*Response:* We recognize that the tribes have longstanding cultural ties to steelhead and steelhead fisheries, and that a number of tribes have treaty-based co-management rights and responsibilities. And we acknowledge that steelhead are of economic importance to Indian people and embody cultural, ceremonial, and social dimensions of tribal life to the degree that the species is a significant symbol of tribal identity (NMFS, 2004). We also understand that an ESA listing of Puget Sound steelhead may impact some tribal fisheries and resource management agencies, at least in the short term. Steelhead recovery will only succeed with the active involvement of affected tribes. We will continue to recognize the tribes as vital co-managers of this important resource in the hope that steelhead runs can be restored as quickly as possible to meet treaty obligations and the needs of present and future generations.

*Comment 6:* A peer reviewer and several commenters expressed concern about the lack of reliable data for this DPS. Another commenter expressed concerns about the adequacy of the peer review process as well as the lack of a co-manager review of the BRT's report.

*Response:* While more data would help resolve some areas of uncertainty, we have sufficient data to assess the ESA status of Puget Sound steelhead. Moreover, as required by section 4(b)(1)(A) of the ESA, we have relied on the best scientific and commercial data available to make this listing determination. We requested and received such data from a variety of interested parties, including state and tribal co-managers. These data and other information are cited in this final rule, agency status reviews (Busby *et al.*, 1996; NMFS, 2005), our proposed rule (71 FR 15666; March 29, 2006), and in the comments received on the latter and contained in our agency files (available for public inspection; see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

Several of the 13 BRT members are acknowledged experts on steelhead

biology in the Pacific Northwest, some with direct experience with the species in Puget Sound. As noted elsewhere in this final rule, we sought technical review of the scientific information underlying the March 2006 proposed listing determination from seven independent experts. All of the experts were selected based on their knowledge of steelhead biology. Four of them provided us with comments that were subsequently considered by the BRT and reflected in the agency's status review (NMFS, 2005). We also received and evaluated information from state and tribal co-managers on the proposed rule and the BRT's report.

*Comment 7:* Several commenters requested that NMFS re-open the public comment period after WDFW publishes an anticipated white paper pertaining to steelhead management. These commenters felt that the public should have the opportunity to review WDFW's management plan to determine what effect, if any, it may have on the extinction risks to Puget Sound steelhead and the NMFS listing of the DPS.

*Response:* On August 25, 2006, we received a letter from WDFW requesting our review of a July 21, 2006, draft report titled "Oncorhynchus mykiss: Assessment of Washington State's Anadromous Populations and Programs" (WDFW, 2006a). This report—commonly referred to as the steelhead "white paper"—was also made available to the general public for comment. We provided comments to WDFW on this report, noting that overall we found it to be a very comprehensive and useful compilation of what is known about the biology and management histories of Washington's steelhead populations. However, we did not believe that the availability of this report warranted re-opening the comment period on our proposed listing because the report was essentially a synthesis of what is known (much of which we had already reviewed) about Washington steelhead. In addition, the report was primarily designed to lay the foundation for the development of improved management plans.

In our proposed rule we stated that "[i]f WDFW completes its new steelhead management plan prior to the publication of the final rule we anticipate considering it in developing our final listing determination." However, a final Puget Sound steelhead management plan has not yet been developed.

*Comment 8:* One letter requested clarification of named populations in the 2005 status review (i.e., if references to the Lake Washington

winter run include steelhead in the Cedar River).

*Response:* Population information on Lake Washington winter run steelhead was provided by WDFW. Lake Washington steelhead data included information on fish spawning in the Cedar River, Issaquah Creek, and Bear Creek, with the Cedar River contribution providing the majority of the escapement (number of adults that return to the spawning grounds). The BRT also reviewed fish passage information from the Lake Washington Ship Canal fish ladder, which would include fish spawning throughout the basin. The WDFW Salmonid Stock Inventory database identifies a number of tributaries, including the Cedar River, in the Lake Washington Basin where spawning steelhead have been observed.

*Comment 9:* One letter requested clarification of the location of "impassible barriers" and suggested the definition include an approximate location.

*Response:* In our status review (NMFS, 2005) we identified some of the major natural and manmade barriers to steelhead (e.g., Snoqualmie Falls and Elwha Dam), emphasizing the general role that longstanding barriers play in isolating the anadromous and resident life forms. During our review it was not possible to identify the specific locations of all impassible barriers, in particular natural waterfalls and velocity/stream gradient barriers. Our biologists (see ADDRESSES) or those from the tribes or state and Federal agencies can assist in determining whether a specific barrier is passable or not.

*Comment 10:* One commenter noted that fish passage above Landsburg dam became possible in September 2003, not 2002 as stated in the BRT's report (NMFS, 2005).

*Response:* The statement in the BRT report should have stated that "Most of the information relevant to this question is from the Cedar River, where research is ongoing on resident and anadromous fish below and above Landsburg Dam, opened to steelhead migrating upstream in 2003, after decades of isolation."

*Comment 11:* We received one correction comment, to add the South Fork Tolt River to the list of rivers under the Federal Energy Regulatory Commission agreement for instream flow management.

*Response:* The statement in the proposed rule (at 71 FR 15677; March 29, 2006) should have read, "Instream flows are also provided through agreements negotiated with the Federal Energy Regulatory Commission on the

Skagit, Sultan, Snoqualmie, South Fork Tolt, and Nisqually rivers."

*Comment 12:* A few commenters provided comments and information relevant to making a critical habitat designation for Puget Sound steelhead.

*Response:* We will consider this information as we prepare a proposal to designate critical habitat for this DPS.

#### *Comments on the Consideration of Hatchery Steelhead*

*Comment 13:* Several commenters expressed strong concerns about the negative impacts of hatchery steelhead in this DPS, urging that much more aggressive steps be taken to reduce these impacts. Some commenters disagreed with the decision to include Green River natural and Hamma Hamma winter-run hatchery steelhead in the DPS. They argued that protecting hatchery steelhead under the ESA by listing them alongside wild steelhead was inappropriate, particularly because research suggests that hatchery fish have a negative impact on the productivity of wild steelhead. In contrast, one commenter recommended hatchery steelhead be included in the DPS if they are derived from a local wild stock.

*Response:* On June 28, 2005, we finalized a new policy for the consideration of hatchery-origin fish in ESA listing determinations ("Hatchery Listing Policy;" 70 FR 37204). Under the Hatchery Listing Policy hatchery stocks are considered part of an evolutionarily significant unit (ESU) if they exhibit a level of genetic divergence relative to the local natural population(s) that is no more than what occurs within the ESU (70 FR 37204; June 28, 2005, at 37215). The considerations that informed the Hatchery Listing Policy for ESUs are equally valid for steelhead DPSs. We acknowledge that hatchery fish can have a negative impact on naturally-produced fish, and in our proposed rule we noted that adverse impacts from hatchery programs may be contributing to the declines in natural steelhead productivity. However, the Hatchery Listing Policy is based in part on the recognition that important components of the evolutionary legacy of West Coast salmon and steelhead can be found in hatchery stocks, and that many hatchery stocks are derived from, and not significantly diverged from, the naturally spawning stocks. We developed a test for including hatchery stocks in an ESU based upon a consideration of "whether a particular hatchery stock reflects an ESU's 'reproductive isolation' and 'evolutionary legacy'" (70 FR 37204; June 28, 2005, at 37208). Those tests are equally applicable to determining

whether hatchery stocks reflect the discreteness and significance of steelhead DPSs.

