considered as suggestions for further rulemaking action. Comments on this notice will be available for inspection in the docket. NHTSA will continue to file relevant information as it becomes available for inspection in the docket after the closing date, and it is recommended that interested persons continue to examine the docket for new material.

Those persons desiring to be notified upon receipt of their comments in the rules docket should enclose a self-addressed, stamped postcard in the envelope with their comments. Upon receiving the comments, the docket supervisor will return the postcard by mail.

List of Subjects in 49 CFR Part 541

Administrative practice and procedure, Labeling, Motor vehicles, Reporting and recordkeeping requirements.

Authority: 15 U.S.C. 2021–2024, and 2026; delegation of authority at 49 CFR 1.50.

Issued on: June 30, 1993.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 93–15967 Filed 7–6–93; 8:45 am]

BILLING CODE 4910–59–M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018—AB94

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Kootenai River Population of the White Sturgeon

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to list the Kootenai River population of the white sturgeon (*Acipenser transmontanus*), as an endangered species without critical habitat, pursuant to the Endangered Species Act of 1973, as amended (Act). The Kootenai River population of the white sturgeon is restricted to approximately 168 miles (270 kilometers (km)) of the Kootenai River, in Idaho, Montana, and British Columbia, Canada, primarily upstream from Cora Linn Dam at the outflow from Kootenay Lake, British Columbia. A natural barrier at Bonnington Falls downstream of Kootenay Lake has isolated the Kootenai River population of white sturgeon from other white sturgeon populations in the Columbia River basin for approximately 10,000 years. Recent genetic analysis indicates that the Kootenai River sturgeon is a unique stock and constitutes a distinct interbreeding population. The free-flowing river habitat for the Kootenai River white sturgeon population has been modified and impacted from development of the Kootenai River basin. Construction of Libby Dam for hydropower and flood control has transformed the natural hydrograph of the Kootenai River, thus reducing river flows critical to successful reproduction during the May to July sturgeon spawning season, and also affecting the biological productivity of the system by removing nutrients. This population has declined to an estimated 880 individuals, with approximately 80 percent of the sturgeon over 20 years old. There has been an almost complete lack of recruitment of juveniles into the population since 1974, soon after Libby Dam began operation. Other potential threats to the population include disease, and poor water quality due to contaminants.

This proposal, if made final, would extend the Act's protection to the Kootenai River population of the white sturgeon. The Service requests comments and information from the public on this proposed rule.

DATES: Comments from all interested parties must be received by November 4, 1993.

In anticipation of a request, the Service intends to conduct a public hearing on Thursday, August 26, 1993, from 1 to 4 p.m. and from 6 to 8 p.m. in Sand Point, Idaho.

ADDRESSES: Written comments and materials concerning this proposed rule may be submitted at the hearing or to the Field Supervisor, Boise Field Office, U.S. Fish and Wildlife Service, 4696 Overland Road, room 576, Boise, Idaho, 83705. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address. The public hearing on August 26, 1993, will be held at the Schweitzer Mountain Resort, Headquarters Day Lodge, Caribou Room, 10000 Schweitzer Mountain Road, 11 miles north of Sand Point, Idaho.

FOR FURTHER INFORMATION CONTACT: Charles H. Lobdell, Field Supervisor, at the above address or (208) 334–1931.

SUPPLEMENTARY INFORMATION:

Background

White sturgeon (*Acipenser transmontanus*) historically occurred on the Pacific coast from the Aleutian Islands to central California. The species reproduces in at least three large river systems: the Sacramento-San Joaquin, Columbia, and Fraser Rivers. The Kootenai River population of white sturgeon is one of several land-locked populations of white sturgeon found in the Pacific Northwest. The Kootenai River originates in Kootenay National Park in British Columbia, Canada, and flows south into Montana, turns northwest into Idaho, and north through the Kootenai Valley back into British Columbia, where it flows through Kootenay Lake and eventually joins the Columbia River at Castlegar.

White sturgeon are included in the Family Acipenseridae, which consists of 4 genera and 24 species of sturgeon. There are eight species of sturgeon in North America; white sturgeon is one of five species in the genus *Acipenser*. *Acipenser*, among the oldest genera of sturgeon, evolved nearly 400 million years ago during the Cretaceous Period (Scott and Crossman 1973). The closely related green sturgeon (*Acipenser medirostris*) also occurs in the Pacific Coast region, but is restricted in distribution to river estuaries.

The white sturgeon was described by Richardson in 1863 from a single specimen collected in the Columbia River near Fort Vancouver, Washington (Scott and Crossman 1973). All sturgeon are distinguished in having a cartilaginous skeleton with a persistent notochord, and also a protractile, tube-like mouth and sensory barbels on the ventral surface of the snout. The white sturgeon is distinguished from other *Acipenser* by the specific arrangement and number of scutes (bony plates) along its body (Scott and Crossman 1973). The fish have 11 to 14 dorsal, 36 to 48 lateral, and 9 to 12 ventral scutes. White sturgeon are the largest freshwater or anadromous fish in North America, reported to grow upwards of 1,800 pounds (lb) (820 kilograms (kg)). However, the largest authentic record of a white sturgeon is a 1,387 lb (630 kg) specimen taken from the Fraser River in British Columbia in 1897 (Scott and Crossman 1973). Individuals in landlocked populations are generally much smaller. For example, there are no reports of white sturgeon over 200 lbs (90 kg) captured from the Kootenai River system (Apperson 1992, Graham 1981, Partridge 1983). White sturgeon are known to be long-lived, with females living from 34 to 70 years (PSMFC 1992). Partridge (1983) reported that the oldest of 342 sturgeon captured in the Kootenai River during 1977 to 1982 was estimated to be 44 years old.

