of the proposal, we are scheduling public informational meetings and public hearings at a number of locations. If we schedule additional public informational meetings or public hearings, we will publicize their times and locations in subsequent notices.

The purpose of the public informational meetings is to provide additional opportunities for the public to gain information and ask questions about the proposal. These informational sessions should assist interested parties in preparing substantive comments on the proposal.

The public hearings will be the only method for comments and data to be presented verbally for entry into the public record of this rulemaking and for our consideration during our final decision. Comments and data can also be submitted in writing or electronically, as described in the July 13, 2000, proposal, and at http://midwest.fws.gov/wolf.

Author

The author of this notice is Ronald L. Refsnider, U.S. Fish and Wildlife Service, Fort Snelling, Minnesota.

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

Dated: July 19, 2000.

Charles M. Wooley,

Assistant Regional Director, Ecological Services, Region 3, Fort Snelling, Minnesota.

[FR Doc. 00–18912 Filed 7–25–00; 8:45 am]

BILLING CODE 4310–55–M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 20

RIN 1018–AG22

Migratory Bird Hunting; Approval of Tungsten-Matrix Shot as Nontoxic for Hunting Waterfowl and Coots

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service or we) proposes to grant final approval of tungsten-matrix shot as nontoxic for hunting waterfowl and coots. Acute toxicity studies reveal no adverse effects over a 30-day period on mallards (*Anas platyrhynchos*) dosed with tungsten-matrix shot. Reproductive/chronic toxicity testing over a 150-day period indicated that tungsten-matrix administered to adult mallards did not adversely affect them or the offspring they produced. We also propose to remove 50 CFR Subpart M (Part 20—Migratory Bird Hunting)—Criteria and Schedule for Implementing Nontoxic Shot Zones for the 1987–88 and Subsequent Waterfowl Hunting Season because implementation of nontoxic shot zones in the United States was completed in 1991.

DATES: You should submit comments on the proposed rule no later than August 25, 2000.

ADDRESSES: You should send comments to the Chief, Division of Migratory Bird Management (DMBM), U.S. Fish and Wildlife Service, 1849 C Street, NW., ms 634–ARLSQ, Washington, DC 20240. You may inspect comments during normal business hours in Room 634, Arlington Square Building, 4401 N. Fairfax Drive, Arlington, Virginia.

FOR FURTHER INFORMATION CONTACT: Jon Andrew, Chief, Division of Migratory Bird Management, (703) 358–1714.

SUPPLEMENTARY INFORMATION: The Migratory Bird Treaty Act of 1918 (Act) (16 U.S.C. 703–712 and 16 U.S.C. 742 a–j) implements migratory bird treaties between the United States and Great Britain for Canada (1916 and 1996 as amended), Mexico (1936 and 1972 as amended), Japan (1972 and 1974 as amended), and Russia (then the Soviet Union, 1978). These treaties protect certain migratory birds from take, except as permitted under the Act. The Act authorizes the Secretary of the Interior to regulate take of migratory birds in the United States. Under this authority, the Fish and Wildlife Service controls the hunting of migratory game birds through regulations in 50 CFR part 20.

The purpose of this proposed rule is to allow the hunting public to use tungsten-matrix shot for hunting migratory birds. Accordingly, we propose to amend 50 CFR 20.21, which describes illegal hunting methods for migratory birds. Paragraph (j) of § 20.21 pertains to prohibited types of shot. In accordance with § 20.21(j)(2), tungsten-matrix shot (95.9 parts tungsten: 4.1 parts polymer with <1 percent residual lead) is legal as nontoxic shot for waterfowl and coot hunting for the 1999–2000 hunting season only. We propose to amend § 20.21(j) to allow permanent use of tungsten-matrix shot in the formulation described above.

Since the mid-1970s, we have sought to identify shot that does not pose a significant toxic hazard to migratory birds or other wildlife. Currently, only steel, bismuth-tin, tungsten-iron, and tungsten-polymer shot are approved as nontoxic. We previously granted temporary approval for tungsten-matrix shot during the 1998–99 (December 8, 1998; 63 FR 67619) and 1999–2000 (August 19, 1999; 64 FR 45400) migratory bird hunting seasons. Compliance with the use of nontoxic shot has increased over the last few years. We believe that compliance will continue to increase with the approval and availability of other nontoxic shot types.

Kent Cartridge Company has requested that we permanently approve tungsten-matrix shot as nontoxic for hunting waterfowl and coots. Kent's candidate shot is fabricated from what is described in their application as a mixture of powdered metals in a plastic polymer matrix whose density is comparable to that of lead. All component metals are present in their elemental form, not as compounds. The shot material being considered has a density of 10.8 grams/cm^3 and is composed of approximately 95.9 percent tungsten and 4.1 percent plastic polymers.

