

7. In § 251.61, revise paragraph (c) to read as follows:

§ 251.61 Modifications.

(c) A holder must obtain prior approval of the authorized officer for all activities that will impact the environment, other users, or the public.

Dated: August 10, 1992.

George M. Leonard,
Associate Chief,

[FR Doc. 92-19371 Filed 8-13-92; 8:45 am]

BILLING CODE 3410-11-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 920773-2173]

**Designated Critical Habitat;
Sacramento River Winter-Run Chinook Salmon**

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Proposed rule.

SUMMARY: NMFS proposes to designate critical habitat for the Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*) pursuant to the Endangered Species Act (ESA). The habitat proposed for designation includes (1) the Sacramento River from Keswick Dam, Shasta County (River Mile 302) to Chipps Island (River Mile 0) at the westward margin of the Sacramento-San Joaquin Delta; (2) all waters from Chipps Island westward to Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisun Bay, and Carquinez Strait; (3) all waters of San Pablo Bay westward of the Carquinez Bridge; and (4) all waters of San Francisco Bay from San Pablo Bay to the Golden Gate Bridge. In addition, the proposed critical habitat designation identifies those physical and biological features of the habitat that are essential to the conservation of the species and that may require special management consideration or protection. The economic and other impacts resulting from this critical habitat designation, over and above those arising from the listing of the species under the ESA, are expected to be minimal. The designation of proposed critical habitat provides explicit notice to Federal agencies and the public that these areas and features are vital to the conservation of the species.

DATES: Comments must be received on or before October 13, 1992. Requests for

a public hearing must be received on or before September 28, 1992.

ADDRESSES: Comments and requests for a public hearing should be addressed to Dr. Nancy Foster, Director, Office of Protected Resources, NMFS, 1335 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: James H. Lecky, NMFS, Southwest Region, Protected Species Management Division, 501 W. Ocean Blvd., suite 4200, Long Beach, CA 90802-4213 at (310) 980-4015, or Margaret Lorenz, NMFS, Office of Protected Resources, 1335 East-West Highway, Silver Spring, MD 20910 (301) 713-2322.

SUPPLEMENTARY INFORMATION:

Background

Although winter-run chinook salmon are currently listed as threatened (55 FR 46515, November 5, 1990), NMFS published a proposed rule to reclassify the species as endangered on June 19, 1992 (57 FR 27416). Critical habitat was not designated at the time of listing since an analysis of the impacts of designation, as required by section 4(b)(2) of the ESA, had not been completed. In the final rule listing winter-run chinook salmon as threatened, NMFS indicated that deferral of the critical habitat designation was not considered detrimental to the conservation of the species since (1) section 7 consultations conducted by NMFS would identify any Federal actions that might harm the species including the modification or destruction of its habitat and (2) all prohibitions on taking the species would be in effect which would allow NMFS to treat actions likely to adversely modify or destroy the species' habitat as a take of the species. NMFS indicated that critical habitat would be proposed in a separate rulemaking following completion of the required analyses.

When NMFS published an emergency interim rule, August 4, 1989, (54 FR 32088) to list the winter-run chinook salmon as threatened under the ESA, portions of the Sacramento River were designated as critical habitat. The designation included a portion of the Sacramento River extending from Red Bluff Diversion Dam, Tehama County (River Mile 243) to Keswick Dam, Shasta County (River Mile 302), and included the adjacent riparian zones, the river water, and the river bottom. This portion of the Sacramento River contains almost all of the habitat where suitable conditions for spawning, egg incubation, and rearing of juvenile fish exist if water management strategies are implemented to maintain suitable water temperatures. This designation represented the

minimum amount of habitat that NMFS believed was necessary to ensure the survival and development of spawned eggs and the successful rearing of juveniles during the period when the emergency rule was in effect.

During the period covered by the emergency listing, NMFS published a proposed rule to list the winter-run chinook as a threatened species under the ESA (March 20, 1990, 55 FR 10280). To avoid a hiatus in protection of the species until the formal listing process was completed, NMFS published a second emergency interim rule on April 2, 1990 (55 FR 12191) which included a designation of critical habitat identical to that included in the first emergency rule.