For white sturgeon in general, the size or age of first maturity in the wild is

quite variable (PSMFC 1992). Females normally require a longer period to mature than males, generally taking 15 to 32 years. Only a portion of adult white sturgeon are reproductive or spawn each year, with the spawning frequency for females estimated at 2 to 11 years. Spawning occurs when the physical environment permits vitellogenesis (egg development) and cues ovulation. White sturgeon are broadcast spawners, releasing their eggs and sperm in fast water. In the lower Columbia River, below McNary Dam, landlocked populations of white sturgeon normally spawn during the period of peak flows from April through July (Parsley et al. 1989; Duke et al. 1990); in recent studies sturgeon eggs were collected in spawning areas with mean column water velocities ranging from 1.6 to 6.3 feet (ft) per second (0.5 to 1.92 meters (m) per second) (Miller et al. 1991). Spawning in high water velocities disperses and prevents clumping of the adhesive eggs. Following fertilization, eggs adhere to the river substrate and hatch after a relatively brief incubation period of 8 to 15 days, depending on water temperature (Brannon et al. 1985). Recently hatched yolk-sac larvae swim or drift in the current for a period of several hours and then settle into interstitial spaces in the substrate. Larval white sturgeon require 20 to 30 days to metamorphose into juveniles with a full complement of fin rays and scutes. During this period, larval sturgeon disperse into the water column where they begin to feed actively, thus becoming susceptible to predation, starvation, disease, and parasitism (Parsley et al. in prep.).

The ecology of white sturgeon in the Kootenai River is not as well known as that of anadromous and other landlocked populations of white sturgeon in the Columbia River basin. Historically, little was known concerning the status and life history of the white sturgeon population in the Kootenai River basin prior to studies initiated during the late 1970's by the British Columbia Ministry of Environment and Parks (Andrusak 1980), Idaho Department of Fish and Game (Partridge 1983), and Montana Department of Fish, Wildlife and Parks (Graham 1981).

The Kootenai River population of white sturgeon is restricted to approximately 168 river miles (270 river km) in the Kootenai River basin, primarily upstream of Cora Linn Dam at the outflow from Kootenay Lake, British Columbia, Canada, through the northeast corner of the Idaho panhandle to Kootenai Falls, about 31 river miles (50 km) below Libby Dam, Montana. Kootenai Falls, in Montana, represents an impassible natural barrier to the upstream migration of the sturgeon. A natural barrier at Bonnington Falls downstream of Kootenay Lake has isolated the Kootenai River white sturgeon from other white sturgeon populations in the Columbia River basin since the last glacial age (approximately 10,000 years) (Apperson and Anders 1991). The Kootenai River population is one of 18 landlocked populations of white sturgeon known to occur in western North America.

Recent genetic analysis indicates that the Kootenai River sturgeon is a unique stock and constitutes a distinct interbreeding population (Setter and Brannon 1990). In examining electrophoretic data from 65 individuals in the Kootenai River, Setter and Brannon (1990) estimated an average heterozygosity (or measure of the quantity of genetic variation) for the Kootenai River population at 0.54. An average heterozygosity of 0.74 was observed for white sturgeon sampled in the Columbia River. Based on the observed lowered average heterozygosity, Setter and Brannon (1990) concluded "* * * that the amount of variability is on the average less for individuals found in the Kootenai River than those found throughout the Columbia River" and "* * * we find adequate evidence to distinguish these fish as a separate population based on differences in allele frequencies, the genetic distance calculation and the overall quantity of variation displayed."

In general, individual white sturgeon in the Kootenai River are broadly distributed, migrating freely between the Kootenai River and the deep, oligotrophic Kootenay Lake (Andrusak 1980). However, the species is not commonly found upstream of Bonners Ferry into Montana (Apperson and Anders 1991). In 1980, Graham (1981) estimated the sturgeon population in Montana to be from one to five individuals found in the river reach immediately downstream of Kootenai Falls. Although white sturgeon use the main channel of the Kootenai River upstream to Kootenai Falls, none have been reported from tributary streams in Idaho and Montana (Partridge 1983).

Based on tagging studies, Kootenai River white sturgeon are relatively sedentary during the summer and inhabit the deepest holes (Apperson and Anders 1990). During late summer and fall, tagged fish were observed moving into the deepest river holes available in the river and/or into Kootenay Lake. Kootenai River locations used by sturgeon were generally sites over 20 ft (6 m) deep with column velocities less than 0.77 ft per second (less than 0.24 m per second) and water temperature of 57 to 68° F (14 to 20° C) (PSMFC 1992). Depths utilized by sturgeon in Kootenay Lake ranged from 30 to over 300 ft (10 to 100.5 m) (Apperson and Anders 1991). Compared with other waters containing white sturgeon, the Kootenai River is a relatively cool river with summer high temperatures of 68 to 72° F (20 to 22° C). Like other white sturgeon, Kootenai River sturgeon are opportunistic feeders. Partridge (1983) found white sturgeon more than 28 inches (in) (80 centimeters (cm)) in length feeding on a variety of prey items, including chironomids, clams, snails, aquatic insects, and fish. Andrusak (British Columbia Environment, Parks and Lands, pers. comm., 1993) noted that kokanee salmon (*Oncorhynchus nerka*) in Kootenay Lake, prior to a dramatic population crash beginning in the mid 1970's, were once considered an important prey item for adult white sturgeon in the lake.