As described in our proposed rule and consistent with recent final listing determinations for 16 West Coast salmon ESUs (70 FR 37160; June 28, 2005) and for 10 West Coast steelhead DPSs (71 FR 834; January 5, 2006), we believe it is appropriate to list two locally-derived hatchery steelhead populations (Green River natural and Hamma Hamma winter-run) along with naturally-produced steelhead in the Puget Sound DPS. This decision is informed by our Hatchery Listing Policy, the conclusions of the Salmon/Steelhead Hatchery Assessment Group (SSHAG; NMFS, 2005), and the deliberations of the BRT. The BRT concluded that these hatchery stocks meet the Hatchery Listing Policy's test for inclusion in the DPS.

As a separate matter, the BRT also explicitly considered both the potential positive and negative effects of hatchery production on the viability of Puget Sound steelhead. The BRT felt that the Green River natural and Hamma Hamma winter-run hatchery programs have the potential to benefit natural steelhead populations in their respective rivers, but acknowledged that both programs are relatively recent and have not collected sufficient data to demonstrate any contributions with any certainty. The BRT did note that the Hamma Hamma program does appear to have successfully increased the number of natural spawners in the population (although the relative increase in natural spawners is large, the absolute increase in natural spawners is modest), but the success of the program cannot be fully evaluated until the naturally produced offspring of the hatchery-origin fish return and reproduce.

*Comment 14:* Several commenters contended that past and present harvest and hatchery management have essentially eliminated the important early returning life-history component of wild steelhead populations in this DPS. They argue that, despite WDFW's intent to temporally separate the hatchery run from the wild run, data demonstrate that hatchery males overwinter, residualize (remain in fresh water), and ultimately breed with wild females. This commenter contended that we failed to adequately evaluate the association of steelhead hatchery programs with overutilization of Puget Sound steelhead. This commenter believed that any evaluation of the risks of adverse genetic and ecological impacts from hatchery programs on the distribution, productivity, and diversity of Puget Sound steelhead should be

made in the context of that fundamental relationship between hatchery management and overutilization.

*Response:* There is some information available on the historical return and spawn timing of Puget Sound steelhead, but it is limited to catch records and anecdotal information. The BRT was unaware of any documentation suggesting a spawning habitat preference exhibited by the early component of the winter run. The BRT was concerned about the decline (or elimination) of this early component to life history diversity, but was unable to establish the magnitude of this loss.

The existence of an early run component of naturally-produced steelhead was discussed by the BRT in relation to the effects of a directed harvest of early run, mass-marked (adipose-clipped) hatchery steelhead (i.e., Chamber's Creek winter run). The BRT reviewed information on hatchery-wild interactions, specifically the potential for interbreeding between hatchery and naturally-produced fish in Washington coastal streams. This information was important in the BRT's increased concern about hatchery effects relative to the 1996 BRT Status Review (Busby *et al.*, 1996).

*Comment 15:* One commenter questioned the assertion that the Chambers Creek hatchery stock is out-of-basin for all waterways in the DPS. This commenter pointed out that originally, the Chambers Creek stock was a composite of wild fish trapped from a variety of Puget Sound rivers, including the Green River. Therefore, Chambers Creek hatchery fish may not be out-of-basin for all waterways, such as the south sound rivers. The commenter requested that NMFS clarify how much composite stock or hatchery selection is necessary for a stock to change to the point of being considered out-of-basin.

*Response:* The commenter is correct that the Chambers Creek hatchery stock (actually several broodstocks derived from the original Chambers Creek broodstock) is technically not an "out-of-basin" stock. Crawford (1979) reviews the history of this stock, including the evolution of the Chambers Creek and "egg bank" steelhead program. But this does not change our conclusion that it has sufficiently diverged from the remainder of the DPS such that it should no longer be considered part of this DPS. The BRT reviewed the findings of the SSHAG (NMFS, 2005) for this broodstock and noted that the intentional and unintentional selection of life history traits was a major factor in the SSHAG evaluation. The advancement in run-

and spawn-timing of the Chambers Creek winter-run steelhead (almost 2 months) and acceleration of the onset of smoltification (1 year instead of 2 years) have dramatically altered the reproductive connectivity between the hatchery-origin and naturally-spawning adults. Additionally, the sole use of hatchery-origin fish for hatchery broodstocks greatly increases the potential for hatchery domestication, and there is evidence that Chambers Creek winter-run steelhead have a poor rate of natural spawning success (NMFS, 2005).

Given the paucity of information on hatchery steelhead life-history traits in the natural environment and their fitness effects on naturally-spawning populations, it is not possible to "quantify" a threshold for exclusion. This is why we convened a SSHAG to review the best available information and provide us with conclusions regarding the relationship of hatchery fish to DPS composition and viability.

*Comment 16:* Several commenters raised questions about the origin of steelhead currently spawning naturally in the Lake Washington system, particularly the Cedar River and Sammamish watershed. Some of these commenters believe that steelhead currently spawning naturally in this system are derived from Chambers Creek hatchery plants and not naturally spawning fish native to this system.

*Response:* Genetic analysis by Marshall *et al.* (2006) on resident and anadromous *O. mykiss* in Lake Washington indicates that there are significant genetic differences between native Cedar River fish and Chambers Creek-derived hatchery winter steelhead. We therefore consider the naturally spawning populations in this system to be part of the Puget Sound DPS.

In their review, the BRT cautioned that although WDFW's conclusion that there is little overlap in spawning between natural and hatchery stocks of winter steelhead throughout the ESU is generally supported by available evidence, for many basins it is based largely on models and assumptions regarding run timing rather than on empirical data.

*Comment 17:* One commenter provided information correlating increasing hatchery smolt releases with declining adult returns, suggesting a "density barrier" to population expansion. This commenter also expressed concerns about hatchery smolts remaining in fresh water rather than migrating to the ocean (residualizing), and preying upon or spawning with natural steelhead

(particularly by residual precocious males). Another commenter echoed many of these concerns related to the release of millions of hatchery fish into this DPS, and one believed that we should have given greater attention to this issue in the status review and requested that at a minimum we do so in the final listing determination.

*Response:* The BRT expressed concern about the increasing numbers and overall proportion of hatchery-origin smolts released into rivers in this DPS; however, there is not sufficient information on behavioral and resource competition, predation, or other ecological interactions to assess the "density barrier" assertion. Factors such as declining freshwater, estuarine, and marine productivity would independently or in combination with hatchery effects produce the same effect. The myriad of factors that could produce the trends observed make it very difficult to associate correlated responses with causal factors. We will continue to address issues related to artificial propagation as we proceed with ESA consultations, permitting, and recovery planning in Puget Sound.

#### *Comments on the Consideration of Resident O. mykiss*

*Comment 18:* Several commenters disagreed with our application of the DPS Policy criteria in separating the resident and anadromous forms of *O. mykiss* in this DPS. One commenter cited the U.S. Fish and Wildlife Service's (FWS) listing of bull trout (*Salvelinus confluentus*; 64 FR 58910, November 1, 1999) as precedent for listing together the different life history forms because all are essential to the survival of the DPS. Another commenter felt resident fish should be considered in the context of protective measures for steelhead. Other commenters supported the listing of the two life forms separately, but encouraged further research to increase our understanding of the interactions between the two. These latter commenters encouraged NMFS to consider the relationship between resident and anadromous *O. mykiss* in the course of other ESA activities (e.g., recovery planning).

*Response:* In our recently updated listing determinations for West Coast steelhead (71 FR 834; January 5, 2006), we responded to similar comments regarding our application of the DPS policy in delineating "species" of *O. mykiss* under the ESA. The reader is referred to these determinations (see 71 FR 834; January 5, 2006, at 836 through 841) for more detailed information and discussion of the above and other issues

relating to our delineation of steelhead DPSs.

NMFS did not include resident and anadromous *O. mykiss* in the same DPS because under the DPS policy, a population or group of populations is considered a DPS if it is first "discrete" from other such population units, and then only if it is "significant" to the taxon as a whole. Whether a given life form contributes to the viability of the species does not necessarily determine whether that life form is "markedly separated" from other components of the species. For example, a subspecies will often contribute significantly to the overall viability of a species but still be markedly separated from other subspecies.