NMFS has completed an assessment of the economic impacts of listing the winter-run chinook salmon and designating critical habitat (Hydrosphere 1991). This assessment focused on identifying the economic consequences (costs and benefits) of implementing alternative water management strategies to achieve specific temperature and flow criteria for various alternative critical habitat designations. In addition, NMFS has prepared an environmental assessment (EA), pursuant to the National Environmental Policy Act (NEPA), to evaluate both the environmental and economic impacts of the proposed critical habitat designation.

Critical Habitat Definition

Critical habitat is defined in section 3(5) of the ESA as "(i) the specific areas within the geographical area occupied by the species * * * on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species * * * upon a determination by the Secretary that such areas are essential for the conservation of the species." Areas outside the current range of a species' habitat can only be designated if a designation limited to the species' present distribution would be inadequate to ensure the conservation of the species. The term conservation, as defined in section 3(3) of the ESA, means " * * * to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary."

The criteria to be considered in designating critical habitat are specified

under 50 CFR 424.12. In making critical habitat designations, requirements that are essential to the conservation of species and that may require special management considerations or protection are considered. NMFS must consider requirements of the species including (1) space for individual and population growth, and for normal behavior, (2) food, water, air, light, minerals, or other nutritional or physiological requirements, (3) cover or shelter, (4) sites for breeding, reproduction, or rearing of offspring and, generally, (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of the species.

In addition, NMFS must focus on and list the known physical and biological features (primary constituent elements) within the designated area(s) that are essential to the conservation of the species and that may require special management considerations or protection. These essential features may include, but are not limited to, spawning sites, food resources, water quality or quantity, and vegetation and soil types.

Consideration of Economic and Other Factors

The economic, environmental and other impacts of a designation must also be evaluated and considered. NMFS must identify present and anticipated activities that may adversely modify the proposed critical habitat or be affected by a designation. An area may be excluded from a critical habitat designation if NMFS determines that the overall benefits of exclusion outweigh the benefits of designation, unless the exclusion will result in the extinction of the species.

The impacts considered in this analysis are only those incremental impacts specifically resulting from a critical habitat designation, above the economic and other impacts attributable to listing the species. Because listing a species under the ESA provides significant protection to the species' habitat, the direct economic and other impacts resulting from critical habitat designation, over and above the impacts of the listing itself, may be minimal (see Significance of Designating Critical Habitat section of this preamble). In general, the designation of critical habitat only duplicates and reinforces the substantive protection resulting from listing.

Impacts attributable to listing include those resulting from the taking prohibitions under section 9 of the ESA and associated regulations. "Taking" as defined in the ESA includes harm to a listed species. Harm can occur through

destruction or modification of habitat (whether or not designated as critical) that significantly impairs essential behaviors including breeding, feeding or sheltering.

Impacts attributable to listing also include those resulting from the duty of Federal agencies under section 7 to ensure that their actions are not likely to jeopardize endangered or threatened species. An action could be likely to jeopardize the continued existence of a listed species through the destruction or modification of its habitat regardless of whether that habitat has been designated as critical.

Significance of Designating Critical Habitat

The designation of critical habitat does not, in itself, restrict human activities within the area or mandate any specific management or recovery action. A critical habitat designation contributes to conservation of the species primarily by identifying critically important areas and describing the features within the areas that are essential to the species, thus alerting public and private entities to the importance of the area. Under the ESA, the only direct impact of a critical habitat designation is through the provisions of section 7. Section 7 applies only to actions with Federal involvement, and does not affect strictly state or private activities.

Under the section 7 provisions, a designation of critical habitat would require Federal agencies to ensure that any action they authorize, fund or carry out is not likely to destroy or adversely modify the designated critical habitat. Activities that adversely modify critical habitat are defined as those actions that "appreciably diminish the value of critical habitat for both the survival and recovery" of the species (50 CFR 404.02). Regardless of a critical habitat designation, Federal agencies must ensure that their actions are not likely to jeopardize the continued existence of the listed species. Activities that jeopardize a species are defined as those actions that "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery" of the species (50 CFR 402.02). Using these definitions, activities that destroy or adversely modify critical habitat also are likely to jeopardize the species. Therefore, the protection provided by a critical habitat designation usually only duplicates the protection provided under the section 7 jeopardy provision. However, critical habitat may provide additional benefits to a species if areas outside the species' current range have

been designated because Federal agencies also would be expected to consult on actions that occur in these areas.