Specific spawning sites for white sturgeon in the Kootenai River are not well known. Apperson (IDFG, pers. comm., 1993) believes that under natural (pre-Libby Dam operation) flow conditions, habitat available for white sturgeon spawning would have occurred in an approximate 60 river mile (96 river km) stretch of the Kootenai River from Shorty's Island in Idaho (river mile 145) upstream to Kootenai Falls in Montana (river mile 203). Apperson (1992) reported that six reproductively mature white sturgeon (three males and three females) tagged with ultrasonic transmitters were located weekly from April through July 1991 to monitor spawning related movements. By May, all six fish had moved upriver 10 to 71 river miles (16 to 114 river km) into the river reach between Shorty's Island and immediately downstream of Bonners Ferry, where they were congregated through July. These fish exhibited movements and remained congregated in areas similar to other sturgeon tagged and monitored in 1990. During May through July, white sturgeon fitted with transmitters occupied locations with water velocities that ranged from 1 to 2 ft per second (0.3 to 0.6 m per second) in 1990, and 1.3 to 2.5 ft per second (0.4 to 0.8 m per second) in 1991.

Based on a comparison of population estimates made in 1982 and 1990, Kootenai River white sturgeon have declined from an estimated 1,194 fish (range of 907 to 1,503) (Partridge 1983) to approximately 880 fish (range of 638 to 1,211) (Apperson and Anders 1991).

This decline in population from 1982 to 1990 indicates an overall annual mortality rate of 0.0374 for adult white sturgeon. The 1990 population estimate translates to an average abundance of seven sturgeon per river kilometer from Kootenay Lake upstream to Bonners Ferry, Idaho.

The population is reproductively mature, with approximately 80 percent of the sturgeon over 20 years old (Apperson 1992). The Idaho Department of Fish and Game (IDFG) estimates that 7 percent of the female white sturgeon and 30 percent of the male white sturgeon in the Kootenai River are reproductive each year (Apperson 1992). Based on a 1:1 sex ratio, this translates into 22 to 42 females and 96 to 182 males available to spawn in any given year. The actual number of available spawners is dependent upon size at maturity and spawning frequency. In addition, it is not certain at what age reproductive senescence occurs in white sturgeon.

There has been an almost complete lack of recruitment of juveniles into the population since 1974, soon after Libby Dam began operation (Partridge 1983, Apperson and Anders 1991). The youngest fish found in the most recent study was a single specimen of the 1977 year class (Apperson and Anders 1991). According to PSMFC (1992), no white sturgeon less than 20 in (51 cm) total length were collected in surveys conducted between 1977 and 1982 on the Kootenai River.

Partridge (1983) noted that sturgeon recruitment was intermittent and possibly decreasing prior to 1974 starting in the mid-1960's, demonstrated by lack of sturgeon from the 1965 to 1969, 1971 to 1973, and 1975 year-classes. Partridge speculated that the lack of recruitment was due in part to (1) the elimination of rearing areas for juveniles through diking of slough and marsh side-channel habitats, and (2) the increase in chemical pollutants (copper, zinc) in the river that may have affected spawning success. In any event, based on current annual mortality rate estimates of 0.0374 coupled with continuing zero recruitment in the future, Apperson (1992) believes that the number of white sturgeon in the Kootenai River population will decline to fewer than 500 individuals within 15 years and to 100 individuals within 55 years.

Previous Federal Action

Federal action on the Kootenai River population of white sturgeon began on November 21, 1991, when the Service included this population as a category 1 candidate species in the Animal Notice of Review (56 FR 58804), based primarily on the results of field studies conducted by Idaho Department of Fish and Game. Category 1 candidates are taxa for which the Service has on file enough substantial information on biological vulnerability and threats to propose them for endangered or threatened status. On June 11, 1992, the Service received a petition from the Idaho Conservation League, Northern Idaho Audubon, and Boundary Backpackers to list the Kootenai River population of white sturgeon as threatened or endangered under the Act. The petition cited the continuing lack of natural flows affecting juvenile recruitment as the primary threat to the continued existence of the wild sturgeon population. Pursuant to section 4(b)(3)(A) of the Act, the Service determined that the petition presented substantial information indicating that the requested action may be warranted, and published this finding in the **Federal Register** on April 14, 1993 (58 FR 19401).

Section 4(b)(3)(B) of the Act requires the Service to make a finding within 1 year of the date a petition is received as to whether or not the requested action is warranted. This proposed rule constitutes the 1-year finding that listing of the Kootenai River population of white sturgeon as an endangered species is warranted.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1533) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. 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 Kootenai River population of white sturgeon (*Acipenser transmontanus*) are as follows:

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

The significant modifications to the natural hydrograph in the Kootenai River caused by flow regulation at Libby Dam is considered the primary reason for the Kootenai River sturgeon's declining numbers (Apperson and Anders 1991). Since 1972 when Libby Dam began operating, spring flows in the Kootenai River have been reduced an average 50 percent, and winter flows have increased by 300 percent over normal. As a consequence, natural high spring flows required by white sturgeon for reproduction rarely occur during the May to July spawning season when suitable temperature, water velocity, and photoperiod conditions exist. Spring flows in the Kootenai River are also far below the flows observed in 1974, the last year with appreciable white sturgeon production (Apperson 1992). Flows in 1974 exceeded 35,000 cubic ft per second (1,000 cubic m per second) during most of the spawning season. The operation of Libby Dam drastically alters seasonal downstream discharge by storing the natural spring runoff, providing more predictable flows throughout the year, and allowing late summer load factoring (power peaking) flows (Apperson 1992).

