G. Executive Order 12875

Under E.O. 12875, EPA may not issue a regulation that is not required by statute and creates a mandate upon a State, local, or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. If EPA complies by consulting, E.O. 12875 requires EPA to provide OMB a description of the extent of EPA's prior consultation with representatives of affected State, local, and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, E.O. 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local, and tribal governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates." Today's rule does not create a mandate on State, local, or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of E.O. 12875 do not apply to this rule.

H. Executive Order 13084

Under E.O. 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or EPA consults with those governments. If EPA complies by consulting, E.O. 13084 requires EPA to provide to the OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, E.O. 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal government "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of E.O. 13084 do not apply to this rule.

I. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Pub. L. 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

J. Submission to Congress and the General Accounting Office

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

Authority: The provisions of this regulation are issued under 5 U.S.C. 301; Sec. 205(c), 63 Stat. 390, as amended, 40 U.S.C. 486(c).

List of Subjects in 48 CFR Parts 1533 and 1552

Government procurement.

Therefore, 48 CFR Chapter 15 is amended as set forth below:

PARTS 1533 AND 1552—[AMENDED]

1. The authority citations for part 1533 and for part 1552 continue to read as follows:

Authority: Sec. 205(c), 63 Stat. 390, as amended, 40 U.S.C. 486(c).

2. Section 1533.103, is revised to read as follows: 1533.103 Protests to the Agency.

Protests to the Agency are processed pursuant to the requirements of FAR 33.103. Contracting Officers must include in every solicitation the provision at 1552.233-70, Notice of Filing Requirements for Agency Protests.

3. Part 1552 is amended by adding the following new Section 1552.233-70:

1552.233-70 Notice of Filing Requirements for Agency Protests.

As prescribed in 1533.103, insert the following clause in all types of solicitations:

Notice of Filing Requirements for Agency Protests July 1999

Agency protests must be filed with the Contracting Officer in accordance with the requirements of FAR 33.103 (d) and (e). Within 10 calendar days after receipt of an adverse Contracting Officer decision, the protester may submit a written request for an independent review by the Head of the Contracting Activity. This independent review is available only as an appeal of a Contracting Officer decision on a protest. Accordingly, as provided in 4 CFR 21.2(a)(3), any protest to the GAO must be filed within 10 days of knowledge of the initial adverse Agency action.

Dated: March 1, 1999.

Betty L. Bailey,

Director, Office of Acquisition Management.

[FR Doc. 99-8479 Filed 4-7-99; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AF01

Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Jarbidge River Population Segment of Bull Trout

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), determine threatened status for the Jarbidge River distinct population segment of bull trout (*Salvelinus confluentus*) from the Jarbidge River basin in northern Nevada and southern Idaho, with a special rule, pursuant to the Endangered Species Act of 1973, as amended (Act). The Jarbidge River population segment, composed of a single subpopulation with few individuals, is threatened by habitat degradation from past and ongoing land

management activities such as road construction and maintenance, mining, and grazing; interactions with non-native fishes; and incidental angler harvest. We based this final determination on the best available scientific and commercial information including current data and new information received during the comment period. This action continues protection for this population segment of the bull trout which was effective for a 240-day period beginning when we emergency listed this population segment on August 11, 1998.

EFFECTIVE DATE: This rule is effective on April 8, 1999.

ADDRESSES: The complete administrative file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, 1340 Financial Boulevard, Suite 234, Reno, Nevada 89502-7147.

FOR FURTHER INFORMATION CONTACT: Robert D. Williams, Field Supervisor, at the above address (telephone 775/861-6300; facsimile 775/861-6301).

SUPPLEMENTARY INFORMATION:

Background

Bull trout (*Salvelinus confluentus*), members of the family Salmonidae, are char native to the Pacific northwest and western Canada. They historically occurred in major river drainages in the Pacific northwest from about 41° N to 60° N latitude, from the southern limits in the McCloud River in northern California and the Jarbidge River in Nevada, north to the headwaters of the Yukon River in Northwest Territories, Canada (Cavender 1978; Bond 1992). To the west, bull trout range includes Puget Sound, various coastal rivers of Washington, British Columbia, Canada, and southeast Alaska (Bond 1992; Leary and Allendorf 1997). Bull trout are relatively dispersed throughout tributaries of the Columbia River basin, including its headwaters in Montana and Canada. Bull trout also occur in the Klamath River basin of south-central Oregon. East of the Continental Divide, bull trout are found in the headwaters of the Saskatchewan River in Alberta and the MacKenzie River system in Alberta and British Columbia (Cavender 1978; Brewin and Brewin 1997). Bull trout habitat in the Jarbidge River basin is a mosaic of land ownership, including Federal lands administered by the U.S. Forest Service (USFS) and U.S. Bureau of Land Management (BLM); State lands in Idaho; and private lands.

Bull trout were first described as *Salmo spectabilis* by Girard in 1856 from a specimen collected on the lower Columbia River (Cavender 1978). Bull trout and Dolly Varden (*Salvelinus malma*) were previously considered a single species (Cavender 1978; Bond 1992); however, they were formally recognized as separate species by the American Fisheries Society in 1980 (Robins *et al.* 1980).

Bull trout exhibit both resident and migratory life history strategies through much of the current range (Rieman and McIntyre 1993). Resident bull trout complete their life cycles in the tributary streams in which they spawn and rear. Migratory bull trout spawn in tributary streams, and juvenile fish rear from 1 to 4 years before migrating to either a lake (adfluvial), river (fluvial), or in certain coastal areas, saltwater (anadromous), to mature (Fraley and Shepard 1989; Goetz 1989). Resident and migratory forms may be found together, and bull trout may produce offspring exhibiting either resident or migratory behavior (Rieman and McIntyre 1993).

Compared to other salmonids, bull trout have more specific habitat requirements (Rieman and McIntyre 1993) that appear to influence their distribution and abundance. These habitat components include water temperature, cover, channel form and stability, valley form, stream elevation, spawning and rearing substrates, and migratory corridors (Oliver 1979; Pratt 1984, 1992; Fraley and Shepard 1989; Goetz 1989; Hoelscher and Bjornn 1989; Sedell and Everest 1991; Howell and Buchanan 1992; Rieman and McIntyre 1993, 1995; Rich 1996; Watson and Hillman 1997). Watson and Hillman (1997) concluded that watersheds must have specific physical characteristics to provide the necessary habitat requirements for bull trout spawning and rearing, and that the characteristics are not necessarily ubiquitous throughout watersheds in which bull trout occur. Because bull trout exhibit a patchy distribution, even in undisturbed habitats (Rieman and McIntyre 1993), fish would not likely occupy all available habitats simultaneously (Rieman *et al.* 1997).

Bull trout are typically associated with the colder streams in a river system, although individual fish can occur throughout larger river systems (Fraley and Shepard 1989; Rieman and McIntyre 1993, 1995; Buchanan and Gregory 1997; Rieman *et al.* 1997). For example, water temperature above 15° C (59° F) is believed to negatively influence bull trout distribution, which partially explains the generally patchy distribution within a watershed (Fraley and Shepard 1989; Rieman and McIntyre 1995). Spawning areas are often associated with cold-water springs, groundwater infiltration, and the coldest streams in a given watershed (Pratt 1992; Rieman and McIntyre 1993; Rieman *et al.* 1997).

All life history stages of bull trout are associated with complex forms of cover, including large woody debris, undercut banks, boulders, and pools (Oliver 1979; Fraley and Shepard 1989; Goetz 1989; Hoelscher and Bjornn 1989; Sedell and Everest 1991; Pratt 1992; Thomas 1992; Rich 1996; Sexauer and James 1997; Watson and Hillman 1997). Jakober (1995) observed bull trout overwintering in deep beaver ponds or pools containing large woody debris in the Bitterroot River drainage, Montana, and suggested that suitable winter habitat may be more restrictive than summer habitat. Maintaining bull trout populations requires stream channel and flow stability (Rieman and McIntyre 1993). Juvenile and adult bull trout frequently inhabit side channels, stream margins, and pools with suitable cover (Sexauer and James 1997). These areas are sensitive to activities that directly or indirectly affect stream channel stability and alter natural flow patterns. For example, altered stream flow in the fall may disrupt bull trout during the spawning period and channel instability may decrease survival of eggs and young juveniles in the gravel during winter through spring (Fraley and Shepard 1989; Pratt 1992; Pratt and Huston 1993).

Preferred spawning habitat generally consists of low gradient streams with loose, clean gravel (Fraley and Shepard 1989) and water temperatures of 5 to 9° C (41 to 48° F) in late summer to early fall (Goetz 1989). However, biologists collected young-of-the-year bull trout in high gradient stream reaches with minimal gravel within the Jarbidge River basin, indicating that spawning occurred in these areas or further upstream (Gary Johnson, Nevada Division of Wildlife (NDOW), pers. comm. 1998a; Terry Crawforth, NDOW, *in litt.* 1998). Pratt (1992) reported that increases in fine sediments reduce egg survival and emergence.

The size and age of maturity for bull trout is variable depending upon life history strategy. Growth of resident fish is generally slower than migratory fish; resident fish tend to be smaller at maturity and less fecund (Fraley and Shepard 1989; Goetz 1989). Resident adults range from 150 to 300 millimeters (mm) (6 to 12 inches (in)) total length and migratory adults commonly reach 600 mm (24 in) or more (Goetz 1989).

Bull trout normally reach sexual maturity in 4 to 7 years and live as long

as 12 years. Repeat and alternate year spawning have been reported, although repeat spawning frequency and post-spawning mortality are not well known (Leathe and Graham 1982; Fraley and Shepard 1989; Pratt 1992; Rieman and McIntyre 1996). Bull trout typically spawn from August to November during periods of decreasing water temperatures. However, migratory bull trout may begin spawning migrations as early as April, and move upstream as far as 250 kilometers (km) (155 miles (mi)) to spawning grounds in some areas of their range (Fraley and Shepard 1989; Swanberg 1997). Temperatures during spawning generally range from 4 to 10° C (39 to 51° F), with redds (spawning beds) often constructed in stream reaches fed by springs or near other sources of cold groundwater (Goetz 1989; Pratt 1992; Rieman and McIntyre 1996). Depending on water temperature, egg incubation is normally 100 to 145 days (Pratt 1992), and juveniles remain in the substrate after hatching. Time from egg deposition to emergence may surpass 200 days. Fry normally emerge from early April through May depending upon water temperatures and increasing stream flows (Pratt 1992; Ratliff and Howell 1992).

