

Section 4(b)(2) of the Act requires that we designate or revise critical habitat based upon the best scientific data available and after taking into consideration the economic impact of specifying any particular area as critical habitat. We may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area as critical habitat, provided such exclusion will not result in the extinction of the species. Based upon the previously published proposals to designate critical habitat for the spectacled eider and Steller's eider and comments previously received during the comment periods, we have conducted a draft economic analysis of the proposed critical habitat designations.

The comment period for the proposed rule designating critical habitat for spectacled eiders originally closed on May 8, 2000. The comment period for the proposed rule designating critical habitat for Steller's eiders originally closed on May 12, 2000. We subsequently extended the comment periods for both species to June 30, 2000, in response to concerns expressed by several parties that the original comment periods did not allow adequate time for review and comment by affected individuals and communities. Additionally, we anticipated that the comment periods for the economic analyses associated with the proposed critical habitat designations would be open during June 2000, and we wished to solicit comments on the proposed rules and their respective economic analyses simultaneously. The development of the economic analyses for the proposed critical habitat designations was unexpectedly delayed, and we subsequently extended the comment periods through August 31, 2000, with the expectation that the economic analyses would be available by August 1, 2000.

We solicit comments on the draft economic analysis as described in this notice, as well as any other aspect of the proposed designation of critical habitat for the spectacled eider and Steller's eider. Our final determination on the proposed critical habitat will take into consideration comments and any additional information received by the date specified above. All previous comments and information submitted during the comment period need not be resubmitted. The comment period is extended to September 25, 2000. Written comments may be submitted to the appropriate Service office as specified in the **ADDRESSES** section.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the rulemaking record, which we will honor to the extent allowable by law. In certain circumstances, we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish for us to withhold your name and/or address, you must state this request prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

The deadline for requesting public hearings on the proposed rule regarding critical habitat for the spectacled eider was March 24, 2000. The deadline for requesting public hearings for the proposed rule regarding critical habitat for Steller's eider was April 27, 2000. We have not extended these deadlines. In order to be considered valid, requests for public hearings must have been submitted in writing and received at the appropriate office by the relevant deadline.

Author

The primary author of this notice is Susan Detwiler, U.S. Fish and Wildlife Service, Division of Endangered Species, 1011 E. Tudor Rd., Anchorage, AK 99503.

Authority

The authority for this action is the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*).

Dated: August 16, 2000.

Gary Edwards,

Acting Regional Director, Region 7, Fish and Wildlife Service.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; 90-day Finding and Commencement of Status Review for a Petition To List the Western Sage Grouse in Washington as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of petition finding and initiation of status review.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service) announce a 90-day finding on a petition to list the western sage grouse (*Centrocercus urophasianus phaios*) in Washington as an endangered or threatened species pursuant to the Endangered Species Act of 1973, as amended. We find that the petition presents substantial scientific or commercial information indicating that listing western sage grouse in Washington, as a distinct population segment, may be warranted. We are initiating a status review to determine if listing this population segment is warranted.

DATES: The finding announced in this document was made August 18, 2000. To be considered in the 12-month finding for this petition, information and comments should be submitted to us by October 23, 2000.

ADDRESSES: Information, comments, or questions concerning this petition should be submitted to the Supervisor, Upper Columbia River Basin Field Office, U.S. Fish and Wildlife Service, 11103 E. Montgomery Drive, Spokane, Washington 99206. The petition finding, supporting data, and comments are available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Chris Warren (See **ADDRESSES** section) or telephone (509) 893-8020.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), requires that we make a finding on whether a petition to list, delist, or reclassify a species, or to revise a critical habitat designation, presents substantial scientific or commercial information to demonstrate that the petitioned action may be warranted. To the maximum extent practicable, this finding is to be made within 90 days of receipt of the petition,

and the finding is to be published promptly in the **Federal Register**. If we find that substantial information was presented, we are required to promptly commence a review of the status of the species involved, if one has not already been initiated under our internal candidate assessment process.

The processing of this petition conforms with our Listing Priority Guidance published in the **Federal Register** on October 22, 1999 (64 FR 57114). The guidance clarifies the order in which we will process rulemakings. The highest priority is processing emergency listing rules for any species determined to face a significant and imminent risk to its well-being. Second priority is processing final determinations on proposed additions to the lists of endangered and threatened wildlife and plants. Third priority is processing new proposals to add species to the lists. The processing of administrative petition findings (petitions filed under section 4 of the Act) is the fourth priority. The processing of this 90-day petition finding is a fourth priority, and is being completed in accordance with the current Listing Priority Guidance.