In 1990 and 1991, river discharge during the suspected spawning period was atypical for the post-Libby Dam period. Instead of discharge declining through late spring as occurred during 1989 and most prior years following Libby Dam operation, increasing and higher than 'normal' flows coincided with increasing water temperatures through June in 1990 and 1991. In both 1990 and 1991, mature female sturgeon tagged with ultrasonic transmitters moved from 10 to 68 river miles (15 to 110 river km) upriver and congregated in the 10 river mile reach near Bonners Ferry (Apperson 1992). These migrations coincided with an increase in flows near Bonners Ferry from approximately 24,700 cubic ft per second to nearly 42,400 cubic ft per second (700 to 1,200 cubic meters per second) and an increase in water temperature from 8 to 14° C. According to Parsley et al. (in prep.), most sturgeon spawning recorded in the lower Columbia River occurred at 14° C. Although no sturgeon eggs were recovered in 1990, 13 eggs were collected in early July 1991 from an artificial substrate placed in the suspected spawning area near river mile 155 at Bonners Ferry, within 0.06 mile (100 m) downriver from the railroad bridge (Apperson 1992). The eggs, estimated to be approximately 3 days of age, were spawned when water temperatures were 14° C and discharge between June 29 and July 2 ranged from 14,125 to 19,400 cubic ft per second (400 to 500 cubic meters per second). Water velocities where sturgeon eggs were collected were estimated at 2.4 to 3.1 ft per second (0.8 to 1.0 m per second); these velocities were at the lower end of velocity ranges measured in white sturgeon spawning areas during egg collection in the lower Columbia River (1.6 to 9.1 ft per second or 0.5 to 2.8 m per second) (Miller et al. 1991). This egg collection is the only

physical evidence of natural spawning by white sturgeon in the Kootenai River basin based upon recent studies. Although pre-spawning migratory behavior was observed in both 1990 and 1991, the higher than normal Kootenai River flows through the suspected spawning area occurred only for a brief period, and few viable eggs were collected. Evidence that more than one female spawned successfully, or whether the eggs spawned in 1991 survived past the larval stage, is lacking.

Additional adverse impacts to sturgeon because of reduced spring flow conditions may result from load-factoring or load-following at Libby Dam. Load-factoring, the deliberate practice of artificially raising and lowering river levels over a daily or weekly pattern for peak power generation or recreation, can create rapid changes in tailwater flows and affect depth, temperature, dissolved gases, and other physical-chemical conditions in the tailwater. Load-factoring at Libby Dam is a frequent and sporadic operating practice contributing to routine fluctuations in river elevations of 1 to 3 ft (0.3 to 0.9 m) per day (Kim Apperson, IDFG, pers. comm., 1993). These fluctuations may adversely affect sturgeon spawning behavior and reduce any egg/larvae survival. Because sturgeon spawning coincides with peak flows during spring and early summer, flows within natural fluctuations are considered important in maintaining consistent sturgeon spawning behavior during the spawning period (Lance Beckman, U.S. Fish and Wildlife Service, pers. comm., 1993).

Kootenai River sturgeon eggs and larvae are subject to downstream drift and are vulnerable to dewatering from flow fluctuations for 4 to 6 weeks post-spawning. This is especially critical for eggs and larvae deposited in shallow, littoral areas within the 10 river mile (16 river km) stretch downstream of Bonners Ferry. In addition, frequent water level fluctuations may displace larval sturgeon, thus increasing their susceptibility to predation (Kim Apperson, IDFG, in litt., 1993). Load-factoring also affects and modifies the primary and secondary productivity in lotic ecosystems (Ward and Stanford 1979). White sturgeon normally begin exogenous feeding within 2 weeks following hatching. Therefore, the availability of native benthos, periphyton, and zooplankton suitable as prey organisms is critical to their early survival.

Elimination of side channel slough habitat in the Kootenai River floodplain due to diking and bank stabilization to protect agricultural lands from flooding may also be a contributing factor to the sturgeon decline. Much of the Kootenai River has been channelized and stabilized from Bonners Ferry downstream to Kootenay Lake resulting in reduced aquatic habitat diversity, altering flow conditions at potential remaining spawning and nursery areas, and altering remaining substrates and conditions necessary for survival. The former slough and side channel areas were considered important rearing and foraging habitat for early age sturgeon and their prey (Partridge 1983). In summary, these extensive habitat modifications in the Kootenai River basin are believed to have caused adverse effects on white sturgeon reproduction, recruitment, and survival, and threaten the continued existence of the population.

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

All legal commercial and sport harvest for Kootenai River sturgeon has been eliminated in Idaho, Montana, and British Columbia. However, it is not known what impact, if any, to Kootenai River sturgeon may still be occurring from the illegal harvest of sturgeon.

While no historic evidence of white sturgeon exploitation in the Kootenai River basin during the 1800's exists (PSMFC 1992), sturgeon were utilized by the Kootenai Indians "* * * at least several hundred years ago" (Graham and White 1985). In Idaho, the harvest of white sturgeon in the Kootenai River was first regulated in 1944 when commercial fishing was prohibited and sport fishing restrictions were imposed (Apperson 1992). With increasingly restrictive harvest and length restrictions, an estimated 10 to 20 white sturgeon were harvested per year from 1944 through the mid-1970's. Partridge (1983) reported that the legal harvest had reached a relatively constant 51 to 52 fish per year over the 1979 through 1981 period, although "* * * the total number of sturgeon caught has been decreasing and less fish are being released * * *." Partridge also found that only 13 percent (n = 50) of the 342 sturgeon sampled were younger than age 15 and smaller than the legal size of 32 in (92 cm) total length, concluding that lack of recruitment was limiting the population and fishery. Following this investigation and citing concerns about the status of the population, Idaho terminated the legal sport harvest in 1984, limiting the sturgeon fishery to catch and release only.