Bull trout are opportunistic feeders, with food habits primarily a function of size and life history strategy. Resident and juvenile bull trout prey on terrestrial and aquatic insects, macro-zooplankton, amphipods, mysids, crayfish, and small fish (Wyman 1975; Rieman and Lukens 1979 in Rieman and McIntyre 1993; Boag 1987; Goetz 1989; Donald and Alger 1993). Adult migratory bull trout are primarily piscivorous (fish eating) and are known to feed on various trout and salmon species (*Onchorynchus* spp.), whitefish (*Prosopium* spp.), yellow perch (*Perca flavescens*) and sculpin (*Cottus* spp.) (Fraley and Shepard 1989; Donald and Alger 1993).

In the Jarbidge River basin, bull trout occur with native redband trout (*Oncorhynchus mykiss*), mountain whitefish (*Prosopium williamsoni*), sculpin, bridgelip sucker (*Catostomus columbianus*), and various minnow (Cyprinidae) species. Introductions of non-native fishes, including brook trout (*Salvelinus fontinalis*), and hatchery rainbow trout (*O. mykiss*), have also occurred within the range of bull trout in the Jarbidge River basin. These non-native fishes have been associated with local bull trout declines and extirpations elsewhere in the species' range (Bond 1992; Ziller 1992; Donald and Alger 1993; Leary *et al.* 1993; Montana Bull Trout Scientific Group (MBTSG) 1996a).

Stocked brook trout failed to establish a self-sustaining population in the Jarbidge River system, but an introduced population still occurs in Emerald Lake, a high-elevation lake within the Jarbidge River watershed (T. Crawforth, *in litt.* 1998; Rich Haskins, NDOW, pers. comm. 1998; G. Johnson, pers. comm. 1998). Brook trout may spill out of the lake into the East Fork of the Jarbidge River during peak runoff events, although the lack of a defined outlet makes such an event appear unlikely (G. Johnson, pers. comm. 1994). NDOW's rainbow trout stocking program in the Jarbidge River system has been ongoing since the 1970s, and the Idaho Department of Fish and Game (IDFG) stocked rainbow trout in the Idaho portion of the East and West Forks of the Jarbidge River from 1970 to 1989 (Fred Partridge, IDFG, *in litt.* 1998).

Migratory corridors link seasonal habitats for all bull trout life history forms. The ability to migrate is important to the persistence of local bull trout subpopulations (Rieman and McIntyre 1993; Mike Gilpin, University of California, *in litt.* 1997; Rieman and Clayton 1997; Rieman *et al.* 1997). Migrations facilitate gene flow among local subpopulations if individuals from different subpopulations interbreed when some return to non-natal streams. Migratory fish may also re-establish extirpated local subpopulations.

Metapopulation concepts of conservation biology theory may be applicable to the distribution and characteristics of bull trout (Rieman and McIntyre 1993). A metapopulation is an interacting network of local subpopulations with varying frequencies of migration and gene flow among them (Meffe and Carroll 1994). Metapopulations provide a mechanism for reducing risk because the simultaneous loss of all subpopulations is unlikely. Although local subpopulations may become extinct, they can be reestablished by individuals from other local subpopulations. However, because bull trout exhibit strong homing fidelity when spawning and their rate of straying appears to be low, natural reestablishment of extinct local subpopulations may take a very long time. Habitat alteration, primarily through construction of impoundments, dams, and water diversions, has fragmented habitats, eliminated migratory corridors, and isolated bull trout, often in the headwaters of tributaries (Rieman *et al.* 1997).

Distinct Population Segments

The best available scientific and commercial information identifies five distinct population segments (DPSs) of bull trout in the United States—(1) Klamath River, (2) Columbia River, (3) Coastal-Puget Sound, (4) Jarbidge River, and (5) St. Mary-Belly River. The final listing determination for the Klamath River and Columbia River bull trout DPSs on June 10, 1998 (63 FR 31647), includes a detailed description of the rationale behind the DPS delineation. The approach is consistent with the joint National Marine Fisheries Service and Fish and Wildlife Service policy for recognizing distinct vertebrate population segments under the Act, published on February 7, 1996 (61 FR 4722). This final rule addresses only the Jarbidge River DPS. The Coastal-Puget Sound and St. Mary-Belly River bull trout DPSs will be the subject of a final rule expected to be published in June 1999.

Three elements are considered in the decision on whether a population segment could be treated as threatened or endangered under the Act—discreteness, significance, and conservation status in relation to the standards for listing. Discreteness refers to the isolation of a population from other members of the species and is based on two criteria—(1) marked separation from other populations of the same taxon resulting from physical, physiological, ecological, or behavioral factors, including genetic discontinuity; and (2) populations delimited by international boundaries. Significance is determined either by the importance or contribution, or both, of a discrete population to the species throughout its range. Four criteria were used to determine significance—(1) persistence of the discrete population segment in an ecological setting unusual or unique for the taxon; (2) evidence that loss of the discrete population segment would result in a significant gap in the range of the taxon; (3) evidence that the discrete population segment represents the only surviving natural occurrence of the taxon that may be more abundant elsewhere as an introduced population outside its historic range; and (4) evidence that the discrete population segment differs markedly from other populations of the taxon in its genetic characteristics. If a population segment is discrete and significant, its evaluation for endangered or threatened status is based on the Act's standards.

The Jarbidge River in southwest Idaho and northern Nevada is a tributary in the Snake River basin and contains the southernmost habitat occupied by bull trout. This population segment is discrete because it is geographically segregated from other bull trout in the Snake River basin by more than 240 km (150 mi) of unsuitable habitat and

several impassable dams on the mainstem Snake River and the lower Bruneau River. The occurrence of a species at the extremities of its range is not necessarily sufficient evidence of significance to the species as a whole. However, since the Jarbidge River possesses bull trout habitat that is disjunct from other patches of suitable habitat, the population segment is considered significant because it occupies a unique or unusual ecological setting, and its loss would result in a substantial modification of the species' range.

Status and Distribution

To facilitate evaluation of current bull trout distribution and abundance for the Jarbidge River population segment, we analyzed data on a subpopulation basis because fragmentation and barriers have isolated bull trout. A subpopulation is considered a reproductively isolated bull trout group that spawns within a particular area(s) of a river system. In areas where two groups of bull trout are separated by a barrier (e.g., an impassable dam or waterfall, or reaches of unsuitable habitat) that may allow only downstream access (i.e., one-way passage), both groups would be considered subpopulations. In addition, subpopulations were considered at risk of extirpation from natural events if they were—

(1) Unlikely to be reestablished by individuals from another subpopulation (i.e., functionally or geographically isolated from other subpopulations);

(2) Limited to a single spawning area (i.e., spatially restricted); and

(3) Characterized by low individual or spawner numbers; or

(4) Consisted primarily of a single life history form.

For example, a subpopulation of resident fish isolated upstream of an impassable waterfall would be considered at risk of extirpation from natural events if it had low numbers of fish that spawn in a relatively restricted area. In such cases, a natural event such as a fire or flood could eliminate the subpopulation, and subsequently, the impassable waterfall would prevent reestablishment of the subpopulation by downstream fish. However, a subpopulation residing downstream of the waterfall would not be considered at risk of extirpation because of potential reestablishment by fish from upstream. Because resident bull trout may exhibit limited downstream movement (Nelson 1996), our estimate of subpopulations at risk of extirpation by natural events may be underestimated. We based the status of subpopulations on modified criteria of Rieman *et al.* (1997), including the abundance, trends in abundance, and the presence of life history forms of bull trout.

We considered a bull trout subpopulation "strong" if 5,000 individuals or 500 spawners likely occur in the subpopulation, abundance appears stable or increasing, and life history forms historically present were likely to persist. A subpopulation was considered "depressed" if less than 5,000 individuals or 500 spawners likely occur in the subpopulation, abundance appears to be declining, or a life history form historically present has been lost (Rieman *et al.* 1997). If there was insufficient abundance, trend, and life history information to classify the status of a subpopulation as either "strong" or "depressed," the status was considered "unknown." It should be noted that the assignment of "unknown" status implies only a deficiency of available data to assign a subpopulation as "strong" or "depressed," not a lack of information regarding the threats. Section 4 of the Act requires us to make a determination solely on the best scientific and commercial data available.

The Jarbidge River DPS is currently believed to contain a single subpopulation in the East Fork, West Fork, and mainstem Jarbidge River in Idaho and Nevada, and headwater tributaries in Nevada (Service 1998), however, further definitive genetic analysis of population structure is needed. This population segment is isolated from other bull trout by a large expanse of unsuitable habitat. Although accounts of bull trout in the Jarbidge River basin date to the 1930s, both sampling and actual collections of bull trout were infrequent (Miller and Morton 1952; Johnson 1990; Johnson and Weller 1994). Therefore, historical distribution and abundance data are limited.

The current distribution of bull trout in the Jarbidge River basin primarily includes headwater streams above 2,200 meters (m) (7,200 feet (ft)) elevation within the Jarbidge Wilderness Area—the East Fork and West Fork Jarbidge River and Slide, Dave, Pine, Sawmill, Fall, and Cougar Creeks (Johnson and Weller 1994; G. Johnson, pers. comm. 1998a). There is no definitive information on whether bull trout have been extirpated from Jarbidge River headwater tributaries. However, recent surveys indicate that bull trout have likely been extirpated from one historical tributary, Jack Creek (G. Johnson, pers. comm. 1998a; T. Crawforth, *in litt.* 1998).

In 1934, bull trout were first collected in Dave Creek (East Fork Jarbidge River drainage) downstream of the Idaho-Nevada border (Miller and Morton 1952). They were later documented in the East Fork of the Jarbidge River in 1951 and the West Fork in 1954 (T. Crawforth, *in litt.* 1998). Zoellick *et al.* (1996) compiled survey data from 1954 through 1993 and estimated bull trout population size in the middle and upper headwater areas of the West and East Forks of the Jarbidge River at less than 150 fish/km (240 fish/mi). Low numbers of migratory (fluvial) bull trout were documented in the West Fork of the Jarbidge River from the 1970s through the mid-1980s (Johnson and Weller 1994). In 1985, 292 resident-size bull trout were estimated to reside in the West Fork (Johnson and Weller 1994). In 1993, the abundance of resident-size bull trout in the East Fork was estimated at 314 fish (Johnson and Weller 1994). During snorkel surveys conducted in October 1997, no bull trout were observed in 40 pools of the West Fork of the Jarbidge River. Biologists did not observe bull trout during surveys in the Idaho portion of the Jarbidge River basin in 1992 or 1995 (Warren and Partridge 1993; Allen *et al.* 1996). However, traps operated on the lower East and West Forks, during August through October 1997, captured a single small bull trout in Idaho on the West Fork. (Zoellick *et al.* 1996; T. Crawforth, *in litt.* 1998). The *Salvelinus confluentus* Curiosity Society (SCCS), a group of individuals interested in bull trout conservation, surveyed bull trout in the Jarbidge River in August 1998. During this 1-day survey, a total of approximately 40 stations were sampled throughout the West Fork of the Jarbidge River, Jack Creek, Pine Creek and tributaries, Dave Creek, Fall Creek and tributaries, Slide Creek and tributaries, and Sawmill Creek. A total of 66 adult and juvenile bull trout were reported as either collected or observed (Selena Werdon, Service, pers. comm. 1998). No bull trout were found in one historically occupied stream, Jack Creek, despite the removal of a fish barrier in 1997.