We have made a 90-day finding on a petition to list the western sage grouse (*Centrocercus urophasianus phaios*) in Washington. The petition, dated May 14, 1999, was submitted by the Northwest Ecosystem Alliance and the Biodiversity Legal Foundation, and was received by us on May 28, 1999. The petition requested the listing of western sage grouse in Washington as threatened or endangered. The letter clearly identified itself as a petition and contained the names, signatures, and addresses of the petitioners. Accompanying the petition was supporting information relating to the taxonomy, ecology, and past and present distribution of the species, as well as the threats faced by the western sage grouse in Washington.

The petitioners requested listing for the Washington population of western sage grouse and not the species rangewide. We consider this request appropriate because, although we do not base listing decisions on political subdivisions except international boundaries, we can consider a population of a vertebrate species or subspecies as a listable entity under the Act if the population is recognized as a distinct population segment (DPS) (61 FR 4722). We can also expand the scope of our review of petitions to the species rangewide, should expansion be appropriate based on our knowledge of the available information.

The information regarding the description and natural history of sage grouse, below, has been condensed from the following sources: Aldrich 1963, Johnsgard 1973, Connelly *et al.* 1988, Fischer *et al.* 1993, Drut 1994, Washington Department of Fish and Wildlife (WDFW) 1995, Washington Sage and Columbian Sage Grouse Workshop (WSCSGW) 1996 and 1998, and Schroeder *et al.* 1999a.

Sage grouse, also known as sage fowl, spine-tailed grouse, fool hen, cock-of-the-plains, and sage chicken, are gallinaceous (chicken-like, ground-nesting) birds, and are the largest North American grouse species. Adult males range in size from 66 to 76 centimeters (cm) (26 to 30 inches (in)) and weigh between 2 and 3 kilograms (kg) (4 and 7 pounds (lb)); adult females range in size from 48 to 58 cm (19 to 23 in) and weigh between 1 and 2 kg (2 and 4 lb). Males and females have dark grayish-brown body plumage with many small gray and white speckles, fleshy yellow combs over the eyes, long pointed tails, and dark-green toes. Males also have blackish chin and throat feathers, conspicuous phylloplumes (specialized erectile feathers) at the back of the head and neck, and white feathers around the neck and upper belly forming a ruff. During breeding displays, males also exhibit olive-green apteria (fleshy bare patches of skin) on their breasts.

Sage grouse depend on a variety of shrub steppe habitats throughout their life cycle, and are particularly tied to several species of sagebrush (*Artemisia* spp.). Adult sage grouse rely on sagebrush throughout much of the year to provide roosting cover and food, and depend almost exclusively on sagebrush for food during the winter. If shrub cover is not available, they will roost in snow burrows. While average dispersal movements are generally less than 35 kilometers (km) (21 miles (mi)), sage grouse may disperse up to 160 km (100 mi) between seasonal use areas. Sage grouse also exhibit strong site fidelity (loyalty to a particular area), and are capable of dispersing over areas of unsuitable habitat.

A wide variety of forb (any herb plant that is not a grass) species are used as forage by adult sage grouse from spring to early fall, and hens require an abundance of forbs for pre-laying and nesting periods. An assortment of forb and insect species form important nutritional components for chicks during the early stages of development. Sage grouse typically seek out more mesic (moist) habitats that provide greater amounts of succulent forbs and insects during the summer and early fall. Winter habitat use varies based

upon snow accumulations and elevational gradients, and sage grouse likely choose winter habitats based upon forage availability.

During the spring breeding season, male sage grouse gather together and perform courtship displays on areas called leks, primarily during the morning hours just after dawn. Leks consist of patches of bare soil, short grass steppe, windswept ridges, exposed knolls, or other relatively open sites, and they are often surrounded by more dense shrub steppe cover, which is used for roosting or predator evasion during the breeding season. Leks range in size from less than 0.4 hectare (ha) (1 acre (ac)) to over 40 ha (100 ac), contain several to hundreds of males, and are usually situated in areas of high female use. Leks used over many consecutive years (historic leks) are typically larger than, and often surrounded by, smaller and less stable satellite leks. Males defend individual territories within leks and perform elaborate displays with their specialized plumage and vocalizations to attract females for mating. Relatively few, dominant males account for the majority of breeding on a given lek.

After mating, females may move a maximum distance of 36 km (22 mi) depending on the availability of suitable nesting habitat, and typically select nest sites under sagebrush cover. Nests are relatively simple and consist of scrapes on the ground, which are sometimes lined with feathers and vegetation. Clutch sizes range from 6 to 13 eggs, and nest success ranges from 10 to 63 percent. Chicks begin to fly at 2 to 3 weeks of age, and broods remain together for up to 12 weeks. Most juvenile mortality occurs during nesting and the chicks' flightless stage, and is due primarily to predation or severe weather conditions. Shrub canopy and grass cover provide concealment for sage grouse nests and young, and may be critical for reproductive success.