Kent's application for tungsten-matrix includes a description of the shot, a toxicological report (Thomas 1997), results of a 30-day toxicity study (Wildlife International, Ltd. 1998), and results of a 150-day reproductive/chronic toxicity study (Gallagher *et al.* 2000). The toxicological report incorporates toxicity information (a synopsis of acute and chronic toxicity data for mammals and birds, potential for environmental concern, and toxicity to aquatic and terrestrial invertebrates, amphibians, and reptiles) and information on environmental fate and transport (shot alteration, environmental half-life, and environmental concentration).

Toxicity Information

The toxicity of the plastic polymers in tungsten-matrix is negligible due to their insolubility. There is considerable difference between the toxicity of soluble and insoluble compounds of tungsten. Elemental tungsten, as found in tungsten-matrix shot, is virtually insoluble and is expected to be relatively nontoxic. Even though most toxicity tests reviewed were based on soluble tungsten compounds rather than elemental tungsten, there appears to be no basis for concern of toxicity to wildlife for tungsten-matrix shot via ingestion by fish or mammals (Bursian *et al.* 1996a, Bursian *et al.* 1996b; Bursian *et al.* 1999; Gigiema 1983; Karantassis 1924; Patty 1982; Industrial Medicine 1946).

Environmental Fate and Transport

Elemental tungsten is insoluble in water and, therefore, does not weather and degrade in the environment. Tungsten is very stable with acids and

does not easily form compounds with other substances. Preferential uptake by plants in acidic soil suggests uptake of tungsten when it has formed compounds with other substances rather than when it is in its elemental form (Kabata-Pendias and Pendias 1984).

Environmental Concentration

The estimated environmental concentration (EEC) for a terrestrial ecosystem was calculated based on 69,000 shot per hectare (Pain 1990), assuming complete erosion of shot material in 5 centimeters of soil. The EECs for tungsten and the two polymers found in tungsten-matrix are 25.7 milligram/kilogram (mg/kg), 4.2 mg/kg, and 0.14 mg/kg, respectively. The EEC for an aquatic ecosystem was calculated assuming complete erosion of the shot in 1 foot of standing water. The EECs in water for tungsten and the two plastic polymers found in tungsten-matrix shot are 4.2 milligram/liter (mg/L), 0.2 mg/L, and 0.02 mg/L, respectively.

Effects on Birds

An extensive literature review contained in the application provided information on the toxicity of elemental tungsten to waterfowl and other birds. Ringelman *et al.* (1993) orally dosed 20 8-week-old game-farm mallards with 12–17 (1.03 g average weight) tungsten-bismuth-tin pellets and monitored them for 32 days for evidence of intoxication. No birds died during the trial and gross lesions were not observed during the postmortem examinations. Examination of tissues did not reveal any evidence of toxicity or tissue damage, and tungsten was not detectable in kidney or liver samples. The authors concluded that tungsten-bismuth-tin shot presented virtually no potential for acute toxicity in mallards.

Kraabel *et al.* (1996) assessed the effects of embedded tungsten-bismuth-tin shot on mallards and concluded that tungsten-bismuth-tin was not acutely toxic when implanted in muscle tissue. Inflammatory reactions to tungsten-bismuth-tin shot were localized and had no detectable systemic effects on mallard health.

Ringelman *et al.* (1992) conducted a 32-day acute toxicity study that involved dosing game-farm mallards with a shot alloy of tungsten-bismuth-tin (39 percent tungsten, 44.5 bismuth, and 16.5 tin). No dosed birds died during the trial, and behavior was normal. Examination of tissues post-euthanization revealed no toxicity or damage related to shot exposure. This study concluded that ''* * * tungsten-bismuth-tin shot presents virtually no potential for acute intoxication in mallards under the conditions of this study.''

Nell (1981) fed laying chickens (*Gallus domesticus*) 0.4 or 1.0 grams/kg tungsten (contained in an unspecified salt compound) in a commercial mash for 5 months to assess reproductive performance. Weekly egg production was normal, and hatchability of fertile eggs was not affected. Exposure of chickens to large doses of tungsten either through injection or by feeding resulted in an increased tissue concentration of tungsten (Nell 1981). The loss of tungsten from the liver occurred in an exponential manner with a half-life of 27 hours. Death due to tungsten occurred when tissue concentrations increased to 25 milligram/gram of liver. Due to the insoluble nature of elemental tungsten contained in tungsten-matrix shot, it is not expected that such high levels of tungsten could be attained through ingestion of tungsten-matrix shot.