NDOW provided population estimates, based on extrapolations of SCCS data and NDOW surveys, which totaled about 1,800 fish in the West and East Forks of the Jarbidge River, and seven other creeks and tributaries (G. Johnson, pers. comm. 1998a). However, the value of this data is in question (see our response to "Issue 2"). Also, it is estimated that between 50 and 125 bull trout spawn throughout the Jarbidge River basin annually (G. Johnson, pers. comm. 1998b). Exact spawning sites and timing are uncertain (G. Johnson, pers. comm. 1998a). A total of three potential

resident bull trout redds were observed in the upper West Fork in 1995 and 1997 surveys (Ramsey 1997).

Adequate population trend information for bull trout in the Jarbidge River subpopulation is not available, although the current characteristics of bull trout in the basin include low numbers and disjunct distribution. These characteristics have been described as similar to that observed in the 1950s (Johnson and Weller 1994). Based on recent surveys, the bull trout population in the Jarbidge River basin is considered "depressed" in all of the occupied range. Migratory fish (fluvial) may be present in low abundance, but resident fish are the predominant life history form. Past and present activities within the Jarbidge River basin have likely restricted bull trout migration, thus reducing opportunities for bull trout reestablishment in areas where the fish are no longer found (Service 1998).

In 1998, the SCCS collected fin clips for genetic analysis from bull trout within the Jarbidge River basin. Although sample sizes from each stream varied and were typically small (less than 30 individuals), preliminary genetic analysis of these tissue samples using DNA microsatellites indicated that fish in the East and West Forks were highly differentiated, and that tributaries to the East Fork also showed differentiation (Jason Dunham, University of Nevada-Reno, *in litt.* 1998; Bruce Rieman, USFS, *in litt.* 1998; Paul Spruell, University of Montana, *in litt.* 1998). These preliminary data indicate the potential presence of multiple, tributary resident bull trout subpopulations, with limited gene flow among them, within the Jarbidge River basin (T. Crawforth, *in litt.* 1998; J. Dunham, *in litt.* 1998; B. Rieman, *in litt.* 1998).

In summary, we considered new, though limited, information submitted on the abundance, trends in abundance, and distribution of bull trout in the Jarbidge River population segment. Resident fish inhabit the East Fork and West Fork of the Jarbidge River and tributary streams, and extremely low numbers of migratory (fluvial) fish may still be present in the watershed (Zoellick *et al.* 1996; K. Ramsey, USFS, *in litt.* 1997; L. McLelland, NDOW, *in litt.* 1998; Crawforth, *in litt.* 1998). If the Jarbidge River DPS is extirpated, individuals from other areas are unlikely to reestablish this DPS due to the presence of dams downstream on the Snake and Bruneau Rivers and the 240 km (150 mi) of unsuitable, degraded habitat within these migratory corridors. Past and present activities within the Jarbidge River basin have likely restricted bull trout migration, thus reducing opportunities for bull trout reestablishment in areas where the fish are no longer found (Service 1998). There is no definitive information on whether bull trout have been extirpated from Jarbidge River headwater tributaries. However, recent surveys indicate that bull trout have likely been extirpated from one historical tributary, Jack Creek.

Previous Federal Action

On October 30, 1992, we received a petition to list the bull trout as an endangered species throughout its range from the following conservation organizations in Montana: Alliance for the Wild Rockies, Inc., Friends of the Wild Swan, and Swan View Coalition (petitioners). The petitioners also requested an emergency listing and concurrent critical habitat designation for bull trout populations in select aquatic ecosystems where the biological information indicated that the species was in imminent risk of extinction. A 90-day finding, published on May 17, 1993 (58 FR 28849), determined that the petitioners had provided substantial information indicating that listing of the species may be warranted. We initiated a rangewide status review of the species concurrent with publication of the 90-day finding.

On June 6, 1994, we concluded in our original 12-month finding that listing of bull trout throughout its range was not warranted due to unavailable or insufficient data regarding threats to, and status and population trends of, the species within Canada and Alaska. However, we determined that sufficient information on the biological vulnerability and threats to the species was available to support a warranted finding to list bull trout within the coterminous United States but this action was precluded due to higher priority listings.

On November 1, 1994, Friends of the Wild Swan, Inc. and Alliance for the Wild Rockies, Inc. (plaintiffs) filed suit in the U.S. District Court of Oregon (District Court) arguing that the warranted but precluded finding was arbitrary and capricious. After we "recycled" the petition and issued another 12-month finding for the coterminous population of bull trout on June 12, 1995 (60 FR 30825), the District Court issued an order declaring the plaintiffs' challenge to the original finding moot. The plaintiffs declined to amend their complaint and appealed to the Ninth Circuit Court of Appeals (Circuit Court), which found that the plaintiffs' challenge fell "within the exception to the mootness doctrine for claims that are capable of repetition yet evading review." On April 2, 1996, the Circuit Court remanded the case back to the District Court. On November 13, 1996, the District Court issued an order and opinion remanding the original finding to us for further consideration. Included in the instructions from the District Court were requirements that we limit our review to the 1994 administrative record, and incorporate any emergency listings or high magnitude threat determinations into current listing priorities. The reconsidered 12-month finding based on the 1994 Administrative Record was delivered to the District Court on March 13, 1997.

On March 24, 1997, the plaintiffs filed a motion for mandatory injunction to compel us to issue a proposed rule to list the Klamath River and Columbia River bull trout populations within 30 days based solely on the 1994 Administrative Record. On April 4, 1997, we requested 60 days to prepare and review the proposed rule. In a stipulation between the plaintiffs and us filed with the District Court on April 11, 1997, we agreed to issue a proposed rule in 60 days to list the Klamath River population of bull trout as endangered and the Columbia River population of bull trout as threatened based solely on the 1994 record.

We proposed the Klamath River population of bull trout as endangered and Columbia River population of bull trout as threatened on June 13, 1997 (62 FR 32268). The proposal included a 60-day comment period and gave notice of five public hearings in Portland, Oregon; Spokane, Washington; Missoula, Montana; Klamath Falls, Oregon; and Boise, Idaho. The comment period on the proposal, which originally closed on August 12, 1997, was extended to October 17, 1997 (62 FR 42092), to provide the public with more time to compile information and submit comments.

On December 4, 1997, the District Court ordered us to reconsider several aspects of the 1997 reconsidered finding. On February 2, 1998, the District Court gave us until June 12, 1998, to respond. The final listing determination for the Klamath River and Columbia River population segments of bull trout and the concurrent proposed listing rule for the Coastal-Puget Sound, St. Mary-Belly River, and Jarbidge River DPSs constituted our response.

We published a final rule listing the Klamath River and Columbia River population segments of bull trout as threatened on June 10, 1998 (63 FR 31647). On the same date, we also published a proposed rule to list the

Coastal-Puget Sound, Jarbidge River, and St. Mary-Belly River population segments of bull trout as threatened (63 FR 31693). On August 11, 1998, we issued an emergency rule listing the Jarbidge River population segment of bull trout as endangered due to river channel alteration associated with unauthorized road construction on the West Fork of the Jarbidge River, which we found to imminently threaten the survival of the distinct population segment (63 FR 42757).

Summary of Comments and Recommendations

In the June 10, 1998, proposed rule (63 FR 31693), we requested interested parties to submit comments or information that might contribute to the final listing determination for bull trout. We sent announcements of the proposed rule and notice of public hearings to at least 800 individuals, including Federal, State, county and city elected officials, State and Federal agencies, interested private citizens and local area newspapers and radio stations. We also published announcements of the proposed rule in 10 newspapers, the Idaho Statesman, Boise, Idaho; the Times-News, Twin Falls, Idaho; the Glacier Reporter, Browning, Montana; the Daily Inter Lake; Kalispell, Montana; the Great Falls Tribune, Great Falls, Montana; the Elko Daily Free Press, Elko, Nevada; the Bellingham Herald, Bellingham, Washington; the Olympian, Olympia, Washington; the Spokesman-Review, Spokane, Washington, and the Seattle Post-Intelligencer, Seattle, Washington. We held public hearings on July 7, 1998, in Lacey, Washington; July 9, 1998, in Mount Vernon, Washington; July 14, 1998, in East Glacier, Montana; and July 21, 1998, in Jackpot, Nevada. We accepted comments on the emergency rule for the Jarbidge River DPS until the comment period on the proposed rule ended on October 8, 1998.

We received 9 oral and 14 written comments (including electronic mail) on the proposed rule which pertained to the Jarbidge River DPS; other comments were generic to all three DPSs. Of those specific to the Jarbidge River DPS, four written comments also addressed the emergency rule. We also received comments on the Jarbidge River DPS from two Federal agencies, two State agencies, one county in Nevada, four environmental organizations, and nine individuals. We received comments from a member of the Nevada Congressional delegation. In addition, we solicited formal scientific peer review of the proposal in accordance with our July 1, 1994, Interagency Cooperative Policy (59 FR 34270). We requested six individuals, who possess expertise in bull trout biology and salmonid ecology, and whose affiliations include academia and Federal, State, and provincial agencies, to review the proposed rule by the close of the comment period. One individual responded to our request and their comments are also addressed in this section of the rule.

We considered all comments, including oral testimony presented at the public hearings, and also the comments from the only peer reviewer who responded to our request to review the proposed rule. A majority of comments supported the listing proposal for the Jarbidge River DPS, while seven comments were in opposition. Opposition was based on several concerns, including possible negative economic effects from listing bull trout; potential restrictions on activities; lack of solutions to the bull trout decline that would result from listing; and interpretation of data concerning the status of bull trout and their threats in the three population segments. The USFS (Ben Siminoe, USFS, *in litt.* 1998; Dave Aicher, USFS, pers. comm. 1998), BLM (Jim Klott, BLM, pers. comm. 1998), NDOW (G. Johnson, NDOW, pers. comm. 1998a; R. Haskins, NDOW, *in litt.* 1998), and IDFG (F. Partridge, IDFG, *in litt.* 1998) provided us with information on respective agency efforts to assess, evaluate, monitor, and conserve bull trout in habitats affected by each agency's management. Because multiple respondents offered similar comments, we grouped comments of a similar nature or point. These comments and our responses are presented below.