Sage grouse typically live between 1 and 4 years and have an annual mortality rate of roughly 50 to 55 percent, with females generally having a higher survival rate than males. Up to 50 percent of all sage grouse mortality is caused by predation, from both avian (e.g., hawks, eagles, and ravens) and ground (e.g., coyotes, badgers, and ground squirrels) predators.

Prior to European expansion into western North America, sage grouse (*Centrocercus urophasianus*) were believed to occur in 16 States and 3 Canadian provinces (Schroeder *et al.* 1999a), although their historic status in Kansas and Arizona is unclear (Colorado Sage Grouse Working Group

(CSGWG) 1997). Currently, sage grouse occur in 11 States and 2 Canadian provinces: ranging from extreme southeastern Alberta and southwestern Saskatchewan, south to western Colorado, and west to eastern California, Oregon, and Washington. In addition to these States, sage grouse occur in southern Idaho, northern Nevada, western and northern Utah, Wyoming, southern and eastern Montana, and extreme western North and South Dakota. Sage grouse have been extirpated from Nebraska, Kansas, Oklahoma, New Mexico, and Arizona, and from British Columbia, Canada (Braun 1998). Range wide, sage grouse distributions have declined in a number of areas, most notably along the periphery of their historic range.

Little substantiated information is available regarding the historic abundance of sage grouse throughout their range. However, within the literature, the general consensus is that considerable declines have occurred

from historic population levels, and much of the overall decline occurred from the late 1800s to the mid 1900s (Hornaday 1916, Crawford and Lutz 1985, Drut 1994, WDFW 1995, Coggins and Crawford 1996, Braun 1998, Schroeder *et al.* 1999a).

A number of studies since the mid-1900s provide sage grouse density estimates for a range of habitats considered of low to high quality (Johnsgard 1973, Drut *et al.* 1994a, WDFW 1995). Assuming 1 grouse per square kilometer (km²) (0.4 square mi (mi²) as an approximate lower limit, 10 grouse per km² (0.4 mi²) as an approximate upper limit (Michael Schroeder, WDFW, pers. comm. 1999), and the most recent estimate of historic sage grouse distribution, roughly between 1.6 million and 16 million sage grouse would have occurred rangewide prior to European expansion across western North America.

Braun (1998) provides a range of values for current breeding sage grouse abundance by State and Canadian

province calculated by males on leks in the spring (Table 1). In order to estimate the total current range-wide abundance of sage grouse, the following estimates of maximum abundance for the four States containing over 20,000 sage grouse were made from the available information. For Oregon, the high population estimate of approximately 66,000 for 1993 was used (after Willis *et al.* 1993). For the remaining three States, it was assumed that the most recent available harvest estimates (Idaho 1996, Wyoming 1998, Montana 1998) accounted for roughly 10 percent (after Zablan 1993) of the total State population. These assumptions result in upper limit estimates of 189,000, 151,000, and 72,000 sage grouse in the spring breeding population (*i.e.*, post-harvest) in Idaho, Wyoming, and Montana, respectively. Considering Table 1 and the above information, currently there are approximately 100,000–500,000 sage grouse range wide.

TABLE 1. CURRENT ESTIMATED SAGE GROUSE ABUNDANCE (INDIVIDUALS IN THE 1998 BREEDING POPULATION) IN VARIOUS AREAS OF NORTH AMERICA (AFTER BRAUN 1998).

500±	< 2,000	< 10,000	<20,000	>20,000
Alberta Saskatchewan	North Dakota South Dakota Washington	California	Colorado Nevada Utah	Idaho Oregon Montana Wyoming

Based on the best available information, the most conservative estimate indicates that there has been roughly a 69 percent reduction from historic range-wide sage grouse abundance. Given a worst-case scenario, sage grouse abundance has declined more than 99 percent from historic levels. The true decline in sage grouse abundance likely falls between these upper and lower limits.

The historic distribution of western sage grouse (*Centrocercus urophasianus phaios*) extended from extreme south-central British Columbia southward through eastern Washington and Oregon, except in extreme southeastern Oregon near the Idaho/Nevada borders. Sage grouse inhabiting California and extreme western Nevada are thought to represent an intermediate form between the western and eastern (*C.u. urophasianus*) subspecies (Aldrich 1963). Currently, western sage grouse occur in southeastern Oregon and central Washington (Johnsgard 1973, Drut 1994, WDFW 1995).