A designation of critical habitat provides a clearer indication to Federal agencies as to when consultation under section 7 is required, particularly if the actions would not result in direct mortality or injury to individuals of a listed species (e.g., an action occurring within the critical area when a migratory species is not present). Also, describing the essential features of the habitat assists in determining which activities conducted outside the designated area are subject to section 7 requirements (i.e., activities that may affect essential features of the designated area). For example, diversions of water upstream from a critical habitat area may affect the essential features of the designated habitat (e.g., water-flow) and would be subject to section 7 requirements.

Also, a critical habitat designation would assist Federal agencies in planning future actions because the designation establishes, in advance, those habitats that will be given special consideration in section 7 consultations. This is particularly true if there are alternative areas that would provide for the conservation of the species. With a designation of critical habitat, potential conflicts between projects and endangered or threatened species can be identified and possibly avoided early in the agency's planning process.

Another indirect benefit of critical habitat is that it helps focus Federal, state and private conservation and management efforts in those areas. Recovery efforts may address special considerations needed in critical habitat areas, including conservation regulations to restrict private as well as Federal activities. The economic and other impacts of these actions would be considered at the time of proposal, and therefore, are not considered in the critical habitat designation process. Other Federal, state, and local laws or regulations, such as zoning or wetlands protection, may also provide special protection for critical habitat areas.

Process for Designating Critical Habitat

Developing a proposed critical habitat designation involves three main considerations. First, the biological needs of the species are evaluated and essential habitat areas and features identified. If there are alternative areas that would provide for the conservation of the species, these alternatives are also identified. Second, the need for special management considerations or

protection of the area(s) or features is evaluated. Finally, the probable economic and other impacts of designating these essential areas as "critical habitat" are evaluated. After considering the requirements of the species, the need for special management, and the impacts of the designation, the proposed critical habitat is published in the **Federal Register** for comment. After considering comments on the proposal and impacts assessment, the final critical habitat designation is published within one year of the proposal. As new data become available, final critical habitat designations may be revised using the same process.

A description of the essential habitat, need for special management, and impacts of designating critical habitat, as well as the proposed action, are described in the following sections for the Sacramento River winter-run chinook salmon.

Essential Habitat of the Sacramento River Winter-run Chinook Salmon

The winter-run chinook salmon is a unique population of chinook salmon that spawns in the Sacramento River and is distinguishable from the other chinook runs found in the river based on the timing of its upstream migration and spawning season. The biology of the winter-run chinook salmon is discussed in previous **Federal Register** notices including 52 FR 6041 (February 27, 1987), 55 FR 10260 (March 20, 1990), and 55 FR 46515 (November 5, 1990). These notices include information on the status of the species, its life history characteristics and habitat requirements as well as projects, activities, and other factors affecting the species. The current status of winter-run chinook salmon is presented in the EA prepared for this critical habitat designation and in the proposed rule to reclassify the species as endangered (June 19, 1992, 57 FR 27416).

It is likely that modification and loss of spawning and rearing habitat have been major factors contributing to the decline of the winter-run chinook salmon population in the Sacramento River. Essential elements of suitable spawning habitat for the species are the availability of clean gravel that provides a substrate for redd construction, adequate flow of oxygenated water through the spawning gravel to aerate the developing eggs, and water temperatures (between 42.5 and 57.5 °F) (5.8 and 14.12 °C) that allow successful egg development. Historically, winter-run chinook found and used this type of habitat in the cold spring-fed tributaries

at the headwaters of the Sacramento River.

Construction of the Shasta and Keswick Dams as part of the U.S. Bureau of Reclamation's Central Valley Project blocked the winter-run chinook salmon's access to its historical spawning habitat in the headwaters of the Sacramento River. However, the operations of these dams also created new habitat for winter-run chinook by the release of cold hypolimnetic waters from Shasta Reservoir into the mainstem of the upper Sacramento River. During the late spring and summer months when winter-run chinook spawn, cold water released from Shasta and Keswick Dams may decrease ambient water temperatures downstream to about Red Bluff Diversion Dam and thus contribute to creating suitable spawning and rearing conditions in most normal water years. However, during dry years when less cold water is available for release from Shasta Dam, river temperatures below Keswick Dam are not as low for as long a period as they may be in normal water years. This temperature increase over time progressively reduces the availability of suitable spawning and rearing conditions for winter-run chinook salmon in the upper Sacramento River.