Issue 1: One respondent questioned our subpopulation definition and asked whether absolute reproductive isolation was required or only some level of population structuring that means reduced gene flow and some local adaptation. Several respondents questioned our single subpopulation designation for the Jarbidge River DPS given preliminary new genetic information which indicates the potential presence of multiple local tributary subpopulations, with limited gene flow. Some respondents also suggested that the bull trout in the Jarbidge River may better fit the definition of a metapopulation, as described in the proposed rule (63 FR 31693). Respondents pointed out that genetic information and changes in DPS population structuring have implications for risk assessment, as well as management and recovery strategies.

Our Response: We selected subpopulations as a convenient unit to analyze bull trout within population segments, and defined a subpopulation as "a reproductively isolated group of bull trout that spawns within a particular area of a river system." We identified subpopulations based on documented or likely barriers to fish movement (e.g., impassable barriers to movement and unsuitable habitat). To be considered a single subpopulation, two-way passage at a barrier is required, otherwise bull trout upstream and downstream of a barrier are each considered a subpopulation. Because it is likely that fish above a barrier could pass downstream and mate with fish downstream, absolute reproductive isolation was not required to be considered a subpopulation.

We viewed metapopulation concepts (see Rieman and McIntyre 1993) as useful tools in evaluating bull trout, but, in querying biologists both within the Service and elsewhere, we found considerable variability in the definition of a metapopulation and the types of data suggestive of a metapopulation. Some biologists may consider a subpopulation, as defined by us, as a metapopulation if it has multiple spawning areas. Likewise, subpopulations without reciprocal interactions (i.e., individuals from upstream of a barrier may mingle with individuals downstream, but not vice versa) may be considered components of a metapopulation consisting of more than one subpopulation. Because little genetic and detailed movement information exists throughout bull trout range in the population segments addressed in the proposed rule, we believe that barriers to movement was an appropriate consideration for identifying subpopulations.

We reviewed preliminary new genetic and other biological data developed since the June 10, 1998 (63 FR 31693), proposed rule and determined that there is insufficient information available to further divide the Jarbidge River DPS into more than one subpopulation at this time. We believe that barriers to movement (including unsuitable habitat) were an appropriate consideration for identifying subpopulations. However, we believe that additional samples of genetic data for several tributaries are needed to accurately define bull trout population structure within the Jarbidge River basin. We still consider this DPS to contain one subpopulation based on the following: (1) conclusive genetic data are not available due to limited sample sizes from many of the tributaries; (2) bull trout in these tributaries are not

physically reproductively isolated; and (3) barriers to movement exist.

We did consider this new genetic information and potential metapopulation structure in assessing the overall level of threat to this DPS. Although the existence of a potential metapopulation may reduce the risk of extinction for this DPS as a whole, the potential presence of unique genetic material in each tributary further elevates their individual relative importance within the DPS. The genetic diversity of all bull trout within the basin will be fully considered in future management and recovery planning in the Jarbidge River basin. As more complete genetic data become available, management and recovery actions may change accordingly.

Issue 2: Numerous respondents provided conflicting comments on the status and trend of bull trout in the Jarbidge River DPS. Respondents variously claimed that population status is either stable, increasing, or uncertain. Some respondents questioned the amount and reliability of survey data and sampling methodologies. One respondent noted that we did not evaluate the listing criteria with objective and quantitative methods, making it difficult to interpret new information in a consistent manner. The reviewer also noted that, although quantitative data are lacking for many local populations of bull trout, sufficient information exists to design an inventory program to describe their current distribution, relative abundance, and population structure.

Our Response: A species may be determined to be an endangered or threatened species due to the five factors listed in section 4(a)(1) of the Act (see the "Summary of Factors Affecting the Species" section). The Act requires us to base listing determinations on the best available commercial and scientific information.

The listing process includes an opportunity for the public to comment and provide new information for us to evaluate and consider before making a final decision. Aside from previously cited studies and reports in the proposed and emergency rules, we reviewed and considered new information regarding bull trout distribution and abundance for the Jarbidge River basin from NDOW (G. Johnson, pers. comm. 1998a; T. Crawforth, *in litt.* 1998) and the SCCS (S. Werdon, pers. comm. 1998). Data are often not available to make statistically rigorous inferences about a species' status (e.g., abundance, trends in abundance, and distribution). Historical and recent collections have consisted of a few, sporadic presence and absence-type surveys occurring years or decades apart, each reflecting a single point-in-time. No regular, standardized, quantitative surveys designed to detect population trends of bull trout over a period of time, with statistical testing to qualify data accuracy, have been done.

NDOW provided us with population estimates for streams in the Jarbidge River basin which they derived by extrapolating the number of bull trout collected or observed (via single-pass electrofishing or snorkeling) within 30-m (100-ft) stations to kilometers (miles) of stream habitat. For example, one bull trout per station equaled an average population density of 85 bull trout/km (52.8 bull trout/mi) in a particular stream reach. We believe these extrapolations are inaccurate since past surveys confirm that bull trout exhibit patchy distributions, and comparisons of such population estimates among years does not provide an accurate analysis of population trends. We specifically requested additional information from NDOW during the comment period, however, they did not provide information on the actual number of bull trout collected or observed, the sizes or life-stages of the fish, or the specific locations where fish were collected during 1998 surveys. This information would be useful for comparison with prior distribution and abundance data. Nevertheless, we believe overall numbers in the subpopulation are low, and that concentrations of fish are found in only a few headwater streams where suitable habitat remains. Overall, we found sufficient evidence exists that demonstrates the Jarbidge River population segment is threatened by a variety of past and on-going threats and is likely to become endangered in the foreseeable future.

Issue 3: Numerous respondents provided conflicting comments on the validity and level of impact from threats identified in the proposed and emergency rules. Some respondents also suggested additional threats to this population.

Our Response: Threats identified in the proposed rule for the Jarbidge River DPS include habitat degradation from past and ongoing land management activities such as road construction and maintenance, mining, and livestock grazing. Additional threats we evaluated included non-native rainbow trout stocking, angling for other fish species, migration barriers, and future natural events. We emergency listed the population due to habitat destruction on the West Fork of the Jarbidge River associated with unauthorized road construction, and the substantial risk of continued loss of bull trout habitat through additional unauthorized road construction. We believe the threats identified in the proposed and emergency rules threaten the continued existence of bull trout in the Jarbidge River system. However, respondents may have misconstrued our perceived level of threat associated with certain activities, livestock grazing in particular. We recognize that existing levels of livestock grazing provide relatively minor impacts to bull trout habitat throughout the Jarbidge River basin; however, all potential threats must be considered during the listing process.

Many of the threats addressed in the proposed rule were associated with residual effects from historical activities within the basin (e.g., mining) and some respondents felt they were no longer valid threats. We recognize that overall watershed conditions have improved from early this century, but impacts to bull trout habitat from such historical activities still exist (e.g., elevated water temperatures from mine adit discharges). Road construction and associated maintenance activities, especially those occurring within riparian areas or adjacent to occupied bull trout streams, have documented impacts on bull trout habitat conditions and thereby threaten bull trout.

Issue 4: Many respondents provided comments regarding prior and ongoing beneficial management and/or habitat rehabilitation measures for bull trout throughout the Jarbidge River watershed. Some respondents also stated that overall watershed conditions in the Jarbidge River basin are improving.

Our Response: Section 4(b)(1)(A) of the Act, requires us to make listing decisions solely on the best scientific and commercial data available after conducting a review of the status of the species. The Act also instructs us to consider existing regulatory mechanisms, including efforts by State, local and other entities to protect a species, including conservation plans or practices.

We recognize that numerous individual conservation actions and restoration projects have been undertaken by the USFS, BLM, States, conservation groups, and other entities for bull trout in the Jarbidge River basin. For example, the Jarbidge Bull Trout Task Force, established in 1994, completed a project to restore access for bull trout to Jack Creek in 1997. However, no bull trout were found in Jack Creek in 1998. The USFS has fenced some springs to protect riparian

areas and improve water quality, and implemented reclamation of old mine sites. Idaho and Nevada State angler harvest regulations for bull trout have also become more restrictive.

We are required to evaluate the current status and existing threats to bull trout in the Jarbidge River DPS in making this final listing determination. Altogether, watershed habitat recovery and actions taken to date are encouraging for initiating long-term bull trout conservation. However, we have found no documentation of changes in abundance and distribution of bull trout as a result of such actions. For example, surveys conducted by biologists did not find bull trout in Jack Creek during 1997 or 1998 after the removal of a culvert barrier. Although impacts to bull trout from historical and on-going activities still exist, we recognize that overall watershed conditions in the Jarbidge River basin have improved, and we are now finalizing our listing of bull trout as threatened, rather than as endangered (see "Issue 6" for further discussion).

Issue 5: Several respondents opposed the Federal listing entirely, while others supported listing the population as threatened or endangered. One respondent commented that we proposed this listing as a result of a lawsuit, rather than sound scientific evidence, as required by the Act.

Our Response: Although the timing of recent listing actions were prompted by petitions and legal action, we previously had substantial information on biological vulnerability and threats on file to support preparation of a bull trout listing proposal, and the decision to list was based solely on scientific data and threats identified during the status review process.

Issue 6: One respondent stated that the August 11, 1998, emergency listing was "inappropriate based on the level of threat" posed by unauthorized road reconstruction activities to reopen 2.4 km (1.5 mi) of road.

Our Response: Road construction and maintenance activities, especially those occurring within riparian areas or adjacent to streams, have substantial documented adverse impacts on bull trout habitats. The threats to bull trout from the unauthorized road construction activities on the West Fork of the Jarbidge River include both direct and indirect impacts. These activities occurred on a migratory corridor during the period when bull trout migrate and spawn. Migratory or resident bull trout may have been stranded and killed when the entire river was diverted and the existing wetted channel was filled. Elko County did not use Best Management Practices (BMPs) to protect instream aquatic habitat during construction, and large quantities of sediment from the disturbed area settled out in the river immediately downstream, filling in pools and interstitial spaces. The sediment plume traveled at least 5.6 km (3.5 mi) downstream (B. Siminoe, pers. comm. 1998), within known bull trout habitats. The newly created channel provided minimal instream or overhead cover, with few resting areas for migratory or resident fish, and at low flow, would impede bull trout migrations. We also anticipated long-term residual impacts such as sedimentation from the new roadbed, floodplain vegetation destruction, slope cuts, and channel instability. Elko County expressed their intentions to continue road reconstruction despite being informed of various regulatory prohibitions. The threat of continued unauthorized road reconstruction without the use of BMPs was considered in the emergency listing.

Issue 7: Several respondents opposed the proposed listing of the Jarbidge River population segment and expressed concerns because of possible restrictions on local activities such as road construction, livestock grazing, and mining, which might impact local residents. One respondent stated that human use and bull trout conservation were "mutually compatible goals." Another respondent stated that future actions needed for bull trout will be the same whether it is listed or remains a "sensitive species."