In Montana, the harvest of white sturgeon was not restricted prior to 1972 (Apperson 1992). Graham and White (1985) reported that burbot (ling) anglers and fishermen using set-lines harvested sturgeon in the Kootenai River downstream of Kootenai Falls during the 1940's and 1950's. Beginning in 1972, harvest was restricted to two sturgeon per year with a slot (size) limit of between 36 and 54 in (102 to 183 cm). Over a 6-year period, 5 to 18 sturgeon were harvested annually. Fishing for sturgeon in Montana has been prohibited since 1979, and the species is now classified as a "Species of Special Concern" (Don Skarr, Montana Department of Fish, Wildlife and Parks, pers. comm., 1993).

In British Columbia, the white sturgeon harvest was first regulated in 1952 (Apperson 1992). During the 1974 through 1989 period, anglers were allowed to harvest one white sturgeon per year over 1 m total length. Anglers were required to secure a permit to fish for sturgeon. An average of 55 permits were issued annually from 1973 to 1980 with an estimated annual legal and illegal harvest of 10 to 20 fish (Graham 1981). Setlining for white sturgeon in British Columbia was prohibited in 1989, and a total ban on the sport harvest was imposed in 1990.

A few adult white sturgeon are collected each year for experimental culture purposes. The Kootenai Tribal Experimental Hatchery in Bonners Ferry, Idaho, is currently evaluating factors limiting recruitment, including the relationship between water quality and gamete viability, as well as habitat use and survival of juvenile Kootenai sturgeon released into the Kootenai River. Although collection for experimental culture purposes does not appear to be a threat at this time, the Bonneville Power Administration (BPA) is funding an evaluation of a captive broodstock program for the species to determine the environmental impacts and genetic risk of supplementation on the remaining wild sturgeon population (Rick Westerhouse, BPA, pers. comm., 1993; and Harold Kincaid, Service, pers. comm., 1993).

C. Disease or Predation

Not known to be applicable. However, the potential exists for disease to enter the wild Kootenai River sturgeon population through the release of hatchery raised sturgeon, such as those from the experimental culture facility. Diseases known to occur in white sturgeon hatcheries include bacterial diseases, protozoans, fungi, adenovirus, and the white sturgeon iridovirus (WSIV) (PSMFC 1992). During late November 1992, an outbreak of the WSIV killed most of the nearly 23,000 fingerling Kootenai River white sturgeon

being raised at the Kootenai Tribe hatchery, and the IDFG hatchery at Sandpoint, Idaho. Following the outbreak, approximately 2,000 of the sturgeon fingerlings survived, 1,800 of which remain at the Kootenai Tribe Hatchery. The remaining 200 sturgeon at the IDFG hatchery at Sandpoint were subsequently destroyed to prevent any further transmission of the WSIV virus (Kent Hauck, IDFG, pers. comm., 1993). Although it appears that white sturgeon fingerlings are most susceptible to the iridovirus when confined under hatchery rearing conditions, the disease may also be transmitted to the remaining wild population when hatchery raised sturgeon are released.

Fish predation may be a source of mortality for white sturgeon eggs and larvae, although no data to support this suggestion exists specific to the Kootenai River. In the Columbia River downstream of McNary Dam, common carp (*Cyprinus carpio*), largescale suckers (*Catostomus macrocheilus*), and northern squawfish (*Ptychocheilus oregonensis*) have been collected with white sturgeon eggs in their stomachs (Duke et al. 1990).

D. The Inadequacy of Existing Regulatory Mechanisms

The Idaho Department of Fish and Game (IDFG) currently classifies the Kootenai River population of white sturgeon as endangered, which it defines as "any species in danger of extinction throughout all or a significant portion of its Idaho range" (IDFG 1992). While such designation regulates t.0he take or possession of those species classified as threatened or endangered, the State lacks authority to impose or implement additional conservation measures to ensure survival or recovery.

In Montana, the Kootenai River sturgeon is classified as a "Species of Special Concern" (Don Skarr, Montana Department of Fish, Wildlife and Parks, pers. comm., 1993). Montana does have a State "Nongame and Endangered Species Conservation Act of 1973" that assists in the protection of endangered, indigenous wildlife of Montana. Species of Special Concern are not protected under this conservation act, however. Listing the white sturgeon under the State conservation act would not only prohibit the taking and possession of the species but also allow the Montana Department of Fish, Wildlife and Parks to negotiate with agencies such as the U.S. Army Corps of Engineers (Corps) and BPA for enhanced management of white sturgeon (Graham 1981). In the early 1980's, the Montana State Legislature resisted all attempts at reclassifying the species as endangered under State law, thus precluding any State-authorized initiatives that could benefit the species.

The Corps regulates the management of water at Libby Dam. The Libby Dam project was authorized by title II of Public Law 81–516, the Flood Control Act of 1950, primarily for flood control, hydropower generation, and recreation purposes (U.S. Army Corps of Engineers 1984). Present Corps policy states that equal consideration should be given to environmental concerns in accordance with project objectives. In practice, there is no specific allocation of water on the Kootenai River for fish and wildlife, and the Corps does not give any special consideration to the Kootenai River sturgeon. The Corps is proposing to provide an additional 400,000 acre ft of storage water in 1993, for a one-time test only, to evaluate sturgeon spawning (Jeff Laufle, Corps, pers. comm., 1993). This block of water will provide about 18,000 to 20,000 cubic ft per second of flows through the Bonners Ferry spawning area over a 15 day period starting in June. This additional water, while possibly useful to evaluate flows necessary to stimulate spawning, is unlikely to provide suitable spawning and rearing habitat throughout the normal sturgeon spawning and early rearing season.