Currently, two subspecies of sage grouse are recognized by the American Ornithologists' Union (AOU 1957). The

eastern/western taxonomic split (*circa* 1940s) was based on plumage coloration and relatively few specimens representing the western birds, including seven from Oregon, three from Washington, and one from California (Aldrich 1946). With regard to current taxonomic standards and information generated over the last few decades, these subspecies designations may be inappropriate (Johnsgard 1983, Schroeder *et al.* 1999a). Considering recent work on other populations of sage grouse (*i.e.*, in southwestern Colorado and southeastern Utah) and the uncertainties surrounding the subspecific designations, the taxon is likely to undergo formal reevaluation and ordering in the near future. This reevaluation is likely to split the taxon into two separate species, discontinuing recognition of the eastern and western subspecies and recognizing only the northern sage grouse and Gunnison sage grouse in Colorado and Utah (WSSGTC 1999).

Historically, western sage grouse in Washington ranged from Oroville in the north, west to the Cascade foothills, east to the Spokane River, and south to the

Oregon border (Yocom 1956). Historic references indicate there were large numbers of sage grouse in Washington (Sveum 1995, WDFW 1995), and annual State harvests averaged roughly 1,800 birds from 1951 to 1973. Harvest rates declined from 900 in 1974 to 18 in 1987, and Washington closed the sage grouse hunting season in 1988 (WDFW 1995). Western sage grouse have been extirpated from seven counties in Washington and currently occupy approximately 10 percent of their historic range in the State.

Two populations of western sage grouse remain in Washington, roughly totaling 1,000 birds (WSGWG 1998). One occurs primarily on private and State-owned lands in Douglas County (approximately 650 birds); the other occurs at the Yakima Training Center (YTC), administered by the Army, in Kittitas and Yakima Counties (approximately 350 birds). These two populations are isolated from the Oregon population (WDFW 1995, Livingston 1998) and nearly isolated from one another (Schroeder, pers. comm. 1999).

Except for Wallowa County, western sage grouse were distributed throughout central and eastern Oregon in sagebrush-dominated areas until the early 1900s (Gabrielson and Jewett 1940). Presently, Malheur, Harney, and Lake Counties harbor the bulk of western sage grouse in Oregon (roughly 24,000 to 58,000 birds), with the remaining portion (roughly 3,000 to 8,000 birds) split among Baker, Crook, Deschutes, Grant, Klamath, Union, and Wheeler Counties (after Willis *et al.* 1993). Sage grouse in extreme southern Malheur and Harney Counties fall within the recognized range of the eastern subspecies (Drut 1994).

Estimates of the historic abundance of western sage grouse range from roughly 200,000 to 2,000,000 birds. Further, it is estimated that the northwestern extension of sage grouse range (*i.e.*, central Oregon northward), which includes nearly all of the Columbia Plateau biogeographic zone (after Wisdom *et al.* 1998), historically harbored roughly 100,000 to 1,000,000 birds. The historic population in Washington is estimated to have been between 60,000 and 600,000. Using best- and worst-case scenarios, western sage grouse abundance has declined between 67 and 97 percent from historic levels. Estimates of the decline from historic abundance for the northwestern extension of the species' range as a whole, and for sage grouse in Washington in particular, are equal to or exceed 97 percent.

While the petitioners requested that we list the western sage grouse under the Act as a threatened or endangered species in the State of Washington, we do not base listing decisions on political subdivisions, except international boundaries. However, as discussed earlier, we have developed policy that provides for the recognition of distinct population segments (DPSs) of vertebrate species and subspecies for consideration under the Act (61 FR 4722).

Under our DPS policy, two elements are used to assess whether a population under consideration for listing may be recognized as a DPS. These elements are: (1) A population segment's discreteness from the remainder of the taxon, and (2) the population segment's significance to the taxon to which it belongs. If we determine that a population being considered for listing may represent a DPS, then the level of threat to the population is evaluated based on the five listing factors established by the Act to determine if listing as either threatened or endangered may be warranted. Formal recognition of a DPS and evaluation of

its listing status under the Act are determined during status reviews, which are initiated after 90-day petition findings that find there is substantial information to indicate that a listing may be warranted.

Two criteria are used to determine if a population segment may be considered discrete from the remainder of the taxon. The first is isolation from other populations as a consequence of physical, physiological, ecological, or behavioral factors. The second is if the population segment can be delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act. As western sage grouse have been extirpated from British Columbia, Canada, the international boundary criterion is not addressed for the purposes of this 90-day petition finding.

Until recently, the two populations of sage grouse that remain in Washington were considered relatively continuous, and may now represent isolated components of a single metapopulation (WDFW 1995, Schroeder *et al.* 1999b). Sporadic sightings outside current concentrations indicate some minimal interaction and, possibly, genetic interchange between them (WDFW 1995; Schroeder; pers. comm. August 18, 1999; Pounds; pers. comm. September 2, 1999). However, a number of telemetry studies have not documented their intermixing (Schroeder; pers. comm. 1999; Pounds; pers. comm. 1999), and it is likely that they are effectively isolated due to a variety of human influences.