Our Response: Section 7(a)(2) of the Act, as amended, requires Federal agencies to insure that activities that they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. This could include Federal activities such as road construction, livestock grazing management, and mining permit issuance. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us. Portions of the Jarbidge River population segment occur on lands administered by the USFS and BLM. We have already consulted with these Federal agencies for several such projects in the Jarbidge River basin during the emergency listing period. Federal and private actions that we authorize through section 7 consultation or through section 10 of the Act (Habitat Conservation Plans) will not result in significant impacts to bull trout. Future impacts to local residents from this final listing determination are expected to be minimal when compared with the requirements of existing laws, regulations, and procedures. See "Available Conservation Measures" section for a list of actions that would not result in a take of this species.

Issue 8: A respondent noted that we are probably correct in stating that critical habitat is presently not determinable. They noted that consistent patterns in juvenile fish distribution, primarily with respect to stream elevation and water temperature, are useful in predicting patches of spawning and rearing habitats, which are probably sensitive to land use and important for the overall productivity of local populations. Several respondents encouraged us to consider several issues such as designating all historic and existing bull trout habitat as critical, protecting roadless and riparian areas, providing suitable water temperatures, limiting sediment delivery, and other habitat management activities.

Our Response: Section 3 of the Act defines critical habitat to include the specific areas within the geographic area occupied by the species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection. Critical habitat may also include specific areas outside of the geographic area occupied by the species at the time it is listed, upon determination that such areas are essential for the conservation of the species. At this time, we find that critical habitat is not determinable for the Jarbidge River population segment. We appreciate the comments and believe that information on patterns in fish distribution will likely be useful in future critical habitat designations. This and other habitat considerations will also be important during development of the recovery plan.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, we determine that the Jarbidge River population segment of bull trout should be classified as a threatened species. We followed procedures found at section 4(a)(1) of the Act and regulations (50 CFR part 424) implementing the listing provisions of the Act. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Jarbidge River population segment of bull trout (*Salvelinus confluentus*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Land and water management activities that degrade and continue to threaten all of the bull trout population segments in the coterminous United States include dams, forest management practices, livestock grazing, agriculture and agricultural diversions, roads, and mining (Furniss *et al.* 1991; Meehan 1991; Nehlsen *et al.* 1991; Sedell and Everest 1991; Frissell 1993; McIntosh *et al.* 1994; MBTSG 1995a,b; 1996a,b).

Ongoing threats affecting bull trout habitat have maintained degraded conditions in the West Fork of the Jarbidge River (McNeill *et al.* 1997; J. Frederick, pers. comm. 1998a; Kathy Ramsey, USFS, pers. comm. 1998a). McNeill *et al.* (1997) indicates that at least 11.2 km (7 mi) of the West Fork of the Jarbidge River is affected by over a century of human activities such as road development and maintenance, mining, stream channelization and removal of large woody debris, residential development, and road and campground development on USFS lands. These activities removed the riparian canopy and much of the upland forest, reduced recruitment of large woody debris, and decreased channel stability (McNeill *et al.* 1997; K. Ramsey, *in litt.* 1997; J. Frederick, *in litt.* 1998a), which can lead to increased stream temperatures and bank erosion, and decreased long-term stream productivity. However, there is little documentation of increased stream temperatures and bank erosion and decreased stream productivity in the Jarbidge River system, but there is documentation of these kinds of degradation in other systems within the range of the bull trout.

Strict, cold water temperature requirements make bull trout particularly vulnerable to activities that warm spawning and rearing waters (Goetz 1989; Pratt 1992; Rieman and McIntyre 1993). Bull trout distribution in the Jarbidge River population segment is likely affected by elevated stream temperatures as a result of past forest practices. Although timber was historically removed from the Jarbidge River basin, forest management is not thought to be a major factor currently affecting bull trout habitat. However, existing habitat conditions still reflect the impacts of past harvesting practices.

Road construction and maintenance account for a majority of human-induced sediment loads to streams in forested areas (Shepard *et al.* 1984; Cederholm and Reid 1987; Furniss *et al.* 1991). Sedimentation affects streams by reducing pool depth, altering substrate composition, reducing interstitial space, and causing braiding of channels (Rieman and McIntyre 1993), which reduce carrying capacity. Sedimentation and the loss of pool-forming structures such as boulders and large wood reduces quantities of large, deep pools (USDA *et al.* 1993). Increasing stream basin road densities and associated effects have been shown to cause declines in bull trout (Quigley and Arbelbide 1997). Fewer bull trout are present within highly roaded basins, and bull trout are less likely to use highly roaded basins for spawning and rearing (Quigley and Arbelbide 1997).

Road densities within the Jarbidge Canyon are currently characterized as moderate (Ramsey 1998). Bull trout habitats in portions of the Jarbidge River basin are negatively affected by the presence and maintenance of roads, especially those immediately adjacent to or crossing occupied streams. The unauthorized road construction and associated alterations to the West Fork of the Jarbidge River within the Humboldt-Toiyabe National Forest by the Elko County (Nevada) Road Department prompted our emergency listing of the Jarbidge River DPS on August 11, 1998 (63 FR 42757). On July 22, 1998, a USFS employee observed a 5.6-km (3.5-mi) plume of sediment in the West Fork, which extended downstream from a site where Elko County was using heavy equipment to reconstruct part of a USFS road that washed out during a flood in 1995 (B. Siminoe, pers. comm. 1998). By the following day, Elko County road crews reconstructed approximately 275 m (300 yards (yds)) of road. To create the road, sections of river were loosely filled with material from adjacent hillsides and floodplain debris. The entire river flow was diverted into a straight channel created with a bulldozer and/or front-end loader. This channel lacked pools and had minimal cover, as mature trees adjacent to the new channel and other riparian vegetation were removed during channel construction. Sedimentation in the river downstream of the construction area was substantial. Federal agencies have implemented channel and floodplain habitat restoration and stabilization practices, but impacts from the road reconstruction to bull trout habitat will likely remain for years. Impacts from County road maintenance practices within the Jarbidge Canyon and elsewhere, such as surface grading and dumping fill directly into the river to stabilize the road also continue to negatively impact bull trout habitat.

Improper livestock grazing can promote streambank erosion and sedimentation, and limit the growth of riparian vegetation important for temperature control, streambank stability, fish cover, and detrital input. The steep terrain of the Jarbidge River basin is a deterrent to livestock grazing (J. Frederick, *in litt.* 1998a). Approximately 40 percent of public and private lands within the watershed are grazed, and ongoing livestock grazing is affecting about 3.2 km (2 mi) of the East Fork of the Jarbidge River and portions of Dave Creek and Jack Creek by increasing sediment input, removing riparian vegetation, and trampling banks (J. Frederick, pers. comm. 1998; G. Johnson, pers. comm. 1998b). However, the effects are localized, and livestock grazing is considered only a minor localized threat to bull trout habitat in the Jarbidge River basin.

Mining can degrade aquatic systems by generating sediment and heavy metals pollution, altering water pH levels, and changing stream channels and flow. Although not currently active, the effects of past mining in the Jarbidge River basin continue to adversely affect streams. Cyanide and/or mercury amalgamation mills were operated directly on the river, and spoil piles are still located adjacent to the river. These piles may be sources of sediment, acidity, and heavy metals. In addition, some old mine adits continue to discharge thermally-elevated groundwater. Water quality and temperatures associated with historical mining are still of concern.

Migration barriers have precluded natural recolonization by bull trout in the Jarbidge River basin into historically occupied sites. For example, an Elko County road culvert had prevented upstream movement of bull trout in Jack Creek, a tributary to the West Fork of the Jarbidge River, for approximately 17 years. Private and public funding was used to replace the culvert with a bridge in the fall of 1997 (J. Frederick, *in litt.* 1998b), but bull trout have yet to return to this stream. In addition to structural barriers, stream habitat conditions (e.g., water temperature) are likely barriers to bull trout movement within the Jarbidge River basin.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Declines in bull trout abundance have prompted States to institute restrictive fishing regulations and eliminate the harvest of bull trout in all waters in Idaho and Nevada. Similar restrictive regulations resulted in an increase in recent observations of adult bull trout in other areas of their range. However,

illegal harvest and incidental harvest still threaten bull trout.

Overutilization by angling is a concern for the Jarbidge River DPS of bull trout. Idaho prohibited harvest of bull trout in the Jarbidge River basin as of 1995 and has shortened fishing seasons and implemented a two trout limit. Until recently, Nevada allowed harvest of up to 10 trout per day, including bull trout. Anglers harvested an estimated 100 to 400 bull trout annually in the Jarbidge River basin (Johnson 1990; Pat Coffin, Service, pers. comm. 1994; P. Coffin, *in litt.* 1995). On the West Fork of the Jarbidge River in Nevada, fishing pressure is between 1,500 to 3,500 angler days per year; the East Fork annually receives 500 to 1,500 angler days (P. Coffin, pers. comm. 1996). Nevada State fishing regulations were recently amended to prohibit harvest of bull trout effective March 1, 1998 (Gene Weller, NDOW, *in litt.* 1997; G. Johnson, pers. comm. 1998b). In addition, Nevada reduced the daily and possession limits for other trout species in the Jarbidge River basin from 10 to 5 trout. We anticipate that these regulation changes will have a long-term positive effect on the conservation of bull trout. Inaccurate identification of bull trout by anglers could result in unauthorized harvest, further impacting already low population levels in this DPS. Even though State regulations now require all bull trout incidentally captured to be released immediately, some residual injuries or mortality are likely associated with capture and handling.

Overutilization for scientific purposes can be a concern for the Jarbidge River DPS of bull trout in the long-term. State regulations require a scientific collection permit to collect bull trout for educational and scientific purposes, but permit application and reporting requirements are minimal. Although many bull trout collected for scientific purposes may be documented as released alive (e.g., after taking fin clips for genetic analysis), collection techniques such as electrofishing, have documented short- and long-term harmful effects on salmonids, including mortality, physical damage, behavioral changes, and physiological disturbances. Other types of permitted scientific research (e.g., implantation of radio tags) may also result in the loss of individual bull trout.

C. Disease or Predation

Diseases affecting salmonids are likely to be present in the Jarbidge River population segment, but are not thought to be a factor threatening bull trout. Instead, interspecific interactions, including predation, likely negatively affect bull trout where non-native salmonids are introduced (Bond 1992; Donald and Alger 1993; Leary *et al.* 1993; MBTSG 1996a; J. Palmisano and V. Kaczynski, Northwest Forestry Resources Council, *in litt.* 1997).