Winter-run chinook spawning occurs principally between Keswick Dam and Red Bluff Diversion Dam; however, the distribution of spawning adults in this river reach varies considerably between years depending on the size of the run, river temperatures, and operation of the diversion dam gates during the species' upstream migration. In recent years, raising the diversion dam gates from December 1 through April 1, has allowed migrating adults free passage upstream. About 61 percent of winter-run adults spawned between Keswick Dam and Ball's Ferry, 34 percent from Ball's Ferry to Red Bluff Diversion Dam, and 5 percent downstream of the diversion dam.

Spawning success of winter-run chinook highly depends on river water temperatures during the period of egg incubation and early fry development. Temperature requirements for chinook salmon have been documented from laboratory studies, and generally water temperatures of 56 °F (13.3 °C) or below are necessary for normal egg and fry development. Mortality of developing eggs and pre-emergent fry begins at 57 °F (13.8 °C) and reaches 100 percent at 62 °F (16.6 °C) (Boles 1988). Elevated temperatures can also adversely affect spawning adults, egg maturation and viability, and pre-emergent fry.

In general, suitable water temperatures for winter-run spawning and incubation only occur upstream of Red Bluff Diversion Dam. In most years, water temperatures downstream of the diversion dam are above the suitable range for egg incubation during the months winter-run chinook spawn. For example, Hallock and Fisher (1985) estimated that suitable temperature occurred downstream of the diversion dam only four times between 1967-1984.

Female winter-run chinook salmon also require proper spawning gravel sites for redd excavation when they are fully ripened. Spawning redd areas may vary in size between 1.25 and 15 square meters.

Spawning habitat in the upper Sacramento River has also been degraded by decreases in the rate of replenishment of gravel suitable for spawning, and this has been identified as a factor in the curtailment of the winter-run chinook run. Construction of Shasta and Keswick Dams precluded the recruitment of new gravel from the river and its tributaries above those dams, and gravel mining in tributary streams below the dams has slowed the recruitment of new gravel into the river. As a consequence, the amount of suitable spawning habitat has been decreasing. Since 1985, state and Federal agencies have conducted a spawning gravel replenishment program in the Sacramento in an attempt to remedy this problem.

Winter-run chinook require sustained high velocity water flows near the gravel surface to spawn successfully, and appropriate intra-gravel water flows to maintain adequate oxygen delivery, remove metabolic wastes, and allow emergence of alevins from the gravel. This flow is affected by depth, substrate porosity, and channel morphology. Significant decreases in flow during these spawning and incubation periods, particularly, can disrupt spawning activity, salmon redds, or result in reduced interstitial flow through spawning gravels that can suffocate developing eggs. Significant fluctuations in water releases from Keswick Dam, particularly reductions that decrease in-river flows during winter-run chinook spawning, incubation, fry development, and fry emergence, can adversely impact winter-run chinook salmon. Operational and structural limitations of the Anderson-Cottonwood Irrigation District Dam, and coordination of flow reductions with the Bureau of Reclamation through reduced releases at Keswick Dam can exacerbate these problems.

Since newly hatched chinook fry are small and consequently incapable of maintaining their position in fast currents, they usually are found in calm habitats characterized by fine sediments. As they become larger, they gradually use deeper and faster water associated with coarser substrates (Chapman and Bjornn 1969, Lister and Genoe 1970). Optimal temperature range for winter-run fry is 53.6 to 57.2 °F (12 to 14 °C), where maximum growth occurred at 55 °F (12.7 °C) (Boles 1988).

Studies of chinook salmon smolts in the middle reaches of the Sacramento River found higher densities in natural, eroding bank habitats with woody debris that may provide protection against predation (Michny 1988a). Studies of bank protection projects in the Sacramento River have demonstrated that juvenile salmon show a marked preference for non-riprapped areas over riprapped areas (Schaffter *et al.* 1983, Michny and Hampton 1984). Additional bank stabilization efforts that destroy or modify natural conditions can be expected to reduce further salmon rearing habitat.