The next closest sage grouse population is located over 240 km (150 mi) to the south, in central Oregon. With regard to sage grouse life history (*e.g.*, seasonal movements, dispersal behavior) and recent census information, the Washington birds may be considered fully discrete from the Oregon populations (WDFW 1995; Schroeder; pers. comm. 1999; Pounds; pers. comm. 1999).

Based on this information, we find that the population of sage grouse that occurs in Washington may be discrete from the remainder of the taxon.

The DPS policy describes a number of factors, singly or in combination, that may demonstrate the significance of a discrete population segment to its taxon, including: (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 a 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 population segments in its genetic characteristics. Those factors that may have bearing on the sage grouse that occur in Washington are addressed separately below.

Sage grouse in Douglas County, in north-central Washington, appear to display a greater reproductive effort compared with other populations throughout the species' range (Schroeder 1997). This increased effort includes more eggs laid per nest and higher rates of nesting and re-nesting attempts. Such differences in behavioral and reproduction ecology suggest that this area represents an unusual and unique ecological setting compared to the rest of the species' range. However, it is difficult to distinguish whether these results represent a regional difference within the species, or if they may be related to the habitat quality or type available, variable environmental conditions, anthropogenic influences unique to the area (*e.g.*, reduced and fragmented habitats, disturbance), or even study design. Identifying the cause(s) of a true increased reproductive effort may hold important implications for the region's sage grouse, and conservation of the species in general.

A number of studies address the potential influences of biogeography on a species. The following provides preliminary support to the claim that loss of the potential DPS would result in a significant gap in the range of the taxon.

The extent to which biogeographic zones have acted to differentiate regional sage grouse populations is currently unclear. However, the different habitat use patterns exhibited by sage grouse may have significant consequences for the fitness of populations occupying different zones, and for future management decisions addressing the species' conservation. These consequences may include differing diet and nutritional preferences (Johnson and Boyce 1990, Welch *et al.* 1991, Drut *et al.* 1994b, Barnett and Crawford 1994), responses to fire or predation (DeLong *et al.* 1995, Fischer *et al.* 1996, Pyle and Crawford 1996), and seasonal movement patterns (Connelly *et al.* 1988, Schroeder *et al.* 1999a).

The significance test under the DPS policy can also be met if there is evidence that the population segment

differs markedly from other populations in its genetic characteristics. Relatively little genetic work has been conducted on sage grouse in Washington, although studies to investigate the species' range-wide genetic profile are underway or proposed (Quinn 1996; Quinn *et al.* 1997; Benedict and Quinn 1998; Sara Oyler-McCance, University of Denver, pers. comm. 1999). To date, range-wide investigations include samples from Colorado, Utah, Nevada, California, Oregon, and Washington. Currently, no clear genetic distinction occurs between the recognized eastern and western subspecies, or between the only sage grouse so far analyzed in Washington (south-central population) and the other sampling locales. However, these results are preliminary, and to what extent the forces of isolation, adaptive change, genetic drift, and/or inbreeding may have influenced the genetic profiles of sage grouse throughout the northwestern United States is unclear (Oyler-McCance, pers. comm. 1999; Nicolas Benedict, University of Denver, pers. comm. 1999).

In summary, the sage grouse population in Washington may represent the only occurrence of the species within the northwestern extension of its historic range (and the Columbia Plateau biogeographic zone). This area represents approximately one half of the historic range of the western subspecies. We currently recognize the western subspecies; however, this designation is undergoing expert review and may be discontinued in the near future. The available information indicates that it may be more appropriate to consider the significance of the sage grouse population in Washington with regard to the entire range of the species. Information concerning sage grouse life-history attributes indicates that the sage grouse in Washington may represent persistence of the species in an ecological setting unusual or unique for the taxon. The biogeographical information indicates that the loss of this discrete population segment may result in a significant gap in the range of the taxon. Finally, not enough information currently exists for us to determine if sage grouse within the northwestern extension of the species' historic distribution may exhibit a significantly different genetic makeup compared to the remainder of the taxon.

Based on the available information, we find that the information is inconclusive either to support or refute a significance determination for the discrete population of sage grouse that occurs in Washington. Further review of the available information, and

additional information that would be accumulated during a status review, would allow for a comprehensive examination of this population's significance to the remainder of the taxon.

As such, the conservation status for this potential DPS in relation to the Act's standards for listing are addressed, below.