The NDOW and IDFG have introduced non-native salmonids, including brook trout and hatchery rainbow trout within the range of bull trout in the Jarbidge River basin. However, brook trout stocked in Nevada failed to establish a self-sustaining population in the Jarbidge River system and the NDOW has not stocked brook trout since 1960 (Johnson and Weller 1994; G. Johnson, pers. comm. 1998b; T. Crawforth, *in litt.* 1998). In the West Fork of the Jarbidge River, only approximately 1 percent of the angler harvest from the 1960s through the 1980s was brook trout (Johnson 1990). Hatchery-reared rainbow trout have been stocked annually for decades in both Nevada and Idaho portions of the basin. IDFG stocked a total of approximately 52,783 hatchery rainbow trout in the East (75 percent) and West (25 percent) forks of the Jarbidge River from 1970 through 1989 (F. Partridge, *in litt.* 1998), but then discontinued their stocking program. NDOW's average annual catchable rainbow trout stocking numbers on the West Fork of the Jarbidge River were 4,242 fish in the1970s; 3,287 fish from 1980 to 1986; and 3,000 fish from 1987 to 1994 (except 1991) (Johnson and Weller 1994). NDOW's rainbow trout stocking program continued through 1998, however, NDOW will not stock rainbow trout in the Jarbidge River system in 1999 (Gene Weller, NDOW, pers. comm. 1999).

D. The Inadequacy of Existing Regulatory Mechanisms

The implementation and enforcement of existing Federal and State laws designed to conserve fishery resources, maintain water quality, and protect aquatic habitat have not been sufficient to prevent past and ongoing habitat degradation leading to bull trout declines and isolation. Regulatory mechanisms, including the National Forest Management Act, the Federal Land Policy and Management Act, the Public Rangelands Improvement Act, the Clean Water Act, the National Environmental Policy Act, Federal Power Act, State Endangered Species Acts and numerous State laws and regulations oversee an array of land and water management activities that affect bull trout and their habitat.

Regulatory mechanisms have been inadequate to protect bull trout habitat in the Jarbidge River basin. The Jarbidge Canyon Road parallels the West Fork of the Jarbidge River for much of its length and includes at least seven undersized bridges for the stream and floodplain. Maintenance of the road and bridges requires frequent channel and floodplain modifications that affect bull trout habitat, such as channelization; removal of riparian trees and beaver dams; and placement of rock, sediment, and concrete (McNeill *et al.* 1997; J. Frederick, pers. comm. 1998a; J. Frederick, *in litt.* 1998a). Periodic channelization in the Jarbidge River by unknown parties has occurred without oversight by the U.S. Army Corps of Engineers (COE) Clean Water Act section 404 regulatory program (Mary Jo Elpers, Service, pers. comm. 1998), and the USFS. Illegal road openings, such as the removal of road barriers and unauthorized grading, have also occurred within the Humboldt-Toiyabe National Forest.

In 1995, a flood event washed out a 2.4-km (1.5-mi) portion of the upper Jarbidge Canyon road, which led to the Jarbidge Wilderness Area boundary. The USFS conducted an environmental analysis on options for restoring access to the wilderness and initially planned to reconstruct the road in the floodplain, which would have included channelizing the river (McNeill *et al.* 1997). After an appeal, the USFS subsequently completed additional environmental analyses and issued an environmental assessment on June 29, 1998, with construction of a hillside trail as the preferred alternative.

On July 15, 1998, the Elko County Board of Commissioners passed a resolution directing the Elko County Road Department to reconstruct the road. On July 22, 1998, the USFS discovered that road construction was in progress and observed a 5.6-km (3.5-mi) plume of sediment downstream from the construction site. Prior to the issuance of cease and desist orders from the COE and Nevada Division of Environmental Protection (NDEP) on July 23, 1998, the County partially reconstructed approximately 275 m (300 yds) of road, created a new river channel, and diverted the flow of the river into the new channel. The County failed to implement BMPs and damaged or destroyed habitat within the river channel and floodplain. Elko County continues to publicly assert that it has jurisdiction over the road, but the Service, USFS, and Elko County are cooperatively exploring alternatives for public access in the area that would not adversely impact bull trout habitat.

The Nevada water temperature standards throughout the Jarbidge River

are 21° C (67° F) for May through October, and 7° C (45° F) for November through April, with less than 1° C (2° F) change for beneficial uses (NDEP, *in litt.* 1998). Water temperature standards for May through October exceed temperatures conducive to bull trout spawning, incubation, and rearing (Rieman and McIntyre 1993; Buchanan and Gregory 1997). Also, several old mines are releasing small quantities of warm groundwater and potential contaminants into the West Fork of the Jarbidge River.

In 1994, a local Bull Trout Task Force was formed to gather and share information on bull trout in the Jarbidge River basin. The task force is open to individuals from Elko and Owyhee counties, the towns of Jarbidge (Nevada) and Murphy Hot Springs (Idaho), road districts, private landowners, conservation organizations, NDOW, IDFG, BLM, USFS, and the Service. The task force was successful in 1997 in obtaining nearly $150,000 for replacing the Jack Creek culvert with a concrete bridge to facilitate bull trout passage into Jack Creek. However, the task force has not yet developed a comprehensive conservation plan addressing threats to bull trout in the Jarbidge River basin.

In 1995, the USFS amended its Forest Plan for the Humbolt National Forest to include the Inland Native Fish Strategy, which was developed by the USFS to provide an interim aquatic conservation strategy for inland native fish in eastern Oregon and Washington, Idaho, western Montana, and portions of Nevada. This strategy sets a "no net loss" objective and is guiding USFS actions within bull trout habitat in the Jarbidge River basin.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Natural and human factors affecting the continued existence of bull trout include—previous introductions of non-native species that compete with bull trout; subpopulation habitat fragmentation and isolation caused by human activities; and the risk of local extirpations due to natural events such as droughts and floods.

Introductions of non-native species by the Federal government, State fish and game departments and unauthorized private parties across the range of bull trout has resulted in declines in abundance, local extirpations, and hybridization of bull trout (Bond 1992; Howell and Buchanan 1992; Leary *et al.* 1993; Donald and Alger 1993; Pratt and Huston 1993; MBTSG 1995b; Platts *et al.* 1995; John Palmisano and V. Kaczynski, *in litt.* 1997). Non-native species may exacerbate stresses on bull trout from habitat degradation, fragmentation, isolation, and species interactions (Rieman and McIntyre 1993). In some lakes and rivers, introduced species including rainbow trout and kokanee may benefit large adult bull trout by providing supplemental forage (Pratt 1992; MBTSG 1996a). However, the same introductions of game fish can negatively affect bull trout due to increased angling and subsequent incidental catch, illegal harvest of bull trout, and competition for space (Rode 1990; Bond 1992).

"The smaller and more isolated parts of the range (such as the bull trout remaining in the Jarbidge River basin) likely face a higher risk" of extirpation by natural events relative to other bull trout populations (Rieman *et al.* 1997). One such risk factor is fire. In 1992, a 4,850 hectare (12,000 acre) fire (Coffeepot Fire) occurred at elevations up to 2,280 m (7,500 ft), in areas adjacent to the Bruneau River basin and a small portion of the Jarbidge River basin. Although the Coffeepot Fire did not affect areas currently occupied by bull trout, similar conditions likely exist in nearby areas where bull trout occur. Adverse effects of fire on bull trout habitat may include loss of riparian canopy, increased water temperature and sediment, loss of pools, mass wasting of soils, altered hydrologic regime and debris torrents. Fires large enough to eliminate one or two suspected spawning streams are more likely at higher elevations where bull trout are usually found in the Jarbidge River basin (J. Frederick, *in litt.* 1998a; K. Ramsey, pers. comm. 1998b).

Other natural risks have been recently documented. The Jarbidge River Watershed Analysis indicates that 65 percent of the upper West Fork of the Jarbidge River basin has a 45 percent or greater slope (McNeill *et al.* 1997). Debris from high spring runoff flows in the various high gradient side drainages such as Snowslide, Gorge, and Bonanza gulches provide the West Fork of the Jarbidge River with large volumes of angular rock material. This material has moved down the gulches at regular intervals, altering the river channel and damaging the Jarbidge Canyon road, culverts, and bridge crossings. Most of the river flows are derived from winter snowpack in the high mountain watershed, with peak flows corresponding with spring snowmelt, typically in May and June (McNeill *et al.* 1997). Rain-on-snow events earlier in the year (January and February) can cause extensive flooding problems and have the potential for mass-wasting, debris torrents, and earth slumps, which could threaten the existence of bull trout in the upper Jarbidge River and tributary streams. In June 1995, a rain-on-snow event triggered debris torrents from three of the high gradient tributaries to the Jarbidge River in the upper watershed (McNeill *et al.* 1997). The relationship between these catastrophic events and the history of intensive livestock grazing, burning to promote livestock forage, timber harvest and recent fire control in the Jarbidge River basin is unclear. Debris torrents may potentially affect the long-term viability of the Jarbidge River bull trout subpopulation.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by the Jarbidge River population segment of bull trout in determining to issue this rule. This population segment is characterized by low numbers of resident and migratory fish comprising a single, isolated subpopulation, within marginal habitat conditions for the species at the southern-most extremity of its range. The Jarbidge River DPS is vulnerable to extinction due to threats from activities such as road construction and maintenance, recreational fishing (intentional and unintentional harvest), rainbow trout stocking, mining, and grazing. Although some of these activities have been modified or discontinued in recent years, the lingering effects from these activities continue to affect water quality, contribute to channel and bank instability, and inhibit habitat and species recovery.

We emergency listed the Jarbidge River population segment of bull trout as endangered on August 11, 1998 (63 FR 42757), due to channel alteration associated with unauthorized road construction to repair the Jarbidge Canyon Road, damaged by a 1995 flood, on the West Fork of the Jarbidge River, and the substantial risk that such construction would continue. The construction activity had completely destroyed all aquatic habitat in this area, and introduced a significant amount of sediment into the river. Continued unauthorized reconstruction of the 2.4 km (1.5 mi) of the Jarbidge Canyon Road would have impacted 27 percent of the known occupied bull trout habitat in the West Fork Jarbidge River, which has among the highest reported densities of bull trout within the Jarbidge River DPS (Johnson and Weller 1994). The road construction would have also indirectly impacted an additional 21 km (13 mi) of bull trout habitat downstream of the construction site in the West Fork Jarbidge River, and potentially 45 km (28 mi) in the mainstem Jarbidge River.