In its 1999 listing determination for the Coastal-Puget Sound bull trout DPS (64 FR 58910; November 1, 1999) the U.S. Department of the Interior found that the resident, migratory, anadromous, amphidromous, fluvial, and adfluvial life-history forms were not discrete because they interbreed. DOI concluded, as the commenter asserts, that reproductive exchange and genetic similarity between different life-history forms requires that they be included as parts of the same DPS, regardless of any "marked separation" in phenotypic traits. While we acknowledge that the expression of a range of life histories in bull trout and other fish species (e.g., coastal cutthroat trout) may raise similar issues to those we confronted in delineating DPSs of *O. mykiss*, there are important differences between *O. mykiss* and these other species. In addition to expressing anadromy (the life-history pattern in which fish spend a large portion of their life cycle in the ocean and return to fresh water to breed), bull trout and coastal cutthroat trout express amphidromy (migration between fresh and salt water that is for feeding and overwintering, as well as breeding). While the anadromous and resident forms of *O. mykiss* differ clearly in ocean-migratory behavior and associated biological factors, the migratory behavior and associated physical, physiological, and ecological factors are comparatively blurred among the life-history forms and stages of bull trout and coastal cutthroat trout. Accordingly, application of the DPS policy to these various species may very well produce different results due to the varying level of separation among their life-history forms.

Efforts to protect resident *O. mykiss* could be considered in the context of efforts being made to protect the species, because the health of related resident *O. mykiss* populations may have a bearing on the viability of the

anadromous populations. No information was presented, however, that would lead us to conclude that any protective efforts for rainbow trout are likely to change the steelhead DPS's risk of extinction.

It is essential to improve our understanding of the interactions between the anadromous and resident life-history forms of *O. mykiss*. Additional scientific research could elucidate the factors affecting reproductive exchange between the two life forms, as well as their respective contributions to the viability of *O. mykiss* as a whole. These considerations may prove to be important in the context of recovery planning and assessing risks faced by the *O. mykiss* species as a whole. At present, there is insufficient information to evaluate whether, under what circumstances, and to what extent the resident form may contribute to the viability of steelhead over the long term (NMFS, 2005; Recovery Science Review Panel, 2004; Good *et al.*, 2005; Independent Scientific Advisory Board, 2005).

*Comment 19:* One letter commented on the BRT's statement that rivers west of the Cascades rarely support resident rainbow trout populations unless the watersheds have been significantly modified, and resident native populations appear to be relatively rare above natural barriers. This commenter argued that rainbow trout are present in many rivers west of the Cascade Mountains in those areas where the anadromous life history form is not dominant, including the upper Skagit River tributaries and the upper Snoqualmie River. One commenter felt it might be appropriate to add a discussion of the unique adfluvial (migrating between lakes and streams) life history pattern of a portion of the Cedar River *O. mykiss*.

*Response:* Rainbow trout are present in some of these western Washington systems, but they are rare above natural barriers to anadromous migration. Although there is potential for resident trout to function in a temporary manner to help maintain *O. mykiss* populations through extreme periods of low marine survival, this life history form is unlikely to maintain connections to other populations a critical role for the anadromous life history in contributing to the ESU's diversity and viability. Evidence for the level of interbreeding between resident and anadromous forms is limited and appears to vary considerably between coastal and inland *O. mykiss* populations, as well as on a basin by basin basis.

It is possible that this interaction may provide a short-term demographic

resiliency, although loss of the anadromous form would result in a catastrophic decline in diversity, and probably also spatial structure. Ultimately, the BRT's task was assessing the longer term risk of extinction facing Puget Sound steelhead, and to accomplish this task it focused on the primary data available: trends in abundance and productivity of anadromous fish. Although the *O. mykiss* life history appears to be extraordinarily plastic, and resident and anadromous fish both may produce the alternate life history form, the extent to which resident fish produce anadromous adults is largely unknown. In addition, the freshwater "trout niche" in Puget Sound is already occupied primarily by native coastal cutthroat trout, and the extent that resident *O. mykiss* alone can maintain self-sustaining natural populations in direct competition with cutthroat trout is unknown.

The adfluvial life form in the Cedar River appears to be somewhat unique to Puget Sound, and may be related to the highly modified nature of the river basin, especially its redirection into Lake Washington from the Green River Basin and the longstanding effects of Landsburg Dam in dividing the watershed.

#### *Comments on the Assessment of Extinction Risk*

*Comment 20:* Most commenters supported a listing of Puget Sound steelhead as a threatened species, although one recommended endangered status due to concerns about efforts being made to protect the species. One commenter provided data for five steelhead populations that indicate the largest populations of winter-run steelhead have experienced a period of pronounced decline in abundance, recruitment, and productivity beginning around 1989 and continuing to the present. One commenter suspected that the declines are likely to be DPS-wide. This commenter expressed concern that there is no information on the productivity of summer populations within the DPS and that this lack of information supports an endangered listing.

*Response:* We have reviewed the comments and new information provided by commenters and believe that Puget Sound steelhead do warrant listing as a threatened species. The BRT was presented with information received during the comment period and concluded that there was no basis for changing their conclusion that Puget Sound steelhead are likely to become endangered within the foreseeable

future throughout all of their range. Nor was the BRT aware of any new or forthcoming information that would warrant a reassessment of this conclusion. Consistent with the commenter's concern about DPS-wide declines, we note that the BRT stated that "marked declines in natural run size are evident in all areas a pattern that reflects widespread reduced productivity of natural steelhead" (NMFS, 2005).

*Comment 21:* A peer reviewer noted that the BRT's risk assessment was based on expert opinion due to the lack of sufficient empirical data. This reviewer noted that such data constraints limit the review and its veracity but acknowledged that the BRT's methods cannot be faulted. He noted that several times "there was the mention of negative impact of hatchery fish on wild, and that hatchery fish have apparently made no contribution to wild adult returns. I suspect this is largely speculation, albeit accurate in my view." He also made several specific recommendations: (1) Explaining how data were obtained and any uncertainties with the data; (2) including an analysis from WDFW's Snow Creek studies (especially with respect to post-smolt migration pathways); (3) including the cited report by Light (1987) in the references; (4) evaluating cutthroat hybridization with steelhead; and (5) including an assessment of how climate change may affect Puget Sound steelhead. The latter recommendation was also made by another commenter, noting that the decline in steelhead abundance has coincided with a period of high hydrological variability during which fish are vulnerable to closely timed high and low flow events.

*Response:* The BRT relied heavily on catch and escapement data provided by WDFW for its risk analyses; this information constitutes the best available data, but there is still considerable uncertainty in the data, particularly for some populations.

The commenter is correct that our knowledge regarding the contribution of hatchery fish to natural steelhead reproduction in Puget Sound is limited. The conclusion that hatchery programs threaten the viability of Puget Sound steelhead is based on several steelhead studies in the Pacific Northwest published between 1977 and 2007, all of which show a depression in the reproductive performance of domesticated or out-of-basin hatchery steelhead spawning in the wild. The BRT concluded that efforts by hatchery managers to prevent natural spawning by Chambers Creek winter-run and

Skamania summer-run hatchery fish were unlikely to be completely effective, with potentially adverse consequences. The BRT concluded that opportunities for genetic and ecological interactions between hatchery and wild steelhead in Puget Sound were substantial, with significant potential to reduce natural productivity. Moreover, the fixed March 15 threshold used by WDFW to separate spawning censuses of hatchery and wild fish confounds evaluations of those potential hatchery fish effects (i.e., spawning hatchery and wild fish may overlap later than that date), thus increasing scientific uncertainties. Until studies more clearly identify the effects of interbreeding between hatchery and wild steelhead, prudent management would reduce the opportunity for interaction between hatchery and wild fish (e.g., by eliminating "outplanting" and by using hatchery broodstocks genetically and phenotypically similar to local wild fish).