Because operation of Libby Dam is considered part of the Coordinated Columbia River System, BPA is also involved in the management of Kootenai River operations. The Coordinated Columbia River System refers to all projects operated under at least three authorities: the Columbia River Treaty, the Pacific Northwest Coordination Agreement, and Federal flood control statutes. The Columbia River Treaty of 1961 between Canada and the United States provided for the building of four storage reservoirs, including Libby Dam, in the upper Columbia River drainage, primarily for flood control and power production. The Pacific Northwest Coordination Agreement, an intricate contract between the Corps, BPA, and Bureau of Reclamation, calls for the planned operation to accommodate all of the authorized purposes of the Columbia River hydropower system. These authorized purposes include flood control, navigation, irrigation, and power production (System Operation Review Interagency Team 1991). The two aforementioned treaties and the various Federal flood control statutes have enacted stringent planning and operation criteria for the Columbia River system for flood control, hydropower, and other purposes. BPA and the Corps have not yet taken steps to impose conservation measures on Libby Dam operations to specifically protect and enhance recruitment opportunities for white sturgeon in the Kootenai River. Although BPA has stated that additional conservation measures to benefit sturgeon would be available if the species were listed, it believes that without threatened or endangered status, the remaining sturgeon have no "special status" for conservation considerations, and other regional interests (i.e., hydropower production, recreation, resident fish) would be given priority consideration (Walt Pollock, BPA, pers. comm., 1993).

BPA, on at least two occasions since June 1992, has made decisions affecting flow conditions in the Kootenai River system that adversely impacted sturgeon. In the first instance, during early June 1992, BPA required that water be stored behind Libby Dam as part of an energy exchange with British Columbia Hydro and Power Authority. As a result, flows dropped from nearly 20,000 cfs to 4,000 cfs in the Kootenai River during the critical spawning period. At that time, three mature female sturgeon tagged with ultrasonic transmitters were staging in the suspected spawning reach near Bonners Ferry when suitable temperature and possibly flow conditions were present. Subsequent to the flow reduction, no eggs or larvae or other evidence of spawning were reported for the 1992 sturgeon spawning season. In the second example, BPA in mid-February 1993 started drafting the nearly 1 million acre ft stored behind Libby Dam for power reserve generation. The Service had been working with the Corps to develop an agreement or Memorandum of Agreement (MOA) that included a flow regime for 1993 using all or part of this stored water for sturgeon reproduction; the Service believed this cooperative effort would not only benefit sturgeon, but also complement flow augmentation proposals being developed for recently listed salmon.

The Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Power Planning Act) was a recent attempt by the United States Congress to address the hydropower impacts on fish and wildlife in the Columbia River system. The Power Planning Act directed the Northwest Power Planning Council (NWPPC) to "* * * promptly develop and adopt * * * a program to protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, on the Columbia River and its tributaries" (16 U.S.C. 839b(h)(1)(A)). BPA has been charged with funding all efforts and projects to protect, mitigate, and enhance fish and

wildlife consistent with the NWPPC's Program. Ongoing efforts by various State agencies and the Kootenai Tribe, authorized by the NWPPC (1987) and funded by BPA, have been undertaken to identify environmental factors limiting the white sturgeon population in the Kootenai River, and develop and maintain an experimental white sturgeon culture facility on the Kootenai River. Despite these efforts to better comprehend the factors affecting the Kootenai River sturgeon, a change in the flow regime associated with dam operation on the Kootenai River is still needed to enable this population to successfully reproduce and increase in size.

The Service joined efforts in June 1992 with IDFG, MDFWP, the Corps, the Kootenai Tribe, and other U.S. and Canada regional agencies to form a Kootenai River White Sturgeon Technical Committee. The goal of the Technical Committee was to develop a regional, prelisting recovery plan that would form the basis of a Conservation Agreement or MOA between the Service, Corps, and IDFG to provide a realistic, natural flow solution for sturgeon recruitment in the Kootenai River within water management constraints. The Service noted the MOA would need to include measures to remove threats to the sturgeon and include long-term provisions to modify flows in the Kootenai River below Libby Dam that would result in successful spawning and recruitment.

Based on discussions and recommendations by the Kootenai River Sturgeon Technical Committee, the Service adopted an interim flow proposal as the basis of any prelisting Conservation Agreement or MOA. This alternative attempts to match flows of 1974, the last year of successful reproduction and measurable recruitment to the population, but reduces the peak flows to 35,000 cfs to minimize flooding impacts and dike damage at Bonners Ferry and reduce nitrogen supersaturation effects below Libby Dam. The interim flow strategy specified that discharge from Libby Dam be regulated so that river flows through the suspected spawning reach near Bonners Ferry stay at the 35,000 cfs discharge throughout the white sturgeon spawning, egg incubation, and early rearing period. The flow proposal is equal to 60 percent of normal discharge (pre Libby Dam) and is similar to the record low natural flows that occurred in 1937.

The Service and the Technical Committee, while recognizing that the lack of reproduction is the most immediate threat to the sturgeon population, are cognizant of other factors negatively affecting the fish. The Service will continue to participate in the Technical Committee process as needed to identify additional factors affecting sturgeon viability in the Kootenai River. To date, the Service has been unable to successfully negotiate a Conservation Agreement to implement the interim flow proposal developed by the Technical Committee.