Since the emergency listing of the Jarbidge River population segment, the USFS has restored some of the habitat. We have consulted with Federal agencies for several projects in the Jarbidge River basin such as old mining site reclamations, the creation of off-stream livestock watering sites, and fencing streams from livestock, that have helped reduce sedimentation into the Jarbidge River system. Following the issuance of a cease and desist order by the State of Nevada and COE to Elko County, the USFS hired stream restoration specialists to restore the damaged portion of the West Fork Jarbidge River. The specialists designed a plan to stabilize and enhance the river channel in its new location. Work crews removed the fine sediment in the river created by the road construction and placed large material such as woody debris, large rocks and boulders back into the river for bull trout habitat. The fine sediment removed from the river was used to repair floodplain damage upslope, and the streambanks were partially revegetated. The USFS will implement additional revegetation and erosion control measures in 1999. These restoration actions have helped to ameliorate some of the effects of the road construction on bull trout habitat. A residual, inaccessible road still exists, but the Service, USFS, and Elko County are cooperatively looking at alternatives for public access in the area that would not adversely impact bull trout habitat.

We have carefully assessed the best scientific and commercial information available regarding past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, we have determined that the Jarbidge River population segment of bull trout should be listed as threatened. We emergency listed this species as endangered due to the threats posed by road construction in the West Fork of the Jarbidge River. Because of the restoration activity that has occurred in the West Fork of the Jarbidge River to repair the road construction damage, we believe this distinct population segment fits the definition of threatened as defined by the Act. Therefore, the action is to list the bull trout as threatened in the Jarbidge River population segment.

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific area within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)) state that critical habitat is not determinable if information sufficient to perform required analysis of impacts of the designation is lacking or if the biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat. Section 4(b)(2) of the Act requires us to consider economic and other relevant impacts of designating a particular area as critical habitat on the basis of the best scientific data available. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the conservation benefits, unless to do such would result in the extinction of the species.

We find that the designation of critical habitat is not determinable for this distinct population segment based on the best available information. When a "not determinable" finding is made, we must, within 2 years of the publication date of the original proposed rule, designate critical habitat, unless the designation is found to be not prudent. We reached a "not determinable" critical habitat finding in the proposed rule and we specifically requested comments on this issue. While we received a number of comments advocating critical habitat designation, none of these comments provided information that added to our ability to determine critical habitat. Additionally, we did not obtain any new information regarding specific physical and biological features essential for bull trout in the Jarbidge River bull trout population segment during the open comment period including the five public hearings. The biological needs of bull trout in this population segment are not sufficiently well known to permit identification of areas as critical habitat. Insufficient information is available on the number of individuals or spawning reaches required to support viable subpopulations throughout the distinct population segment. In addition, we have not identified the extent of habitat required and specific management measures needed for recovery of this fish. This information is considered essential for determining critical habitat for this population segment. Therefore, we find that designation of critical habitat for the Jarbidge River population segment is not determinable at this time. We will protect bull trout habitat through enforcement of take prohibitions under section 9 of the Act, through the recovery process, through section 7 consultations to determine whether Federal actions are likely to jeopardize the continued existence of the species, and through the section 10 process for activities on non-Federal lands with no Federal nexus.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us.

The Jarbidge River bull trout population segment occurs on lands administered by the USFS and the BLM, and on various State-owned properties in Idaho, and on private lands. Federal agency actions that may require consultation as described in the preceding paragraph include COE involvement in projects such as the construction of roads and bridges, and the permitting of wetland filling and

dredging projects subject to section 404 of the Clean Water Act (33 U.S.C. 1344); USFS and BLM timber, recreation, mining, and grazing management activities; Environmental Protection Agency authorized discharges under the National Pollutant Discharge System of the Clean Water Act; and U.S. Housing and Urban Development projects.

The Act and its implementing regulations found at 50 CFR 17.31 set forth a series of general trade prohibitions and exceptions that apply to all threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to our agents and State conservation agencies.

We may issue permits under section 10(a)(1) of the Act, to carry out otherwise prohibited activities involving threatened wildlife under certain circumstances. Regulations governing permits are at 50 CFR 17.32. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. Permits are also available for zoological exhibition, educational purposes, or special purposes consistent with the purpose of the Act. You may address your requests for copies of the regulations concerning listed plants and animals, and general inquiries regarding prohibitions and permits, to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon, 97232-4181 (telephone 503/231-2063; facsimile 503/231-6243).

It is our policy, published in the **Federal Register** on July 1, 1994 (59 FR 34272), to 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 Act. 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. We believe the following actions would not be likely to result in a violation of section 9, provided the activities are carried out in accordance with any existing regulations and permit requirements:

(1) Actions that may affect bull trout in the Jarbidge River population segment and are authorized, funded or carried out by a Federal agency when the action is conducted in accordance with an incidental take statement issued by us pursuant to section 7 of the Act;

(2) Incidental catch and immediate release of Jarbidge River population segment bull trout in accordance with applicable State fish and wildlife conservation laws and regulations in effect on April 8, 1999 (see Special Rule section);

(3) State, local and other activities approved by us under section 4(d) and section 10(a)(1) of the Act.

With respect to the Jarbidge River bull trout population segment, the following actions likely would be considered a violation of section 9:

(1) Take of bull trout without a permit, which includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting any of these actions, except in accordance with applicable State fish and wildlife conservation laws and regulations within the Jarbidge River bull trout population segment;

(2) To possess, sell, deliver, carry, transport, or ship illegally taken bull trout;

(3) Unauthorized interstate and foreign commerce (commerce across State or international boundaries) and import/export of bull trout (as discussed earlier in this section);

(4) Introduction of non-native fish species that compete or hybridize with, or prey on bull trout;

(5) Destruction or alteration of bull trout habitat by dredging, channelization, diversion, in-stream vehicle operation or rock removal, or other activities that result in the destruction or degradation of cover, channel stability, substrate composition, temperature, and migratory corridors used by the species for foraging, cover, migration, and spawning;

(6) Discharges or dumping of toxic chemicals, silt, or other pollutants into waters supporting bull trout that result in death or injury of the species; and

(7) Destruction or alteration of riparian habitat and adjoining uplands of waters supporting bull trout by recreational activities, timber harvest, grazing, mining, hydropower development, or other developmental activities that result in destruction or degradation of cover, channel stability, substrate composition, temperature, and migratory corridors used by the species for foraging, cover, migration, and spawning.

We will review other activities not identified above on a case-by-case basis to determine if a violation of section 9 of the Act may be likely to result from such activity. We do not consider these lists to be exhaustive and provide them as information to the public.

Questions regarding whether specific activities may constitute a violation of section 9 should be directed to the Field Supervisor of our Nevada Fish and Wildlife Office (see **ADDRESSES** section) for the Jarbidge River population segment.

Special Rule

Section 4(d) of the Act provides authority for us to promulgate special rules for threatened species that would relax specific prohibitions against taking. The final special rule included with this final listing allows for take of bull trout within the Jarbidge River DPS associated with certain activities for a period of 24 months. The special rule allows take for educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act. The special rule also allows take that is incidental to recreational fishing activities, when conducted in accordance with State regulations, and provided that any bull trout caught are immediately returned to the stream. This special rule shall be in effect until April 9, 2001. At that time, all take prohibitions of the Act will be reinstated for the Jarbidge River population segment of the bull trout.

We believe that existing angling regulations and other bull trout conservation measures developed independently by the States (see following paragraphs) are adequate to provide continued short-term conservation of bull trout in the Jarbidge River DPS. However, we believe that the development by the States of Idaho and Nevada of a management and conservation plan covering the entire range of bull trout in the Jarbidge River DPS with the objective of recovery and eventual delisting of this DPS would most effectively protect bull trout from excessive taking, and thereby ensure the future continuation of State sport fisheries programs in the Jarbidge River system. Therefore, it is our intent to propose, in the near future, another special rule that would provide the States of Idaho and Nevada the opportunity to develop a management and conservation plan for the Jarbidge River population segment of the bull trout that, if approved, could extend the exceptions to the take prohibitions provided by the special rule included in

this final listing. Such a plan would be developed with public input (e.g., Jarbidge Bull Trout Task Force), peer-reviewed by the scientific community, and presented to the appropriate State Fish and Game/Wildlife Commissions. We would provide public notice in the **Federal Register** upon our approval of the plan.

We find that State angling regulations have become more restrictive in an attempt to protect bull trout in the Jarbidge River DPS in Idaho and Nevada. Bull trout harvest prohibitions and reduced daily/possession limits on other trout within the basin are currently in place throughout the Jarbidge River system, and the fishing season has been shortened in Idaho. The States, to varying extent, have also initiated public/angler awareness and education efforts relative to bull trout status, biology, and identification. IDFG has not stocked rainbow trout in the Jarbidge River system since 1989. NDOW will not stock rainbow trout in the Jarbidge River system in 1999 (Gene Weller, NDOW, pers. comm. 1999).

IDFG has prepared a State-wide Bull Trout Conservation Program Plan (Hutchinson *et al.* 1998). In the plan, IDFG commits to 1) ensuring that management, research, hatchery, and scientific permitting programs are consistent with the Endangered Species Act, and 2) implementing bull trout recovery actions in Idaho.

NDOW has a Bull Trout Species Management Plan that recommends management alternatives to ensure that human activities will not jeopardize the future of bull trout in Nevada (Johnson 1990). The recommended program identifies actions including bull trout population and habitat inventories, life history research, and potential population reestablishment; State involvement in watershed land use planning; angler harvest impact assessment; official State sensitive species designation for regulatory protection; and non-native fish stocking evaluation/prohibition and potential non-native fish eradications. NDOW scheduled these activities for implementation from 1991 to 2000, but many have yet to be initiated or fully implemented.

In the special rule for fishes we are making a minor editorial correction in the paragraph designations.

Paperwork Reduction Act for the Listing

This listing rule does not contain any new collections of information other than those already approved under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and assigned Office of Management and Budget clearance number 1018–0094. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information, unless it displays a currently valid control number. For additional information concerning permit and associated requirements for threatened species, see 50 CFR 17.32.

Required Determinations for the Special Rule

Regulatory Planning and Review, Regulatory Flexibility Act, and Small Business Regulatory Enforcement Fairness Act

The special rule was not subject to Office of Management and Budget (OMB) review under Executive Order 12866.

a. This rule will not have an annual economic effect of $100 million or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government. Therefore, a cost-benefit and full economic analysis is not required. Section 4(d) of the Act provides authority for us to promulgate special rules for threatened species that would relax the prohibition against taking. We find that State angling regulations have become more restrictive in an attempt to protect bull trout in the Jarbidge River in Idaho and Nevada. Bull trout harvest prohibitions and reduced daily/possession limits on other trout within the basin are currently in place throughout the Jarbidge River system, and the fishing season has been shortened in Idaho. The States, to varying extent, have also initiated public/angler awareness and education efforts relative to bull trout status, biology, and identification. We believe that existing angling regulations and other bull trout conservation measures developed independently by the States are adequate to provide continued short-term conservation of bull trout in the Jarbidge River. As a result, this special rule will allow recreational angling to take place in the Jarbidge River during the next 24 months under existing State regulations. The economic effects discussion addresses only the economic benefits that will accrue to the anglers who can continue to fish in the Jarbidge River.