Outmigrating chinook salmon smolts in estuaries generally feed in schools within saltmarshes, mudflats, and other intertidal habitats. Fall-run chinook in the Sacramento-San Joaquin Delta have been found to feed primarily on zooplankton. As the smolts increase in size, fish become a more important food item (Cannon 1982).

Successful initiation of upstream migration may depend on temporary increases in river discharge and relative onshore wind conditions to assist in olfactory recognition of home streams by adult chinook salmon (Banks 1969). A substantial increase or decrease in any of these conditions may adversely affect upstream migration (Hallock, *et al.* 1970, Bell 1973). Reversal of flows in the lower Sacramento-San Joaquin Delta resulting from export pumping at the Federal (Central Valley Project) and state (State Water Project) facilities can adversely affect upstream migrating adults by causing them to stray into the Delta rather than pass up the Sacramento River.

Physical and biological features that are essential for the conservation of winter-run chinook salmon, based on the best available information, include (1) unimpeded access from the Pacific Ocean to appropriate spawning areas in the upper Sacramento River, (2) the availability of clean gravel for spawning substrate, (3) adequate river flows for successful spawning, incubation of eggs, fry development and emergence, and downstream transport of juveniles, (4) water temperatures between 42.5 and

57.5 °F (5.8 and 14.1 °C) for successful spawning, egg incubation, and fry development, (5) habitat and prey free of contaminants, (6) riparian habitat that provides for successful juvenile development and survival, and (7) unimpeded passage of juveniles downstream from the spawning grounds to San Francisco Bay and the Pacific Ocean.

Need for Special Management Considerations or protection

In the areas proposed for critical habitat, NMFS has determined that certain physical and biological features may require special management considerations or protection. In particular, specific water temperature criteria, minimum instream flow criteria, and water quality standards represent physical features of the winter-run chinook's habitat that are essential for the species' conservation. Similarly, biological features of the designated critical habitat that are considered vital for winter-run chinook salmon include unimpeded adult upstream migration routes, spawning habitat, egg incubation and fry emergence areas, rearing areas for juveniles, and unimpeded downstream migration routes for juveniles.

To achieve the maximum conservation and recovery benefits for winter-run chinook salmon, the average daily water temperature in the Sacramento River should not exceed 56 °F (13.3 °C) between Keswick Dam and Red Bluff Diversion Dam from April 15 through September 30, and at no more than 60 °F (15.5 °C) from October 1 through October 31. Survival of winter-run chinook's developing eggs are adversely affected at temperatures above 56 (13.3 °C).

Similarly for maximum recovery, instream flows should be no less than 6,000 cubic feet per second (cfs) at Keswick Dam from April 15 through October 15. Flows below 6,000 cfs at Keswick Dam during this critical period may increase mortality to a level that is not acceptable. In addition, reductions in flows from 8,000 to 6,000 cfs at Keswick Dam should not occur at a rate of more than 1,000 cfs per day. Finally, instream flows in the Sacramento River should be maintained at levels necessary to ensure that a 500 cfs bypass flow occurs in the lower side channel between the fish bypass outlet at the Glenn-Colusa Irrigation District facility and the Sacramento River between July 31 and October 31. Absent unusual circumstances, the 500 cfs bypass flow in this area is considered the minimum necessary to ensure this

portion of the winter-run chinook's critical habitat is not degraded.

Water quality is another essential feature of winter-run chinook habitat. In particular, dredging activities may degrade critical habitat used by winter-run chinook in San Francisco Bay and elsewhere. In the past, NMFS has evaluated dredging projects both in terms of their quantitative and qualitative impact on water quality. In general, small scale dredging projects, typically 100,000 cubic yards or less, were thought to have a minor impact while larger projects, especially projects involving contaminated sediments, were thought to have potentially significant adverse impacts on water quality. NMFS is attempting to evaluate and establish more specific criteria for use in judging the impact that dredging activities may have on this important habitat feature.

Management considerations and protection are not limited to activities conducted in the area proposed for designation as critical habitat. Activities that affect essential critical habitat features, regardless of their location, are a matter of concern. For example, a bank restoration project on the Sacramento River or in the Delta may degrade the associated habitat area utilized by winter-run chinook. Similarly, timber harvesting activities, authorization of pesticide use, highway and construction projects, and similar activities, may have the potential to modify or destroy the habitat and consultation is recommended.