Available research on Snow Creek winter-run steelhead represents one of Puget Sound's longest term, watershed-scale studies on this species. However, the BRT did not formally include Snow Creek winter-run steelhead in its analysis of DPS risk because this population exhibits some sharp differences from other steelhead on the Olympic Peninsula and Puget Sound. The BRT concluded that the Snow Creek system is not representative of the level of human development seen in many other Puget Sound streams. The watershed enters Discovery Bay, an eastern Strait of Juan de Fuca tributary, so steelhead do not have to pass through a long fjord on their way to and from their freshwater home as do other Puget Sound stocks. There is some development along Snow Creek (including one of the most extensive clear-cuts in Washington state), but the stream lacks the urban and industrial changes seen in many other areas. Additionally, Snow Creek is a relatively small lowland watershed, lacking many of the features and species interactions found in larger river basins. Based on these differences, the BRT members were reluctant to extrapolate trends in the Snow Creek steelhead population to those of southern Puget Sound, for example. The BRT examined Snow Creek steelhead abundance data to evaluate their patterns relative to other Puget Sound steelhead trends, and it appears that the recent trend in abundance of Snow Creek steelhead is similar to that observed for several Puget Sound steelhead populations, including some surrounding populations from the Strait of Juan de

Fuca; Snow Creek steelhead show a recent sharp decline in adult abundance with a very recent modest upswing.

The BRT discussed rainbow/steelhead and cutthroat hybridization in its review. Although specific areas with relatively high incidences of hybrid fish have been identified, it is unclear how extensive this occurrence is. Additionally, in the absence of a historical baseline, it is unclear if the hybridization observed represents a natural process or one that is influenced by anthropogenic activities such as fish introductions or habitat disturbances. This topic is in need of concerted research before an evaluation in the listing context would be meaningful.

The BRT did not specifically evaluate how climate change might affect Puget Sound steelhead because such an evaluation would be highly speculative given the state of available evidence. In the proposed rule, we acknowledged that variability in ocean and freshwater conditions can have profound impacts on the productivity of salmon and steelhead populations. Natural climatic conditions have at different times exacerbated or mitigated the problems associated with degraded and altered riverine and estuarine habitats. We conclude that ocean-climate change and variability is a factor contributing considerable uncertainty to the viability of the Puget Sound steelhead DPS into the foreseeable future.

*Comment 22:* One commenter presented findings indicating that populations in the Skagit and Snohomish have a low risk of extinction. This commenter contended that winter-run steelhead in the Skagit, Snohomish-Skykomish, Pilchuck, Snoqualmie, and Green rivers and Morse Creek and other Strait of Juan de Fuca streams had a relatively low risk of extinction (WDFW, 2006b).

*Response:* The BRT did not find that extinction risk was high in the Skagit and Snohomish River winter-run populations; what the BRT found was that abundance had declined significantly in both since the 1996 review and that declining trends were evident in recent years. This pattern contrasted with that evidence in the previous review of steelhead in Puget Sound (Busby *et al.*, 1996), and was cause for concern among all BRT members. The other populations mentioned are small and therefore vulnerable to unpredictable events, even though their risk of imminent extinction is also probably low. The BRT based its conclusion about extinction risk for Puget Sound steelhead primarily on: (1) The widespread declines in adult abundance (total run size), despite

significant reductions in harvest in recent years (strongly implying declining productivity of naturally spawning steelhead); (2) the threats to diversity posed by use of two hatchery stocks of steelhead inconsistent with wild stock diversity throughout the DPS; (3) the declining diversity in the DPS, including the uncertain but weak status of summer-run fish in the DPS; and (4) a reduction in spatial structure for steelhead in the DPS. The most striking difference in the BRT and WDFW reviews was the use of total run size by the BRT and escapement by WDFW. NMFS believes that by not including harvest, the WDFW analysis masks declines in overall productivity. The lack of a recent resurgence in abundance of Puget Sound steelhead since ocean conditions in the region have generally improved and since harvest rates have declined are key to understanding the factors that limit steelhead productivity in this DPS.

*Comment 23:* One commenter questioned our analysis of abundance trends for Puget Sound steelhead, noting that it differed from recent analyses by WDFW (in particular for the Skagit River) (WDFW, 2006a; WDFW, 2006b). Several other commenters expressed concern that WDFW's computed escapement goals were too low and ignored historical records indicating that some streams supported considerably larger runs of steelhead. Two commenters believed that the historical run size of Puget Sound steelhead may have been twice that estimated by the BRT.

*Response:* The BRT's risk assessment was based primarily on total run size, not escapement. The BRT believes that trends in run size are a better indicator of productivity and abundance of naturally reproducing fish; in addition, run size trends are independent of any changes in WDFW's escapement goals for Puget Sound steelhead populations.

With a few exceptions, there was little information that the BRT could use to develop statistical trends in abundance. A form of population viability analysis was provided by one commenter to the BRT for five of the largest steelhead populations in Puget Sound. This was possible because relatively complete adult abundance data (in the form of expanded redd counts) and age structure were known for these populations. The BRT reviewed these analyses and concluded that they were useful in corroborating additional analyses of trends in productivity and abundance. The BRT also concluded that the utility of this approach was limited by the use of an average age structure taken from historical data to

estimate recruits and by failing to account for errors in estimates of spawner abundance. Concerns regarding the use of an average age structure in evaluating recruitment relationships may be relatively minimal compared to other factors, but the BRT felt that the fact that this age structure is based on much older data than the spawner-recruit time series may impose undue bias on the analyses. Although the run size and escapement data used in the commenter's analysis for the five populations were recent (through 2001–2003, depending on the population), the age structures were not. The age structure data were obtained from scales and tags recovered in the late 1980s and early 1990s, a period not coincident with the abundance data. Failing to account for temporal variability in age structure can bias estimates of productivity by overestimating recruitment in small cohorts and underestimating recruitment in large cohorts. Furthermore, and more importantly, the errors surrounding the estimates of spawner abundance remain unknown (but are probably quite high, e.g., the proportion of redds dug by hatchery-origin steelhead). Thus, the BRT concluded that the commenter's analysis had significant limitations. In its own analysis, the BRT could not avoid all these sources of bias but tried to minimize them by basing calculations on empirical age structure distributions that varied over time, where they were available, and identifying where this was not possible.

The BRT also noted that the fit of the stock-recruit data in the commenter's analysis was not evaluated quantitatively, and the BRT therefore attempted to fit these data to alternative models. In general, the fit of the data to either Ricker or Beverton-Holt stock-recruit models was very poor; for each of the five populations, a simple density-independent model such as the random-walk model with trend provided fits equally as good. Nevertheless, the fits to the random-walk model with trend were also poor.

The BRT therefore used several analyses to look for emergent patterns in the abundance and productivity trends, including estimates of trend, population growth rates, and estimates of recruits per spawner. Analysis of population growth rates does not account for density dependent productivity; however, the BRT's ability to detect such factors with the available data was limited because of the scientific uncertainties and assumptions associated with the spawner-recruit relationships. Nevertheless, the conclusions drawn from the BRT's



analyses were remarkably similar to those drawn from the commenter's analyses, despite limitations in the methods of both of them. Both the BRT and commenter's analyses express concern over low abundance and eroding productivity in even the largest and most robust populations in the DPS.

Any effort to model future population trends should account for recurring cyclic effects (such as ocean productivity cycles caused by decadal oscillations and marine upwelling) and long-term trends (such as freshwater habitat changes). The available data do not allow us to identify and partition these types of effects, which led the BRT to employ the more conservative approach of not assuming population improvements as a result of potential future cyclic improvements in ocean productivity.