This special rule will remove the threat of a take prohibition under section 9 of the Act and allow continued angling opportunities in Idaho and Nevada under existing State regulations. Data on the number of days of fishing under new State regulations are available for the East and West forks of the Jarbidge River in Nevada. We used these data to calculate angling days per river mile which was applied to the river segment in Idaho. Because of the lack of definitive data, we decided to do a worst case analysis. We analyzed the economic loss in angling satisfaction, measured as consumer surplus, if all fishing were prohibited in the Jarbidge River. Since there are substitute sites nearby where fishing is available, this measure of consumer surplus is a conservative estimate and would be a maximum estimate. The range of angling days in Nevada is from 2,000 to 5,000 (figures combine angler days in the East and West Fork of the Jarbidge River) annually. We estimate for Idaho a range of 3,600 to 9,000 angling days per year. A consumer surplus of $19.35 (1999 $) per day for trout fishing in Idaho and Nevada results in a range of benefits of $109,000 to $271,000 per year. The consumer surplus is a measurement of the satisfaction that an angler gets from pursuing the sport of fishing. Since this special rule will only be in place for 24 months, there is little need for discounting. Consequently, this special rule will have a small economic benefit on the United States economy, and even in the worst case, will not have an annual effect of $100 million or more for a significant rule making action.

b. This special rule will not create inconsistencies with other agencies' actions. The special rule allows for continued angling opportunities in accordance with existing State regulations.

c. This special rule will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. This special rule does not affect entitlement programs.

d. This special rule will not raise novel legal or policy issues. There is no indication that allowing for continued angling opportunities in accordance with existing State regulations would raise legal, policy, or any other issues.

The Department of the Interior certifies that the final rule will not have a significant economic effect on a substantial number of small entities as defined under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). A Regulatory Flexibility Analysis is not required. Accordingly, a Small Entity Compliance Guide is not required. No individual small industry within the United States will be significantly affected by allowing for continued angling opportunities in accordance with existing State regulations in the Jarbidge River for 24 months.

The special rule is not a major rule under 5 U.S.C. 801 *et seq.*, the Small

Business Regulatory Enforcement Fairness Act. This special rule:

a. Does not have an annual effect on the economy of $100 million or more. Trout fishing in the Jarbidge River basin generates, on average, expenditures by local anglers ranging from $168 thousand to $519 thousand per year. Consequently, the maximum benefit of this rule for local sales of equipment and supplies is no more than $519 thousand per year and most likely smaller because all fishing would not cease in the area even if the Jarbidge River were closed to fishing. The availability of numerous substitute sites would keep anglers spending at a level probably close to past levels.

b. Will not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions. This special rule allows the continuation of fishing in the Jarbidge River and, therefore, allows for the usual sale of equipment and supplies by local businesses. This special rule will not affect the supply or demand for angling opportunities in southern Idaho or northern Nevada and therefore should not affect prices for fishing equipment and supplies, or the retailers that sell equipment.

c. Does not have significant adverse effects on competition, employment, investment productivity, innovation, or the ability of United States based enterprises to compete with foreign-based enterprises. The recreational spending of a small number of affected anglers, ranging from just over 600 to slightly over 1,500 anglers, will have only a small beneficial economic effect on the sportfish industry.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501, *et seq.*):

a. This special rule will not "significantly or uniquely" affect small governments. A Small Government Agency Plan is not required.

b. This special rule will not produce a Federal mandate of $100 million or greater in any year; that is, it is not a "significant regulatory action" under the Unfunded Mandates Reform Act.

Takings Implication

We have determined that this special rule has no potential takings of private property implications as defined by Executive Order 12630. The special rule would not restrict, limit, or affect property rights protected by the Constitution.

Federalism

This special rule will not have substantial direct effects on the States, in their relationship between the Federal Government and the States, or on the distribution of power and responsibilities among various levels of government. Therefore, in accordance with Executive Order 12612, we have determined that this special rule does not have sufficient federalism implications to warrant a Federalism Assessment.

Civil Justice Reform

The Department of the Interior has determined that this special rule meets the applicable standards provided in sections 3(a) and 3(b)(2) of Executive Order 12988.

National Environmental Policy Act

We have determined that an Environmental Assessment and Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein is available upon request from the Nevada Fish and Wildlife Office (see ADDRESSES section).

Author. The primary author of this proposed rule is Selena Werdon, Nevada Fish and Wildlife Office, Reno, Nevada.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.11(h) by adding the following, in alphabetical order under FISHES, to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
FISHES							
*	*	*	*	*	*		*
Trout, bull	*Salvelinus confluentus.*	U.S.A. (Pacific NW), Canada (NW Territories).	Jarbidge R. Basin (U.S.A.—ID, NV).	T	659	NA	17.44(x)
*	*	*	*	*	*		*

3. Amend § 17.44 by redesignating paragraph (v) bull trout as paragraph (w).

4. Amend § 17.44 by adding paragraph (x) to read as follows:

§ 17.44 Special rules—fishes.

* * * * *

(x) Bull trout (*Salvelinus confluentus*), Jarbidge River population segment.

(1) Prohibitions. Except as noted in paragraph (x)(2) of this section, all prohibitions of 50 CFR 17.31 and exemptions of 50 CFR 17.32 apply to the bull trout in the Jarbidge River

population segment within the United States.

(2) Exceptions. No person may take this species, except in the following instances in accordance with applicable State fish and wildlife conservation laws and regulations relevant to protection of bull trout in effect on April 8, 1999.

(i) For educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act;

(ii) Incidental to State-permitted recreational fishing activities, provided that any bull trout caught are immediately returned to the stream.

(iii) The exceptions in paragraphs (x)(2) (i) and (ii) of this section will be in effect until April 9, 2001. At that time, all take prohibitions of the Act will be reinstated for the Jarbidge River population segment unless exceptions to take prohibitions are otherwise provided through a subsequent special rule.

(3) Any violation of applicable State fish and wildlife conservation laws or regulations with respect to the taking of this species is also a violation of the Endangered Species Act.

(4) No person may possess, sell, deliver, carry, transport, ship, import, or export, any means whatsoever, any such species taken in violation of this section or in violation of applicable State fish and conservation laws and regulations.

(5) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (x)(2) through (4) of this section.

Dated: April 5, 1999.

Donald J. Barry,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 99-8850 Filed 4-7-99; 8:45 am]

BILLING CODE 4310-55-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[Docket No. 980429110-8110-01; I.D. 032499B]

Fisheries Off West Coast States and in the Western Pacific; West Coast Salmon Fisheries; Inseason Adjustments From Cape Falcon, OR, to Point Pitas, CA

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

ACTION: Inseason adjustments; request for comments.

SUMMARY: NMFS announces that a commercial salmon test fishery for all salmon except coho in the areas from Point Pillar (37°29'48" N. lat.) to Point Pigeon (37°10'54" N. lat.) and from Point Piedras Blancas (35°40'00" N. lat.) to Point Pitas (34°19'02" N. lat.), CA, that was tentatively scheduled to open April 2, 1999, will open April 14, 1999, run 3 days open and 4 days closed, and continue through the earlier of April 28, 1999, or the attainment of chinook quotas of 3,000 and 5,000 respectively. NMFS also announces that the commercial and recreational fisheries for all salmon except coho, in the areas from Cape Falcon to Humbug Mountain, OR, will open April 1, 1999, and continue through dates to be determined in the 1999 management measures for 1999 ocean salmon fisheries in the exclusive economic zone (EEZ). This action is necessary to conform to the 1998 announcement of management measures for 1999 salmon seasons opening earlier than May 1, 1999, and is intended to ensure conservation of chinook salmon.

DATES: Effective April 1, 1999, until the effective date of the 1999 management measures, which will be published in the **Federal Register** for the west coast salmon fisheries. Comments will be accepted through April 22, 1999.

ADDRESSES: Comments may be mailed to William Stelle, Jr., Regional Administrator, Northwest Region, NMFS, NOAA, 7600 Sand Point Way NE., Bldg. 1, Seattle, WA 98115-0070; or William Hogarth, Regional Administrator, Southwest Region, NMFS, NOAA, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802-4132. Information relevant to this document is available for public review during business hours at the Office of the Regional Administrator, Northwest Region, NMFS.

FOR FURTHER INFORMATION CONTACT: William Robinson, 206-526-6140, or Svein Fougner, 562-980-4030.

SUPPLEMENTARY INFORMATION: The 1999 April test fishery off southern California is a continuation of the test fishery initiated in April 1997, and is intended to evaluate the contribution of Sacramento River winter chinook and Central Valley spring chinook to the commercial catch off Morro Bay and Santa Barbara during the month of April. Sacramento River winter chinook are listed under the Federal and California State endangered species acts and Central Valley spring chinook are listed under the state act and proposed under the Federal act.

In the 1998 management measures for 1999 ocean salmon fisheries in the EEZ opening earlier than May 1, 1999 (63 FR 24973, May 6, 1998), NMFS announced that an experimental fishery would open between Point Sur and the U.S.-Mexican border for all salmon except coho, from April 2, 1999, through the earlier of April 29, 1999, or achievement of a chinook quota. Details regarding the season, the areas, the chinook quota, and participating vessels would be determined through an inseason recommendation of the Pacific Fishery Management Council (Council) at the November 1998 meeting.

At the November meeting, the Council decided to delay the final recommendation until its March meeting when there would be more information available about the status of the stocks in 1999. At the March 1999 meeting, the Council made its inseason recommendation to open the April test fishery in two locations: the area from Point Pillar to Point Pigeon and from Point Piedras Blancas to Point Pitas, CA. The Council also recommended adding an additional test area between Point Pillar and Point Pigeon to provide comparative data from the same year in a different area. In evaluating the effect of the test fishery to determine whether the overall impact of the proposed options for 1999 ocean fisheries on Sacramento River winter chinook will achieve NMFS consultation standards under the Endangered Species Act, the Council considered the results of the 1997 April test fishery from Point Lopez to Point Mugu and substantially increased its estimates of the incidental take of winter chinook associated with the fishery relative to the estimate used in evaluating the 1997 April test fishery.

The test fishery will be conducted from Point Pillar to Point Pigeon, for all salmon except coho, with a 3,000 chinook quota; from Point Piedras Blancas to Point Conception (34°27'00" N. lat.), for all salmon except coho, with a 2,500 chinook quota; and Point Conception to Point Pitas, for all salmon except coho, with a 2,500 chinook quota. The subareas and subquotas between Point Piedras Blancas and Point Pitas are intended to ensure that samples are collected uniformly over the entire area. The season will open 0001 hours local time, April 14, 1999, and operate on a schedule of 3 days open and 4 days closed, through the earlier of 2359 hours local time April 28, 1999, or attainment of chinook