This discussion of special management considerations and protective measures is provided to inform the public and to provide general guidance to Federal agencies. The recommended temperature and flow criteria have not been included in the regulatory text describing the critical habitat; rather, this discussion is to alert the public to recommendations that NMFS may make on a case-by-case basis as a part of the section 7 consultation process.

In addition, special considerations and protection for these and other habitat features will be evaluated in the development and implementation of a recovery plan for winter-run chinook salmon. If adequate protection cannot be provided through consultation or through the recovery planning process, separate management actions with binding requirements may be considered.

Activities That May affect the Essential Habitat

A wide range of activities may affect the essential habitat requirements of

winter-run chinook salmon. These activities include water management operations by the Bureau of Reclamation's Central Valley Project (e.g., Shasta and Keswick Dams, Red Bluff Diversion Dam, the Tehama-Colusa Canal, the Delta Cross Channel, and delta export facilities) that affect the Sacramento River and Delta, water management operations by the California Department of Water Resource's State Water Project (including export of water from the Sacramento-San Joaquin Delta) that affect both the Sacramento River and Delta, small and large water diversions by private entities such as the Anderson Cottonwood Irrigation District and the Glenn-Colusa Irrigation District that are located on the Sacramento River, bank restoration activities by the U.S. Army Corps of Engineers (Corps) in the Sacramento River and Sacramento-San Joaquin Delta, and Corps permitting activities that authorize dredging and other construction-related activities in the Sacramento River, Sacramento-San Joaquin Delta, and San Francisco Bay.

The Federal agencies that most likely will be affected by this critical habitat designation include the U.S. Bureau of Reclamation, the Corps, the U.S. Fish and Wildlife Service, the Federal Energy Regulatory Commission, the U.S. Navy, and NMFS. This designation will provide clear notification to these agencies, private entities, and the public of the existence of critical habitat for winter-run chinook salmon and the boundaries of the habitat and the protection provided for that habitat by the section 7 consultation process. This designation will also assist these agencies, and others as required, in evaluating the potential effects of their activities on the winter-run chinook salmon and its critical habitat, and in determining when consultation with NMFS would be appropriate.

Expected Impacts of Designating Critical Habitat

Under section 7 of the ESA, Federal agencies are required to ensure that their actions are not likely to jeopardize the continued existence of listed species or to result in the destruction or adverse modification of listed species' critical habitat. Also, takings of winter-run chinook salmon are prohibited under regulations issued when the species was listed as threatened.

This action will identify specific habitat areas that have been determined to be essential for the conservation of the winter-run chinook salmon and that may be in need of special management considerations or protection. This designation would also require Federal

agencies to evaluate their activities with respect to the critical habitat of winter-run chinook salmon and to consult with NMFS pursuant to section 7 of the ESA before engaging in any action that may affect the critical habitat. Federal agencies must ensure that their activities are not likely to result in the destruction or adverse modification of this critical habitat.

Currently, Federal agencies active within the range of the winter-run chinook salmon are required to consult with NMFS regarding projects and activities they permit, fund, or otherwise carry-out that may affect the species since it is listed as threatened under the ESA. Thus, even without this critical habitat designation, Federal agencies would be required to consult with NMFS, in most if not all situations, if winter-run chinook habitat might be adversely affected since any action that is likely to affect the habitat of winter-run chinook would also be expected to affect the species. For this reason, additional consultations resulting from this critical habitat designation are unlikely.

Designation of critical habitat for winter-run chinook salmon is not likely to have any additional adverse economic impacts on Federal, state, or private activities beyond those that already occur as a result of listing a species under the ESA. Following designation of critical habitat, Federal agencies will continue to engage in section 7 consultations to determine if the actions they authorize, fund, or carry out are likely to jeopardize the continued existence of winter-run chinook salmon; however, with the designation they will also need to address explicitly impacts to the species' critical habitat as well. However, this is not expected to materially affect the scope of future consultations or result in greater economic impacts since the impacts to winter-run chinook habitat are already considered in section 7 consultations.