A number of influences have been implicated in sage grouse population declines throughout the species' range (Crawford and Lutz 1985, Blus *et al.* 1989, Braun *et al.* 1994, Drut 1994, WDFW 1995, Fischer *et al.* 1996, Connelly and Braun 1997, Schroeder *et al.* 1999a). Of primary concern is the variety of impacts to shrub steppe habitats, which include conversion for agricultural, urban, and mineral resources development, construction of utility and transportation corridors, and habitat degradation through overgrazing, brush control (*e.g.*, prescribed burning, herbicide spraying, and chaining), altered fire frequencies, and exotic species invasions. Other potential influences that may be associated with local population declines include predation, excessive hunting, disease and parasitism, chemical applications for pest control, weather cycles, and recreational activities. As a result of these combined influences, sage grouse distribution and abundance have continued to decline over the past decade, and a number of populations may now be at risk throughout the species' range (in WSCSGW 1996 and 1998). Currently, sage grouse populations may be considered secure in five States, including Montana, Wyoming, Idaho, Nevada, and Oregon (Connelly and Braun 1997).

From 1986 to 1993, roughly 500,000 cattle were grazed in the 9 central Washington counties that historically harbored sage grouse (WDFW 1995). Current estimates of other livestock abundance in central Washington and northern Oregon are not available. Excessive grazing pressure can have significant impacts on the shrub steppe ecosystems found throughout the historic range of sage grouse (Fleischner 1994), and these impacts may be exacerbated in portions of the Columbia River Basin that support the northwestern extension of the species' range. In this region, excessive grazing removes current herbaceous growth and residual cover of native grasses and forbs, and can increase the canopy cover and density of sagebrush and undesirable invasive species (Daubenmire 1988, WDFW 1995, Livingston 1998). These impacts may be especially critical to the reproductive

success of sage grouse populations during the spring nesting and brood rearing periods (Crawford 1997, Connelly and Braun 1997, Schroeder *et al.* 1999a).

The latest available estimate (1993) of the number of cattle supported in Douglas County, which also supports the north-central population of sage grouse in Washington, is about 20,000 (WDFW 1995). Whether level of livestock use in the county may have negative effects on sage grouse or their habitats is not clear. Prior to 1992, livestock grazing pressure was intense throughout the area of Kittitas and Yakima Counties that now comprises the YTC, which supports the south-central population of sage grouse in Washington. In 1992, grazing intensity was reduced at the YTC within the sage grouse protection areas identified by the Army. In 1995, cattle grazing was eliminated throughout the installation (Livingston 1998). Twice annually during spring and fall, flocks of sheep are trailed through the YTC over a period of several weeks (Pounds, pers. comm. 1999). To what degree current livestock use levels may be impacting sage grouse or their habitat at the YTC is unknown. However, impacts from past livestock grazing are still evident throughout the installation (Livingston 1998).

During the first half of the 1900s, large portions of the shrub steppe ecosystem in Washington were converted for dryland crop production (Daubenmire 1988, WDFW 1995). During the mid-1900s, a number of hydro-electric dams were developed on the Columbia and Snake Rivers in Washington. The reservoirs formed by these projects impacted native shrub steppe habitat adjacent to the rivers and precipitated further conversion of large expanses of upland shrub steppe habitat in central Washington for irrigated agriculture (WDFW 1995). Dobler (1994) estimated that approximately 60 percent of the original shrub steppe habitat in Washington had been converted for other, primarily agricultural, uses. While at much-reduced levels, shrub steppe habitat continues to be converted for both dryland and irrigated crop production. In addition, the U.S. Bureau of Reclamation retains options for further development of the Columbia Basin Irrigation Project in central Washington (USDI 1998). Cassidy (1997) considered major portions of Washington's shrub steppe ecosystem among the least protected areas in the State.

Large areas of privately owned lands in Douglas and Grant Counties are currently withdrawn from crop

production and planted to native and non native cover under the Federal Conservation Reserve Program (CRP), established in 1985 (USDA 1998). Lands under the CRP are very important to the local population of sage grouse in north-central Washington (Schroeder, pers. comm. 1999). A number of CRP contracts in Washington have expired since 1995, and more are scheduled to expire from now through 2002. New contracts completed in 1998 for Douglas County have increased the acreage of CRP lands potentially available for use by sage grouse. However, contracts extend for just 10 years, and new standards for CRP lands will be implemented that may require replanting of significant acreage under existing contracts (USDA 1998, Schroeder, pers. comm. 1999). Presently, it is unclear what effects these changes have had, or will have, on the north-central population of sage grouse in Washington.

In 1991, the Army expanded the YTC along its northern boundary by approximately 24,000 ha (60,000 ac) to form its present configuration and size of approximately 130,000 ha (320,000 ac). One of the primary justifications for expansion of the installation was to reduce impacts to heavily used areas by allowing rotational training exercises and rehabilitation of impacted sites (USDD 1989). In 1994, the Army restationed mechanized and armored combat forces to Fort Lewis (USDD 1994). This restationing action was undertaken to accommodate brigade-level maneuver exercises, and may result in an increase in overall training activity and associated impacts at the YTC. The large-scale training exercises at the YTC are scheduled to occur at 18- to 24-month intervals, and may involve more than 10,000 troops and 1,000 tracked and wheeled vehicles. Various smaller-scale training exercises are also conducted annually at the YTC by other U.S. and allied military units (USDD 1989, Livingston 1998).