In summary, cooperative efforts to date to implement a regional prelisting recovery strategy for the Kootenai River sturgeon have not been successful. Existing regulatory mechanisms are not sufficient to ensure the survival and recovery of this species.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Although not fully understood, there is evidence that the overall biological productivity of the Kootenai River downstream of Libby Dam has been altered. Based on limnological studies of Kootenay Lake, Daley et al. (1981) concluded that the construction and operation of Libby Dam (and Duncan Dam in Canada) "* * * has drastically altered the annual hydrograph and has resulted in modifications to the quality of water now entering the lake by removing nutrients, by permitting the stripping of nutrients from the water in the river downstream from the dam and altering the time at which the nutrients are supplied to the lake." Potential threats to the Kootenai River population of white sturgeon from declining biological productivity include (1) Decreased prey abundance and limited food availability for all life stages of sturgeon downstream of Libby Dam, (2) reduced condition factor in adult sturgeon possibly impacting fecundity and reproduction, and (3) a possible reduction in the overall capacity for the Kootenai River and Kootenay Lake systems to sustain substantial populations of sturgeon and other native fishes. The British Columbia Ministry of Environment, Lands and Parks is currently experimenting with fertilization of Kootenay Lake to increase biological productivity and enhance native fisheries (Jay Hammond, British Columbia Environment, Lands and Parks, pers. comm., 1993). Additionally, BPA has recently funded IDFG to study primary productivity and nutrient cycling in the Kootenai River from Kootenai Falls downstream to Kootenay Lake (Kim Apperson, pers. comm., 1993).

Poor water quality and excessive nutrients in the Kootenai River were once considered major problems for the Kootenai River sturgeon and other native fishes prior to the construction and operation of Libby Dam. Graham (1981) concluded that poor water quality conditions in the Kootenai River in the 1950's and 1960's resulting from industrial and mine development most likely affected white sturgeon reproduction and overall productivity. Poor water quality could have affected white sturgeon by impacting their prey base, and introducing heavy metals and other contaminants that may have affected reproductive success. The major sources of pollution resulted from effluents from a lead-zinc mine and concentrator, a fertilizer processing plant, and sewage treatment plants on the St. Mary River, an upstream tributary in Canada, and also a vermiculite mine and processing plant 7 miles (11 km) upstream of Libby, Montana. Significant improvements in water quality were noted by 1977, due in part to waste water control and effluent recycling measures initiated in the late 1960's. Apperson (1992) noted that detectable levels of aluminum, copper, lead, zinc, and strontium were found in sturgeon oocyte (egg) samples from the Kootenai River along with detectable levels of PCB's and pesticides. However, other than copper, the detectable levels of these compounds (e.g., PCB's, organochlorides, zinc) were either (1) lower than levels found in other Columbia River basin sturgeon populations that successfully reproduce, or (2) not enough is known regarding the toxicity of these pollutants to sturgeon. Apperson believed that "* * * concentrations of copper found in white sturgeon oocytes potentially present the most severe contaminant effect on reproductive success" since some of the copper concentrations found in water samples taken in the Kootenai River were in the range of levels known to inhibit yolk uptake in larval white sturgeon. One of the objectives of the Kootenai Indian Tribe's experimental hatchery is to determine the relationship between water quality (including toxicants) and gamete viability. Initial culture efforts have documented successful fertilization and incubation and that sturgeon gametes (i.e., eggs and sperm) are generally viable (Apperson and Anders 1991). The degree to which poor water quality is a factor threatening Kootenai River sturgeon is not known; however, it remains a potential threat to the species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by the species in determining to propose this

rule. Based on this evaluation, the preferred action is to list the Kootenai River population of white sturgeon (*Acipenser transmontanus*) as endangered because the species has declined to an estimated 880 individuals, the majority of which are greater than 20 years of age, and there has been an almost total lack of recruitment of juveniles into the population since 1974. The reduced river flows during the critical spring spawning season as a result of the operation of Libby Dam has precluded successful reproduction, and threatens the continued existence of this population. The population also faces threats from reduced water quality and prey abundance, and disease. Because this distinct population of white sturgeon is in danger of extinction throughout its range, it fits the Act's definition of an endangered species. For reasons discussed below, critical habitat is not being proposed at this time.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat for the Kootenai River population of white sturgeon is not presently determinable. Regulations implementing section 4 of the Act provide that a designation of critical habitat is not determinable when one or both of the following situations exists: (1) Information sufficient to perform required analyses of the impacts of the designation is lacking, or (2) the biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat (50 CFR 424.12). For example, the Service has identified the lack of natural flows in the Kootenai River below Libby Dam as the primary threat to the white sturgeon population. Other than a basic understanding of streamflow conditions necessary for providing spawning and early rearing habitat during the normal May through July sturgeon spawning season, the life history requirements for other life stages of sturgeon are not sufficiently well known to permit identification of an area in the Kootenai River basin as designated critical habitat. Additionally, many Kootenai River sturgeon migrate freely throughout the Kootenai River system and spend part of their life in Kootenay Lake in British Columbia, Canada. The Service will gather additional information on the life history needs of the Kootenai River population of the white sturgeon, and on the potential economic consequences of designating critical before making a decision concerning critical habitat for the sturgeon.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species 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)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, 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 such a 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 the Service.