Historical estimates of Puget Sound steelhead run size were based on expansions of commercial harvest (in pounds or fish) in the late 1800s and early 1900s. Given the uncertainties in estimating the catch, fishing effort, and historical average size, it is not surprising that there would be substantial differences in estimates. Nevertheless, estimates derived by the BRT and those submitted by the commenters indicate that there has been a substantial decline in the abundance of naturally-produced steelhead in the last 100 years.

*Comment 24:* One commenter requested that we clarify our use of the term "viability" as it pertains to salmonids.

*Response:* As described in McElhany *et al.* (2000), a viable salmonid population is an independent population of any Pacific salmonid (genus *Oncorhynchus*) that has a negligible risk of extinction due to threats from demographic variation (random or directional), local environmental variation, and genetic diversity changes (random or directional) over a 100-year time frame.

*Comment 25:* One commenter presented findings indicating that the number of winter steelhead spawners was above the state's management goal in 67 percent of the watersheds assessed, the number of winter steelhead spawners had or were expected to increase relative to the review by Busby *et al.* (1996), or a substantial number of resident *O. mykiss* were present. In contrast, other commenters believed that state management goals for steelhead had been set too low and would suggest that Puget Sound steelhead are healthier than they really are. Two commenters addressed the spatial distribution of

steelhead and one of these contended that the percentage of the historical habitat occupied by the Puget Sound steelhead DPS is consistent with other non-listed DPSs.

*Response:* We have not reviewed in detail the state's management goals for winter steelhead and cannot assess whether the levels are appropriate to ensure the long-term viability of the DPS. Such a review should also consider summer steelhead and will need to occur in partnership with our state and tribal co-managers during ESA consultations and permitting reviews, and with all interested stakeholders during recovery planning. We do note that more than half of the watersheds identified as above management goals for winter steelhead have relatively small runs, each averaging 102 fish or less from 2002–2005 (WDFW, 2006b). We also note that the BRT did express concerns over reductions in escapement goals for steelhead runs in several watersheds, including the relatively large run in the Skagit River.

The BRT reviewed the most recent abundance data for 2005 and the projections for 2006 (WDFW, 2006b). These data, which were not available prior to our proposed rule, indicate that winter steelhead abundance in 2005 was actually lower than the 2004 estimates in every watershed reviewed. Moreover, in all but one watershed, the 2006 projections are also lower than the 1991–1994 average abundance considered in our earlier status review (Busby *et al.*, 1996). These data do not suggest a lessening of abundance-related risk for this DPS.

The evidence for a substantial number of resident fish appears to be restricted to a single watershed (Lake Washington). As noted in a previous response, there is insufficient information to evaluate whether, under what circumstances, and to what extent the resident form may contribute to the viability of steelhead over the long term. Additional scientific research is needed to more fully understand the roles and interactions of the anadromous and resident life forms.

The percentage of historical habitat still occupied by Puget Sound steelhead is one of many parameters that we considered in making this final listing determination. While the data referenced by one commenter (WDFW, 2006a) suggest that this percentage is high relative to other ESA-listed DPSs, the data also indicate that watersheds with some of the highest production potential (e.g., the Skagit River and Green/Duwamish River) have potentially suffered the greatest loss in habitat. In addition, these data do not

reveal the related and significant decline in the quality of remaining habitat highlighted by the BRT (NMFS, 2005) and in our proposed rule (71 FR 15666; March 29, 2006).

#### *Comments on the Factors Affecting the Species*

*Comment 26:* Several commenters agreed with our determination that habitat loss is a principal factor limiting the viability of the DPS. One commenter believed that we failed to focus on habitat limiting factors particular to steelhead (e.g., susceptibilities during extended freshwater rearing) and believed that degraded habitat exerts the greatest influence on steelhead survival. Other commenters believed that we provided a superficial treatment of the biological and demographic conditions of the DPS and as a result presented a poorly grounded conclusion that habitat modification and destruction is the principal limiting factor for Puget Sound steelhead. One commenter believed that some habitat restoration efforts are misguided (e.g., large woody debris placement) and actually damage the river channel.

*Response:* We believe that we have accurately portrayed the role that habitat loss and modification have played in the decline of this DPS. Habitat issues were discussed at length by the BRT, and several of the 13 BRT members (including scientists from four Federal agencies) have extensive knowledge working with steelhead habitat issues in Puget Sound. We also base our assessment on more than 8 years of consultations for other ESA-listed species, namely Chinook and summer-run chum salmon, that share many habitat areas with Puget Sound steelhead. The vast majority of our ESA consultations involve evaluating actions that affect salmonid habitat. We have also been actively engaged in the development of numerous ESA habitat conservation plans affecting dozens of Puget Sound watersheds and have played a significant role in the development and recent adoption of a recovery plan for Puget Sound Chinook. We will address issues specific to steelhead as we continue working with these stakeholders and co-managers to determine what if any changes are needed to actions that modify salmonid habitat (including restoration efforts).

*Comment 27:* Two commenters did not agree with our assessment regarding the overutilization of Puget Sound steelhead for commercial, recreational, scientific, or educational purposes. They believed that overutilization likely is a factor limiting the viability of this DPS and argued that even low mortality

from harvest could continue to limit the viability of the DPS. One took exception to the BRT report's characterization that the Skagit River escapement goal was recently lowered to "support harvest" and was cited as one of the reasons for the proposed listing.

*Response:* We did not receive new information to support a change in our conclusion that overutilization for recreational purposes was a factor that contributed to the past decline of Puget Sound steelhead populations but is not believed to be a primary factor limiting the viability of the Puget Sound steelhead DPS into the foreseeable future. We will, however, actively consult with state and tribal co-managers under the ESA and review harvest and associated hatchery strategies for this DPS to ensure that they do not jeopardize its continued existence.

The BRT acknowledged that questions regarding carrying capacity were a primary impetus for co-managers to reduce the escapement goals in the Skagit River basin. The BRT's statement reflects a general concern by the BRT that the Skagit River (one of the largest producers of steelhead in Puget Sound) may be subjected to reduced escapements at a time when the basin's abundance is much reduced from the past.

*Comment 28:* We received a number of comments regarding the role of tribal netting in the overutilization of steelhead in Puget Sound. These commenters felt that tribal fishing is an important aspect of overutilization of the DPS and needs either greater oversight or a complete moratorium in order to protect steelhead populations. One commenter argued that tribal fishing is not monitored enough by authorities and so take numbers are higher than what is allowed.

*Response:* We have not received information that would lead us to the conclusion that tribal fisheries overutilize Puget Sound steelhead. A number of Puget Sound tribes have federally-recognized treaty rights to fish for steelhead, and in most areas their fisheries target hatchery fish. The tribes in many cases have curtailed their fisheries or refrained from fishing to conserve salmon and steelhead. We will continue working with the tribes to address harvest and other issues that affect the long-term viability of Puget Sound steelhead and treaty-based fisheries.

*Comment 29:* NMFS received several comments disagreeing with the assertion that disease and predation are not factors limiting the viability of the DPS. Commenters felt that this issue

deserves greater research and requested that NMFS acknowledge uncertainty about the role these factors play in the decline of the DPS. One commenter claimed that low abundances, diversity, and distribution, limited habitat, and poor productivity make the DPS more vulnerable to the effects of disease and predation.

*Response:* Additional research is needed to determine if and how disease and predation, in combination with other factors, may limit the viability of Puget Sound steelhead. It is our understanding that little research on steelhead is currently being undertaken in these important areas.