In the fall of 1995, the Army conducted its first large-scale training exercise at the YTC following the restationing action. Analysis of the impacts from this exercise indicated that over 9 percent of the sagebrush plants within the sage grouse protection areas experienced major structural damage. In addition, modeling exercises indicated that sagebrush cover would decline due to similar training scenarios if conducted on a biannual basis (Cadwell *et al.* 1996). Analyses of the potential impacts to other shrub steppe components that may be important to sage grouse at the YTC (*e.g.*, grass, forb, and insect quality and abundance), or

those associated with the smaller, ongoing training activities, are not currently available. Cadwell *et al.* (1996) suggested that native vegetation on impacted sites with limited soil disturbance will recover following large-scale maneuver exercises. In addition, the YTC conducts aggressive revegetation efforts for sagebrush and native grasses within the sage grouse protection areas (Livingston 1998), and has eliminated season-long grazing on the installation (USDD 1996). Evaluation of the quality or quantity of naturally recovered areas and the efficacy of revegetation efforts is currently not available.

Natural and human-caused fire is a significant threat to sage grouse throughout Washington because, at increased frequencies, it can remove sagebrush from the vegetation assemblage (USDI 1994, WDFW 1995). Sagebrush is easily killed by fire (Daubenmire 1988) and, in the absence of a sufficient seed source, may not readily reinvade sites where it has been removed. Fire may be especially damaging at the YTC, where military training activities provide multiple ignition sources, vegetative cover is relatively continuous, and invasive species such as cheatgrass (*Bromus tectorum*) and knapweed (*Centaurea spp.*) may provide fine fuels that can carry a fire. The Army considered fire management and control in its planning efforts for the restationing action (USDD 1996), and YTC has since developed a detailed fire management plan (USDD 1998). However, the potential for relatively large range fires to occur at the YTC remains. In 1996, over 25,000 ha (60,000 ac) of shrub steppe habitat, much of it currently and potentially used by sage grouse, was burned as a result of training activities. Livingston (1998) indicates that a fire of this magnitude within the identified sage grouse protection areas would jeopardize the species' persistence at the installation.

Well-managed hunting with harvest rates below roughly 30 percent are not believed to have significant impacts on healthy sage grouse populations (Schroeder *et al.* 1999a). Harvest rates that exceed 30 percent or hunting of relatively small, isolated populations may act to limit sage grouse abundance in some areas. Western sage grouse in Washington have not been subject to hunting since 1988 (WDFW 1995).

The fragmented, isolated nature of the populations of sage grouse that occur in Washington is a concern for the conservation of the species in the northwestern extension of its historic range. Preliminary viability analyses

conducted by the WSGWG (1998) indicate that neither local population is likely viable at their current levels over the long term (approximately 100 years). In addition to the relatively large-scale impacts on native shrub steppe habitat (above), other naturally occurring impacts and human influences of lesser magnitude may pose threats to Washington's isolated local populations.

Potential risks to small and/or fragmented populations include direct impacts to individuals from inclement weather conditions, altered predator demographics or behavior, agricultural practices, vehicle collisions, pest control measures, and military training. Impacts may also result from indirect disturbance of the local populations caused by agricultural and grazing activities, transportation corridors, recreation, and military training events (over-flights, troop movements, etc.). The relatively small, isolated populations of sage grouse in Washington may also be at greater risk to the deleterious effects from inbreeding. Conversely, outbreeding depression may be a concern for reintroduction efforts in Washington. It is unlikely that any one of the above factors has played a significant role in the population declines and range reductions of sage grouse in the northwestern extension of their historic range. However, these influences may now play an important role in the dynamics of the relatively small and isolated local populations that remain in Washington.

We have reviewed the petition, literature cited in the petition, other pertinent literature, and information available in our files, and consulted with biologists and researchers familiar with sage grouse. After reviewing this information, we find that the Washington population of western sage grouse may be both discrete and significant, and so may satisfy our criteria for designation as a DPS. On the basis of the best scientific and commercial information available, we also find that sufficient information exists with regard to the five listing factors established by the Act and ongoing conservation measures to indicate that listing the population of sage grouse that occurs in Washington as threatened or endangered may be warranted.