Hydrosphere (1991) evaluated the economic impacts of implementing various special water management alternatives (i.e., specific temperature and instream flow criteria within the geographically defined critical habitat) that NMFS believes would improve the critical habitat of winter-run chinook salmon and, therefore, benefit the species. NMFS is currently using these same general hydrologic attributes to determine whether proposed or existing actions are likely to result in jeopardy to winter-run chinook salmon. For this reason, it is difficult to separate the estimated costs of the critical habitat

designation from the costs associated with listing the species and the taking prohibition. However, for the purpose of this analysis, costs associated with achieving the identified hydrologic attributes (e.g., minimum flow requirements and temperature goals) within the critical habitat designation were analyzed. The resulting changes in hydrology and associated economic costs or benefits were then estimated.

Some actions that would improve winter-run habitat were not included in the analysis conducted by Hydrosphere since they (e.g., the Shasta temperature control device) are already in the planning or financing stages and are expected to be implemented regardless of whether critical habitat for winter-run chinook salmon is designated.

An evaluation of costs associated with achieving specified hydrologic attributes, such as minimum flow requirements and temperature goals, within the designated critical habitat concluded that total economic benefits and costs would be about \$82.5 million and \$69.6 million, respectively, with an overall net economic benefit of \$12.9 million (Hydrosphere 1991).

Proposed Critical Habitat; Essential Features

Based on available information, NMFS proposes to designate critical habitat that is considered essential for the survival and recovery of the winter-run chinook salmon and that requires special management consideration or protection. The critical habitat designation proposed by this rule includes areas that are currently utilized by winter-run chinook salmon including the Sacramento River, all waterways and bays westward of Chipps Island to San Francisco Bay, and San Francisco Bay.

Proposed specific critical habitat includes (1) the Sacramento River from Keswick Dam, Shasta County (River Mile 302) to Chipps Island (River Mile 0) at the westward margin of the Sacramento-San Joaquin Delta, (2) all waters from Chipps Island westward to Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisun Bay, and Carquinez Strait, (3) all waters of San Pablo Bay westward of the Carquinez Bridge, and (4) all waters of San Francisco Bay from San Pablo Bay to the Golden Gate Bridge.

Within the Sacramento River, this designation would include the river water, river bottom (including those areas and associated gravels utilized by winter-run chinook salmon as spawning substrate), and adjacent riparian zone used by fry and juveniles for rearing. In

the areas westward from Chipps Island, including San Francisco Bay to the Golden Gate Bridge, this designation would include the estuarine water column and essential foraging habitat and food resources utilized by winter-run chinook as part of their juvenile outmigration or adult spawning migration.

Although it is important, the proposed critical habitat does not include the open ocean habitat utilized by winter-run chinook because degradation of this portion of the species habitat, or other factors associated with the open ocean, do not appear to be significant factors in the decline of the species. In addition, existing laws appear adequate to protect these areas, and special management of this habitat is not considered necessary at this time. NMFS will continue to monitor activities in this area under its general ESA responsibilities although it is not included in the area proposed for critical habitat designation.

NMFS has not proposed that specific areas outside the current geographical area occupied by winter-run chinook salmon be included in this designation since these areas are not considered essential for conservation of the species. Although some may recommend removing dams (e.g., Shasta and Keswick) along the Sacramento River so that the former upriver habitat could once again be made available to winter-run chinook, NMFS has concluded that proper management of the existing habitat is sufficient to provide for the survival and recovery of this species.

Public Comments Solicited

NMFS is soliciting information, comments, or recommendations on any aspect of this proposal from all interested parties. NMFS will consider all information, comments and recommendations received before reaching a final decision. The ESA also provides for a public hearing on this proposal, if requested. Hearing requests must be made in writing and received within 45 days (see **DATES and ADDRESSES**).

Classification

The Assistant Administrator for Fisheries, NOAA (Assistant Administrator), has determined that this is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. The regulations are not likely to result in (1) an annual effect on the economy of \$100 million or more, (2) a major increase in costs or prices for consumers, individual industries, Federal, state, or local government agencies, or geographic regions or (3) a significant adverse effect

on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets.