*Comment 30:* There was general agreement by commenters that no single factor described in Section 4(a)(1) of the ESA and NMFS' implementing regulations (50 CFR part 424) has caused the decline of Puget Sound steelhead. Many commenters felt that a primary focus for recovery of the DPS should be an improvement of hatchery practices. Others believed that habitat restoration and protection are essential to the recovery of the DPS. In particular, some commenters felt that hydropower dams, floodplain development, water withdrawals, and logging are factors in the decline of the DPS that must be addressed in recovery planning.

*Response:* These and other factors have contributed to the decline of Puget Sound steelhead and will need to be addressed in recovery planning for this DPS. We believe that the recent Shared Strategy for Puget Sound (Shared Strategy Development Committee, 2007) provides an excellent foundation upon which to build and address issues and risk factors unique to Puget Sound steelhead. We are also encouraged by WDFW's progress in developing statewide and regional plans for steelhead to promote policies, strategies, and actions that will improve steelhead management in Puget Sound and elsewhere.

#### *Comments on the Consideration of Protective Efforts/Mitigating Factors*

*Comment 31:* Two commenters agreed with our determination in the proposed rule that existing protective efforts, including the Shared Strategy for Puget Sound (Shared Strategy Development Committee, 2007), hatchery reform efforts, and Habitat Conservation Plans, are not adequate to remedy the harmful factors that are depressing Puget Sound steelhead. Others believed that habitat protection and restoration provisions, including the Washington Forest Practices and Governor's Puget Sound Initiative, are far more substantial than those in place at the time of our initial

status review (Busby *et al.*, 1996). Many expressed concern that we would inappropriately apply our PECE policy and decide that listing is not warranted. Another requested clarification of which land-use regulations across Puget Sound do not adequately address the continued threats from habitat degradation and modification and which presently unregulated activities, require regulation to protect the habitat of the DPS.

*Response:* We have not received information to support changing our conclusion that current protective efforts collectively do not provide sufficient certainty of implementation and effectiveness to substantially ameliorate the level of assessed extinction risk for Puget Sound steelhead. While we acknowledge that many of the ongoing protective efforts are more substantial than those in place when we originally reviewed the status of this DPS, many efforts are relatively recent or still under development, and as yet have insufficient regulatory measures and/or resources in place to assure their implementation and effectiveness in addressing the factors for the decline of and threats facing Puget Sound steelhead.

In our proposed rule we identified a number of land use activities that impact Puget Sound steelhead, including forestry, agriculture, and urban development (71 FR 15672; March 29, 2006). In addition, the local watershed chapters in the recent recovery plan for Puget Sound Chinook (Shared Strategy Development Committee, 2007) are an excellent resource for understanding the myriad land use issues (and restoration opportunities) facing salmon and steelhead in specific watersheds throughout Puget Sound. Through our ESA consultations and ongoing recovery planning forums we will continue to collaborate with tribal, Federal, state, and local entities, and the public to promote and improve efforts being made to protect Puget Sound steelhead.

#### *Final Species Determination*

We did not receive nor review any new information that would warrant revision of the proposed geographic boundaries delineating the Puget Sound steelhead DPS. These steelhead are markedly separated from other such population groups of *O. mykiss* as a consequence of physical, physiological, ecological, or behavioral factors (Busby *et al.*, 1996; NMFS, 2005). Therefore, we conclude that steelhead in Puget Sound satisfy the "discreteness" criterion under the joint DPS policy. We also conclude that Puget Sound steelhead

represent an important component in the evolutionary legacy of the *O. mykiss* species based on their unique life-history, genetic, and ecological characteristics, as well as the unique glacial and fjord-like characteristics of the ecoregion occupied (Busby *et al.*, 1996). These traits satisfy the "significance" criterion of the joint DPS Policy. If Puget Sound steelhead DPS were lost, it would represent: (1) the loss of unusual or unique habitats and ecosystems occupied by the species; (2) a significant gap in the species' range; and (3) a significant loss to the ecological, life-history, and genetic diversity of the taxon.

Based on the BRT's findings, our review of comments summarized above, and our considerations under the joint DPS policy, we conclude that Puget Sound steelhead warrant delineation as a DPS under the ESA. Consistent with our proposed rule, the geographic boundaries of the Puget Sound steelhead DPS continue to include winter- and summer-run steelhead populations in the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington, bounded to the west by the Elwha River (inclusive) and to the north by the Nooksack River and Dakota Creek (inclusive).

#### *Final Assessment of Extinction Risk*

We did not receive any new information that would warrant revision of the BRT's assessment of extinction risk. As described in more detail in our proposed rule for this DPS (71 FR 15666; March 29, 2006), the BRT assessed the risk of extinction for Puget Sound steelhead at two levels: first at the individual population level; and then at the overall DPS level. At both levels the BRT evaluated the likely contributions of resident and hatchery-origin fish to DPS viability. The BRT's DPS-level extinction risk assessment reflects professional scientific judgment guided by an analysis of the factors contributing to VSP (McElhany *et al.*, 2000), as well as by expectations about the likely interactions among the individual VSP factors. Specifically, the BRT concluded that there is: (1) A high risk to the viability of Puget Sound steelhead due to declining productivity and abundance; (2) a moderate risk due to reduced spatial complexity of, and connectivity among, populations; and (3) a moderate risk due to the reduced life-history diversity of populations and the potential threats posed by artificial propagation and harvest practices in Puget Sound. As a result, an overwhelming majority of the BRT concluded that Puget Sound steelhead are likely to become endangered within

the foreseeable future throughout all of their range.

The BRT's conclusion was expressed in terms that correspond to the statutory definition of a threatened species in the ESA. The BRT's assessment, however, did not include an evaluation of efforts being made to protect the species, as required under section 4(b)(1)(A) of the ESA. The following sections briefly summarize the likely factors for the decline of Puget Sound steelhead, as well as the efforts being made to protect steelhead and other salmonids in the Puget Sound region. The reader is referred to our proposed rule for more detailed information and discussion concerning threats and protective efforts affecting Puget Sound steelhead (71 FR 15666; March 29, 2006).

#### *Summary of Factors Affecting the Species*

Section 4(a)(1) of the ESA requires that we determine whether any species is endangered or threatened because of any one or a combination of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; or (5) other natural or human-made factors affecting its continued existence. We have previously detailed the impacts of various factors contributing to the decline of Pacific salmon and *O. mykiss* in previous listing determinations (e.g., 62 FR 43937, August 18, 1997; 57 FR 14517, March 25, 1999) and supporting documentation (e.g., NMFS, 1997, "Factors Contributing to the Decline of Chinook Salmon An Addendum to the 1996 West Coast Steelhead Factors for Decline Report;" NMFS, 1996, "Factors for Decline A Supplement to the Notice of Determination for West Coast Steelhead Under the Endangered Species Act"). NMFS' **Federal Register** notices and technical reports conclude that all of the factors identified in section 4(a)(1) of the ESA have played a role in the decline of West Coast salmon and *O. mykiss* DPSs. The reader is referred to the above **Federal Register** notices and technical reports for a more detailed treatment of the relevant factors leading to the decline of specific DPSs.

In the proposed rule, we evaluated those factors of specific relevance to steelhead in the Puget Sound area. We concluded that the principal factor for decline for Puget Sound steelhead is the present or threatened destruction, modification, or curtailment of its habitat or range. Barriers to fish passage

and adverse effects on water quality and quantity resulting from dams, the loss of wetland and riparian habitats, and agricultural and urban development activities have contributed and continue to contribute to the loss and degradation of steelhead habitats in Puget Sound. We observed that previous harvest management practices likely contributed to the historical decline of Puget Sound steelhead, but concluded that the elimination of the direct harvest of wild steelhead in the mid 1990s has largely addressed this threat. We noted that predation by marine mammals (principally seals and sea lions) and birds may be of concern in some local areas experiencing dwindling steelhead run sizes. With respect to disease (e.g., infectious diseases exacerbated by some hatchery practices), we concluded that we lack specific current or historical information to determine whether it poses a significant threat to the DPS. We concluded that existing regulatory mechanisms inadequately protect steelhead habitats as evidenced by the historical and continued threat posed by the loss and degradation of nearshore, estuarine, and lowland habitats due to agricultural activities and urbanization. We concluded that ocean and climate conditions can have profound impacts on the continued existence of steelhead populations. Finally, we reiterated concerns regarding the extensive propagation of the Chambers Creek and Skamania hatchery steelhead stocks and their possible contribution to the observed declines in Puget Sound steelhead populations, while acknowledging that there is insufficient information to quantify the extent of potential adverse impacts.