In making this finding, we recognize that there have been declines in sage grouse populations primarily attributed to the loss and degradation of shrub steppe habitat. These impacts are likely due to a combination of factors, including crop production, over-grazing by livestock, fire, military training, rural

and suburban development, dam construction, herbicide spraying, recreation, and other factors. The petition presents evidence that the population of this species that occurs in Washington is at risk. We also recognize that various State and Federal agencies in Washington, and throughout the species' historic distribution, are actively managing the birds to try and improve their overall population status and/or attempting to restore them to currently unoccupied habitats.

Section 4(b)(3)(B) of the Act requires that, to the maximum extent practicable within 12 months from the date that a petition presenting substantial information is received, we make a finding as to whether it is warranted to list the petitioned species as threatened or endangered. Due to a backlog of court-ordered listing and critical habitat actions and funding constraints, a status review for the sage grouse population that occurs in Washington will probably not be conducted until May 2001. If the 12-month finding determines listing the western sage grouse in Washington is warranted, the designation of critical habitat would be addressed in the subsequent proposed rule.

Public Information Solicited

We are required to promptly commence a review of the status of the species after making a positive 90-day finding on a petition. With regard to this positive petition finding, we are requesting information primarily concerning the species' population status and trends, extent of fragmentation and isolation of other population segments, significance or nonsignificance of the Washington population and/or any other discrete population segments, potential threats to the species, and ongoing management measures that may be important with regard to the conservation of sage grouse in Washington or throughout the remainder of the taxon's historic range. In addition, we request information relating to the designation of critical habitat for western sage grouse in Washington.

References Cited

A complete list of all references cited herein is available on request from the Upper Columbia River Basin Field Office, (See ADDRESSES section).

Author: The primary author of this document is Chris Warren, U.S. Fish and Wildlife Service, 11103 E. Montgomery Drive, Spokane, Washington, 99206.

Authority: The authority for this action is the Endangered Species Act (16 U.S.C. 1531 *et seq.*).

Dated: August 18, 2000.

Jamie Rappaport Clark,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 00-21610 Filed 8-23-00; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 216

[Docket No. 000801223-0223-01; I.D. 062000A]

RIN 0648-AO24

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Operation of a Low Frequency Sound Source by the North Pacific Acoustic Laboratory

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

ACTION: Advance notice of proposed rulemaking; receipt of an application for a small take exemption; request for comment and information.

SUMMARY: NMFS has received a request from the University of California San Diego, Scripps Institution of Oceanography (Scripps), for a small take of marine mammals incidental to the continued operation of a low frequency (LF) sound source previously installed off the north shore of Kauai by the Acoustic Thermometry of Ocean Climate (ATOC) project. As a result of that request, NMFS is considering whether to propose regulations that would authorize the incidental taking of a small number of marine mammals. In order to issue regulations for this taking, NMFS must determine that this taking will have no more than a negligible impact on the affected species and stocks of marine mammals. NMFS invites comment on the application and suggestions on the content of the regulations.

DATES: Comments and information must be postmarked no later than September 25, 2000. Comments will not be accepted if submitted via e-mail or the Internet.

ADDRESSES: Comments should be addressed to Donna Wieting, Chief, Marine Mammal Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3226. A copy of the application, which contains the references used in

this document, may be obtained by writing to this address, or by telephoning the contact listed here (see **FOR FURTHER INFORMATION CONTACT**). A copy of the draft environmental impact statement (DEIS) may be obtained from Marine Acoustics Inc., 809 Aquidneck Ave., Middletown, RI 02842, attn. Kathy Vigness Reposa, 401-847-7508.

FOR FURTHER INFORMATION CONTACT: Kenneth R. Hollingshead (301) 713-2055, ext. 128.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(A) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*) (MMPA) directs the Secretary of Commerce (Secretary) to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and regulations are issued.

Permission may be granted for periods of 5 years or less if the Secretary finds that the taking will be small, will have no more than a negligible impact on the species or stock(s), and will not have an unmitigable adverse impact on the availability of the species or stock(s) for Arctic Ocean subsistence uses, and if regulations are prescribed setting forth the permissible methods of taking and the requirements pertaining to the monitoring and reporting of such taking.

Summary of Request

On May 21, 2000, NMFS received an application for an incidental, small take authorization under section 101(a)(5)(A) of the MMPA from Scripps to take marine mammals incidental to the continued operation of a LF sound source previously installed off the north shore of Kauai by the ATOC project. An alternative source location under consideration in the DEIS and here is for Midway Island. A final decision on whether to re-use the ATOC source (or to install a new source and cable at Midway), in order to combine a second phase of research on the feasibility and value of large-scale acoustic thermometry with long range underwater sound transmission studies and marine mammal monitoring and studies will be made based, in part, on findings and determinations made under the National Environmental Policy Act (NEPA). As the principal funding agency for the proposed action, a DEIS has been prepared by the Office of Naval Research (ONR). NMFS is a