The General Counsel of the Department of Commerce has certified that the proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities as described in the Regulatory Flexibility Act. The designation of critical habitat only duplicates and reinforces the substantive protection resulting from listing; therefore, the economic and other impacts resulting from designation are expected to be minimal, and a regulatory flexibility analysis is not required.

This rule does not contain a collection-of-information requirement for purposes of the Paperwork Reduction Act.

This proposed rule does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 12612.

The Assistant Administrator has determined that the proposed designation is consistent to the maximum extent practicable with the approved Coastal Zone Management Program of the State of California. This determination has been submitted for review by the responsible State agency under section 3.7 of the Coastal Zone Management Act.

NOAA Administrative Order 216-6 states that critical habitat designations under the ESA, generally, are categorically excluded from the requirement to prepare an EA or an environmental impact statement. However, in order to more clearly evaluate the minimal impacts of the proposed critical habitat designation, NMFS has prepared an EA. Copies of the assessment are available on request (see **FOR FURTHER INFORMATION CONTACT**).

References

- Banks, J.W. 1969. A review of the literature on the upstream migration of adult salmonids. *J. Fish. Biol.* 1:85-138.
- Bell, M.C. 1973. Fisheries handbook of engineering requirements and biological criteria. U.S. Army Corps of Engineers, North Pacific Division. Contract No. DACW57-68-C-0086.
- Boles, G. 1988. Water temperature effects on chinook salmon (*Oncorhynchus tshawytscha*) with emphasis on the Sacramento River: a literature review. Report of the California Department of Water Resources, Northern District. 43 pp.

Cannon, T.C. 1982. Status of the Sacramento-San Joaquin chinook salmon and factors related to their decline. Cont. Rept. NMFS. 11 pp.

Chapman, D.W., and T.C. Bjornn. 1969. Distribution of salmonids in streams, with special reference to food and feeding. T.C. Northcote (ed.), Symposium on salmon and trout in streams. H.R. MacMillan Lectures in Fisheries. U. Brit. Columbia, Vancouver.

Hallock, R.J., R.F. Elwell, and D.H. Fry. 1970. Migrations of adult king salmon *Oncorhynchus tshawytscha*, in the San Joaquin Delta, as demonstrated by the use of sonic tags. California Department of Fish and Game, Fish. Bull. 151. 92 pp.

Hallock, R.J., and F.W. Fisher. 1985. Status of the winter-run chinook salmon, *Oncorhynchus tshawytscha*, in the Sacramento River. Calif. Dept. of Fish and Game, Anad. Fish. Br. Office Report. 28 pp.

Hydrosphere, 1991. Evaluation of economic impacts of alternatives for designation of winter-run chinook salmon critical habitat in the Sacramento River. July 1991. Boulder, Colo.

Lister, D.B., and H.S. Genow. 1970. Stream habitat utilization by cohabiting underyearlings of chinook (*Oncorhynchus tshawytscha*) and coho (*O. kisutch*) salmon in the Big Qualicum River, British Columbia. *J. Fish. Res. Bd. Canada.* 27:1215-1224.

Michny, F. 1988. Sacramento River Butte Basin Reach preproject juvenile salmon study. U.S. Fish and Wildlife Service, Division of Ecological Services. Sacramento, Calif. 27 pp.

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: August 5, 1992.

Michael F. Tillman,
Acting Assistant Administrator for Fisheries,
National Marine Fisheries Service.

For the reasons set forth in the preamble, 50 CFR part 226 is proposed to be amended as follows:

PART 226—DESIGNATED CRITICAL HABITAT

1. The authority citation for part 226 continues to read as follows:

Authority: 16 U.S.C. 1533.

2. Subpart C, which was reserved, is added to read as follows:

Subpart C—Critical Habitat for Fish

§ 226.21 Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*).

The following waterways, bottom and water of the waterways and adjacent riparian zones: The Sacramento River from Keswick Dam, Shasta County (River Mile 302) to Chipps Island (River Mile 0) at the westward margin of the Sacramento-San Joaquin Delta, all

waters from Chipps Island westward to Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisun Bay, and Carquinez Strait, all waters of San Pablo Bay westward of the Carquinez Bridge, and all waters of San Francisco Bay from San Pablo Bay to the Golden Gate Bridge.

[FR Doc. 92-19373 Filed 8-13-92; 8:45 am]

BILLING CODE 3510-22-M