Federal actions that may be affected by this proposal include the continuing operation of Libby Dam and Kootenai River flow management by the U.S. Army Corps of Engineers. The Corps would be required to consult with the Service on the previously mentioned Libby Dam operations. BPA would be required to consult with the Service regarding the existing Kootenai sturgeon research program authorized by the Northwest Power Planning Council (1987) and funded by BPA. BPA would need to insure that the research and monitoring efforts to identify environmental factors limiting the white sturgeon in the Kootenai River, and that the experimental sturgeon culture facility operated by the Kootenai Indian Tribe of Idaho, are not likely to jeopardize the continued existence of the species. In addition, joint consultation by the Corps, BPA, and Bureau of Reclamation may be necessary if any change in the operation or reauthorization of the Joint Coordination Columbia River System occurs as a result of the System Operation Review process.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (including harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt any such conduct), import or export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing endangered species permits are at 50 CFR 17.22 and 17.23. 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. Requests for information on permits should be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service 4401 North Fairfax Drive, room 432--ARLSQ, Arlington, Virginia 22203-3507 (703/358-2171).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;

(2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical

habitat as provided by section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of this species; and

(4) Current or planned activities in the subject area and their possible impacts on this species.

Any final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

A public hearing will be held on this proposal. See DATES and ADDRESSES sections for detailed information.

National Environmental Policy Act

The Service has determined that an Environmental Assessment, 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 Endangered Species Act, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

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Author

The primary author of this proposed rule is Stephen D. Duke, U.S. Fish and Wildlife Service, Boise Field Office (see ADDRESSES section); telephone 208/334–1931.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

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. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under FISHES, to the List of Endangered and Threatened Wildlife to read as follows:

§ 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:							
•	•	•	•	•	•	•	•
Sturgeon, white ...	*Acipenser transmontanus.*	U.S.A. (AK, CA, ID, MT, OR, WA), Canada (BC).	U.S.A. (ID, MT), Canada (BC) (Kootenai R. system).	E	.....	NA	NA
•	•	•	•	•	•	•	•

Dated: June 24, 1993.

Richard N. Smith,

Acting Director, U.S. Fish and Wildlife Service.

[FR Doc. 93–15958 Filed 7–6–93; 8:45 am]

BILLING CODE 4310–55–P

50 CFR Part 17

RIN 1018–AB88

Endangered and Threatened Wildlife and Plants; Proposed Delisting of the Hawaiian Plant "Bidens cuneata" (Cuneate Bidens)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes to remove a plant, *Bidens cuneata* (cuneate bidens), from the List of Endangered and Threatened Plants. This action is based on a review of all available data, which indicate that this plant is not a discrete taxonomic entity and does not meet the definition of a species as defined by the Endangered Species Act of 1973, as amended (Act), and therefore was listed in error. Extensive studies associated with a recent revision of the Hawaiian members of the genus have concluded that *Bidens cuneata* is an outlying population of *B. molokaiensis,* which is common along the windward cliffs of the island of Molokai.

DATES: Comments from all interested parties must be received by September 7, 1993. Public hearing requests must be received by August 23, 1993.

ADDRESSES: Comments and materials concerning this proposal should be sent to Robert P. Smith, Field Supervisor, Pacific Islands Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, room 6307, P.O. Box 50167, Honolulu, Hawaii 96850. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Robert P. Smith at the above address (808/541–2749).

SUPPLEMENTARY INFORMATION:

Background

The type specimen for *Bidens cuneata* was collected on Diamond Head, Oahu, by William A. Bryan on December 6, 1903, and was formally described by Earl E. Sherff in 1920 (Sherff 1920, Takeuchi 1980). Subsequent to its initial discovery, there were no further collections or observations of the species, leading botanists to believe that it possibly could have gone extinct. In 1955, the species was rediscovered in the area from which the type originally was collected (Takeuchi 1980).

Hybrids between Hawaiian *Bidens* species can readily be induced experimentally and result in highly fertile progeny, indicating a general lack of genetic barriers within the group. Based upon experimental crosses in the Hawaiian members of the genus, Gillette and Lim (1970) concluded that *B. cuneata* was a natural hybrid between *B. mauiensis,* native to the island of Maui, and *B. molokaiensis,* which is restricted to Molokai Island; however, few botanists accepted this conclusion. Citing the occurrence of natural and experimental hybrids, Gillette (1975) later contended that the 41 species of Hawaiian *Bidens* placed by Sherff in section *Campylotheca* should be considered a single species. Recent systematic studies of the genus (including additional experimental hybridizations) culminated in a revision of the Hawaiian members of the genus (Ganders and Nagata 1990). In this publication, *B. cuneata* was considered conspecific with *B. molokaiensis,* a common species found along the northern side of Molokai Island. *Bidens molokaiensis* occurs between sea level and 150 meters (500 feet) in elevation along the seashores, sea cliffs, talus slopes, and fields of northern Molokai from Hoolehua to Kaonihu, a distance of about 37 kilometers (23 miles) or about two-thirds the length of the island.

Summary of Factors Affecting the Species

50 CFR 424.11 requires that certain factors be considered before a species can be listed, reclassified, or delisted. These factors and their application to *Bidens cuneata* Sherff (cuneate bidens) are as follows:

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

Bidens cuneata has been determined to be no more than an outlying population of *Bidens molokaiensis,* a common species native to the northern part of Molokai. *Bidens molokaiensis* is not significantly threatened with destruction, modification, or curtailment of its habitat throughout a significant portion of its range. The final rule designating *Bidens cuneata* as an endangered species was published on February 17, 1984 (49 FR 6099) and identified habitat degradation, possible reduction of reproductive success due to a decline of native pollinating insects, and potential fire hazards as threats contributing to the endangerment of that species. If *Bidens cuneata* were a valid taxon and met the definition of a "species" as described by the Act, then these factors would be relevant. However, since the entity shows no genetic integrity independent of *Bidens molokaiensis,* it cannot be scientifically defended as either a species, subspecies, or taxonomic variety.

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

Such overutilization is not known to be a factor for *Bidens molokaiensis,* which includes *Bidens cuneata.*