#### *Efforts Being Made To Protect West Coast Steelhead*

Section 4(b)(1)(A) of the ESA requires the Secretary to make listing determinations solely on the basis of the best scientific and commercial data available after taking into account efforts being made to protect a species. Therefore, in making ESA listing determinations, we first assess a DPS's level of extinction risk and identify factors that have led to its decline. We then assess existing efforts being made to protect the species to determine if those measures ameliorate the risks faced by the DPS. In judging the efficacy of existing protective efforts that have not yet been implemented or demonstrated effectiveness, we rely on the PECE (68 FR 15100; March 28, 2003). The PECE articulates several criteria for evaluating the certainty of implementation and effectiveness of protective efforts to aid in determining

whether a species warrants listing as threatened or endangered.

In the proposed rule, we provided an extensive review of protective efforts affecting Puget Sound steelhead, ranging in scope from regional conservation strategies to local watershed initiatives (71 FR 15666; March 29, 2006). We did not receive new information to support changing our conclusion that protective efforts collectively do not provide empirical evidence or sufficient certainty of implementation and effectiveness to substantially ameliorate the level of assessed extinction risk for Puget Sound steelhead. While we acknowledge that many of the ongoing protective efforts for this DPS, especially those contained in the Shared Strategy for Puget Sound (Shared Strategy Development Committee, 2007) and proposed in the Draft Statewide Steelhead Plan and regional plans (WDFW, 2007), are likely to promote steelhead conservation, many efforts are relatively recent or still under development, and as yet have insufficient regulatory measures and/or resources in place to assure their implementation and effectiveness in addressing the factors for the decline of and threats facing Puget Sound steelhead. We will continue to encourage these and other future protective efforts, and we will continue to collaborate with tribal, Federal, state, and local entities to promote and improve efforts being made to protect the species.

#### *Final Listing Determination*

After reviewing the public comments received, independent expert reviewer comments, and other data available to us, we find that there is no available information that would cause us to reconsider the extinction risk assessments by the BRT (NMFS, 2005), nor substantially alter our assessments of the Section 4(a)(1) listing factors and efforts being made to protect the species. We conclude that the Puget Sound steelhead DPS is likely to become endangered within the foreseeable future throughout all of its range, and warrants listing as a threatened species under the ESA.

#### *Prohibitions and Protective Regulations*

ESA section 9(a)(1) take and other prohibitions (16 U.S.C. 1538(a)(1)) apply to all species of fish or wildlife listed as endangered. In the case of threatened species, ESA section 4(d) directs the Secretary to issue such regulations as are determined to be necessary and advisable for the conservation of the species. We have flexibility under section 4(d) to tailor protective

regulations based on the contributions of available conservation measures. The 4(d) protective regulations may prohibit, with respect to threatened species, some or all of the acts which section 9(a) of the ESA prohibits with respect to endangered species. These 9(a) prohibitions and 4(d) regulations apply to all persons subject to U.S. jurisdiction, including individuals, corporations, and government agencies and their employees.

On February 7, 2007 (72 FR 5648), we proposed to issue section 4(d) protective regulations for Puget Sound steelhead. The proposed regulations would prohibit the take of Puget Sound steelhead unless a "limit" applies for specified categories of activities determined to be adequately protective of these fish. We have received public comment on that proposal and will address those comments when we finalize the protective regulations for this DPS in a subsequent **Federal Register** notice.

#### *Identification of Those Activities That Would Constitute a Violation of Section 9 of the ESA*

We and the FWS published in the **Federal Register** on July 1, 1994 (59 FR 34272), a policy that the agencies shall identify, to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the ESA. The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the species' range. As noted above, final 4(d) protective regulations will be issued in a subsequent **Federal Register** notice, and until such regulations are final, Puget Sound steelhead will not be subject to ESA take protections. If and when we issue any final 4(d) protective regulations, we will identify to the extent known the activities that will not be considered likely to result in violation of section 9, as well as activities that will be considered likely to result in violation.

#### *Effective Date of the Final Listing Determination*

The final listing for Puget Sound steelhead will take effect on June 11, 2007.

#### *Critical Habitat*

Section 4(a)(3)(A) of the ESA requires that, to the maximum extent prudent and determinable, critical habitat be designated concurrently with the listing of a species. Section 4(b)(6)(C)(ii) provides that, where critical habitat is not determinable at the time of final

listing, we may extend the period for designating critical habitat by not more than 1 additional year. In keeping with agency regulations at 50 CFR 424.12, we conclude that critical habitat is not presently determinable for the Puget Sound steelhead DPS. Specifically, we lack biological, economic, and related mapping information sufficient to determine which areas may qualify as critical habitat for this DPS and to determine the economic, national security, or other relevant impacts of designation necessary to perform required analyses of the impacts of critical habitat designation. Therefore, we are proceeding with the final listing determination now and will propose critical habitat in a separate rulemaking.

#### **Classification**

##### *National Environmental Policy Act (NEPA)*

ESA listing decisions are exempt from the requirement to prepare an environmental assessment or environmental impact statement under the NEPA. See NOAA Administrative Order 216-6.03(e)(1) and *Pacific Legal Foundation v. Andrus*, 657 F.2d 829 (6th Cir. 1981). Thus, we have determined that the final listing determination for the Puget Sound steelhead DPS described in this notice is exempt from the requirements of NEPA.

##### *Regulatory Flexibility Act, Executive Order (E.O.) 12866, and Paperwork Reduction Act*

As noted in the Conference Report on the 1982 amendments to the ESA, economic impacts cannot be considered when deciding on the listing of a species. Therefore, the economic analysis requirements of the Regulatory Flexibility Act are not applicable to the listing process. In addition, this rule is exempt from review under E.O. 12866. This final rule does not contain a collection-of-information requirement for the purposes of the Paperwork Reduction Act.

##### *Peer Review*

A joint NMFS/FWS policy requires us to solicit independent expert review from at least three qualified specialists, concurrent with the public comment period (59 FR 34270; July 1, 1994). In December 2004 the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review (Peer Review Bulletin) establishing minimum peer review standards, a transparent process for public disclosure, and opportunities for public input. The OMB Peer Review

Bulletin, implemented under the Information Quality Act (Public Law 106 554), is intended to ensure the quality of agency information, analyses, and regulatory activities and provide for a more transparent peer review process.

The BRT's status review for Puget Sound steelhead (NMFS, 2005) is the key science document underlying the decision to list Puget Sound steelhead as a threatened species. As described in our proposed rule, the BRT's status review was considered to be "influential scientific information" in the context of the OMB Peer Review Bulletin and was subjected to pre-dissemination peer review (60 FR 15666, March 29, 2006). A description of the peer review plan was posted on the Internet in December 2005 by the U.S. Department of Commerce and is available at: <http://www.osec.doc.gov/cio/oipr/ID47.htm>. The seven experts chosen for this review are knowledgeable in steelhead biology, artificial propagation, fisheries management, and local and regional habitat conditions and processes. Four of the experts provided peer review and their comments were thoroughly considered, and, as appropriate, incorporated into the BRT's assessment and this final listing determination. We believe that adherence to the OMB Peer Review Bulletin is consistent with the goals of the 1994 NMFS/FWS policy "to ensure the best biological and commercial information is being used in the decisionmaking process, as well as to ensure that reviews by recognized experts are incorporated into the review process of rulemakings" developed in accordance with the ESA.

*E.O. 13175 – Consultation and Coordination with Indian Tribal Governments*

The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and co-management agreements, which differentiate tribal governments from the other entities that

deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. E.O. 13175 outlines the responsibilities of the Federal Government in matters affecting tribal interests.

During our status review of Puget Sound steelhead we solicited information from the tribes, met with several tribal governments and associated tribal fisheries commissions, and provided the opportunity for all interested tribes to comment on the proposed listing of this DPS and discuss any concerns they may have. Several tribes submitted comments during the public comment period and these were thoroughly considered and incorporated (e.g., see comment 5, 6, 12, 23, and 26), as appropriate, into our final listing determination. We will continue to coordinate with the tribes on management and conservation actions related to this species.

*E.O. 13132 – Federalism*

E.O. 13132 requires agencies to take into account any federalism impacts of regulations under development. It includes specific consultation directives for situations where a regulation will preempt state law, or impose substantial direct compliance costs on state and local governments (unless required by statute). This rule establishes the protected status of Puget Sound steelhead under the ESA. It thereby creates obligations on Federal agencies, e.g., to consult on their proposed actions that may affect Puget Sound steelhead. It does not impose requirements for, or restrictions on, state or local governments. Accordingly, E.O. 13132 does not apply to this final listing determination. In keeping with the intent of the Administration and

Congress to provide continuing and meaningful dialogue on issues of mutual tribal, state and Federal interest, we provided the proposed rule to the relevant agencies in each state in which the subject species occurs, and these agencies were invited to comment. As noted in the previous section and in our response to comments (e.g., see comment 1, 2, 7, and 25), this final rule takes into account the views and comments received from state agencies. We will continue to consider any federalism impacts of regulations still under development for this DPS, such as our ongoing consideration of potential ESA protective regulations and critical habitat areas for Puget Sound steelhead.

**References**

A complete list of all references cited herein is available upon request (see **ADDRESSES**), or can be obtained from the Internet at: <http://www.nwr.noaa.gov>.

**List of Subjects in 50 CFR Part 223**

Endangered and threatened species, Exports, Imports, Transportation.

Dated: May 7, 2007.

**Samuel D. Rauch III,**

*Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.*

■ For the reasons set out in the preamble, 50 CFR part 223 is amended as follows:

**PART 223—THREATENED MARINE AND ANADROMOUS SPECIES**

■ 1. The authority citation for part 223 continues to read as follows:

**Authority:** 16 U.S.C. 1531–1543; subpart B, § 223.201 also issued under 16 U.S.C. 1361 *et seq.*

■ 2. In § 223.102, paragraph (c)(23) is added to read as follows:

**§ 223.102 Enumeration of threatened marine and anadromous species.**

\* \* \* \* \*

Species <sup>1</sup>		Where Listed	Citation(s) for Listing Determinations	Citation(s) for Critical Habitat
Common name	Scientific name			
*****				
(c) ***				

Species <sup>1</sup>		Where Listed	Citation(s) for Listing Determinations	Citation(s) for Critical Habitat
Common name	Scientific name			
(23) Puget Sound Steelhead	Oncorhynchus mykiss	U.S.A., WA, Distinct Population Segment including all naturally spawned anadromous <i>O. mykiss</i> (steelhead) populations, from streams in the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington, bounded to the west by the Elwha River (inclusive) and to the north by the Nooksack River and Dakota Creek (inclusive), as well as the Green River natural and Hamma Hamma winter-run steelhead hatchery stocks.	[Insert FEDERAL REGISTER page citation] May 11, 2007	NA
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<sup>1</sup>Species includes taxonomic species, subspecies, distinct population segments (DPSs) (for a policy statement, see 61 FR 4722, February 7, 1996), and evolutionarily significant units (ESUs) (for a policy statement, see 56 FR 58612, November 20, 1991)

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BILLING CODE 3510-22-S

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 635

[Docket No. 070307055-7099-02; I.D. 022607F]

RIN 0648-AV25

### Atlantic Highly Migratory Species (HMS); U.S. Atlantic Billfish Tournament Management Measures

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** This final rule suspends mandatory circle hook requirements for participants in Atlantic billfish fishing tournaments through December 31, 2007. Circle hook requirements will be reinstated unchanged effective 12:01 a.m., January 1, 2008. The suspension is intended to increase post-release survival rates of Atlantic billfish in the long-term by providing an additional phase-in period during which Atlantic billfish tournament anglers can become more proficient and familiar with circle hooks and their ecological benefits, respectively.

**DATES:** In this final rule, § 635.21, paragraph (e)(2)(iii), is suspended from May 11, 2007 to December 31, 2007, and is revised effective January 1, 2008.

**ADDRESSES:** Copies of the Final Environmental Assessment/Regulatory Impact Review/Final Regulatory Flexibility Analysis (Final EA/RIR/

FRFA) are available from the Highly Migratory Species Management Division website at [www.nmfs.noaa.gov/sfa/hms](http://www.nmfs.noaa.gov/sfa/hms) or can be obtained by contacting Russell Dunn or Randy Blankinship (see **FOR FURTHER INFORMATION CONTACT**).

**FOR FURTHER INFORMATION CONTACT:** Russell Dunn or Randy Blankinship, by phone: 727-824-5399; by fax: 727-824-5398.

**SUPPLEMENTARY INFORMATION:** The U.S. recreational fishery for Atlantic billfish is managed under the Consolidated Highly Migratory Species (HMS) Fishery Management Plan (FMP). Implementing regulations at 50 CFR part 635 are issued under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 *et seq.*), and the Atlantic Tunas Convention Act (ATCA) (16 U.S.C. 971 *et seq.*)

#### Background

NMFS recently finalized a Consolidated HMS FMP (October 2, 2006; 71 FR 58058) that consolidated and replaced previous FMPs for Atlantic Billfish and Atlantic Tunas, Swordfish, and Sharks. The Consolidated HMS FMP is implemented by regulations at 50 CFR part 635.

Prior to January 1, 2007, the recreational Atlantic billfish fishery was subject to regulations that required fishing permits, limited allowable gears to rod and reel only, established minimum legal size limits, specified landing form of retained billfish, mandated reporting of billfish landings, required registration of all recreational HMS fishing tournaments and reporting by tournaments that are selected for reporting, prohibited the retention of longbill spearfish, and prohibited sale of any billfish, among other measures. The

final rule implementing the Consolidated HMS FMP implemented additional regulations that applied to the Atlantic recreational billfish fishery.

Effective January 1, 2007, these regulations require anglers fishing from HMS permitted vessels and participating in Atlantic billfish tournaments to use only non-offset circle hooks when deploying natural baits or natural bait/artificial lure combinations. The regulations allow the use of J-hooks (the hook-type traditionally used in this fishery) with artificial lures in tournaments, and do not impose hook requirements on recreational fishermen fishing outside of Atlantic billfish tournaments. Additionally, the final rule limits U.S. landings of Atlantic blue and white marlin to 250 individual fish, combined, on an annual basis.

In response to continuing public input on the Atlantic billfish tournament circle hook regulations, NMFS released a draft environmental assessment and published a proposed rule on March 15, 2007 (72 FR 12154), that included a preferred alternative to suspend Atlantic billfish tournament circle hook requirements through December 31, 2007. The EA considered three alternatives. Information regarding these alternatives was provided in the proposed rule and is not repeated here.

#### Response to Comments

The public comment period for the proposed rule was open from March 15, 2007 to March 30, 2007. During that time, NMFS held three public hearings and received comments from 111 individuals or organizations. A summary of the major comments received, along with NMFS' responses are provided below.