The two plastic polymers used in tungsten-matrix shot act as a physical matrix in which the tungsten is distributed as ionically bound fine particles. Most completely polymerized nylon materials are physiologically inert, regardless of the toxicity of the monomer from which they are made (Peterson 1977). A literature review did not reveal studies in which either of the two polymers were evaluated for toxicity in birds.

New Acute Toxicity Studies

Kent contracted with Wildlife International Ltd. to conduct an acute toxicity study of tungsten-matrix. The acute toxicity test is a short-term (30-day) study where ducks are dosed with shot and fed commercially available duck food. Survival, body weight, blood chemistry (hematocrit), bone (femur), and organ analysis are recorded.

Kent's 30-day dosing study (Wildlife International Ltd. 1998) included four treatment and one control group of game-farm mallards. Treatment groups were exposed to one of three different types of shot: eight No. 4 steel, eight No. 4 lead, or eight No. 4 tungsten-matrix; whereas the control group received no shot. The two tungsten-matrix treatment groups (1 group with a deficient diet, 1 group with a balanced diet) each consisted of 16 birds (8 males and 8 females); whereas remaining treatment and control groups consisted of 6 birds each (3 males and 3 females). All tungsten-matrix-dosed birds survived the test and showed no overt signs of toxicity or treatment-related effects on body weight. There were no differences in hematocrit or hemoglobin concentration between the tungsten-matrix treatment group and either the steel shot or control groups. No histopathological lesions were found during gross necropsy. In general, no adverse effects were seen in mallards given eight No.4 size tungsten-matrix shot and monitored over a 30-day period. Tungsten was found to be below the limit of detection in all samples of femur, gonad, liver, and kidney from treatment groups.

New Reproductive/Chronic Toxicity Study

Kent contracted with Wildlife International Ltd. to conduct a reproductive/chronic toxicity study of tungsten-matrix. The reproductive/chronic toxicity study is a long-term (150-day) study where ducks are dosed with shot and fed commercially available duck food. Survival, body weight, blood hematocrit, bone (femur), organ analysis, and reproductive performance are recorded.

The chronic toxicity/reproductive study revealed no adverse effects when mallards were dosed with eight No. 4 size tungsten-matrix shot and monitored over a 150-day period (Gallagher *et al.* 2000). At initiation of the test (day 0), and on days 31, 60, and 90, 21 male and 21 female adult mallards were orally dosed with 8 No. 4 tungsten-matrix shot. On the same days, 22 male and 22 female adult mallards were dosed with eight No. 4 steel shot (negative control group). An additional four male and four female mallards were dosed with a single No. 4 lead shot (positive control group). Two lead-dosed birds (one female, one male) died from lead toxicosis on days 10 and 17, respectively, during the study; whereas no mortalities occurred in the other test groups. Hematological and biochemical results from blood samples collected during tests revealed no biologically meaningful differences between the tungsten-matrix group and the steel shot control group. Low, but measurable, levels of tungsten were found in the livers of males from the tungsten-matrix group and in the femurs of females from all treatment groups. For all treatment groups, levels of tungsten were below the limit of detection in egg yolks and whites, and all tissues collected from offspring. Liver and kidney tissues collected for histopathological examination revealed no treatment-related abnormalities.

No significant differences occurred in egg production, fertility, or hatchability of eggs from birds dosed with tungsten-matrix when compared to steel-dosed ducks. No differences occurred in survival and body weight of ducklings from birds dosed with tungsten-matrix

when compared to ducklings from steel-dosed ducks. Blood measurements of ducklings from tungsten-matrix-dosed ducks were similar to measurements from ducklings from steel-dosed ducks. Overall, results of the 150-day study indicated that tungsten-matrix shot repeatedly administered to adult mallards did not adversely affect them, or the offspring they produced.

Nontoxic Shot Approval

The nontoxic shot approval process contains a tiered review system and outlines three conditions for approval of shot types. The first condition for nontoxic shot approval is toxicity testing. Based on the results of the toxicological report and the toxicity tests discussed above, we conclude that tungsten-matrix shot does not pose a significant danger to migratory birds or other wildlife.

The second condition for approval is testing for residual lead levels. Any shot with lead levels equal to or exceeding 1 percent will be considered toxic and, therefore, illegal. We have determined that the maximum environmentally acceptable level of lead in any nontoxic shot is trace amounts of <1 percent, and we have incorporated this requirement in the new approval process. Kent has documented that tungsten-matrix meets this requirement.

The third condition for approval involves law enforcement. In the August 18, 1995, **Federal Register** (60 FR 43314), we indicated our position that a noninvasive field detection device to distinguish lead from other shot types was an important component of the nontoxic shot approval process. At that time, we stated that final approval of bismuth-tin shot would be contingent upon the development and availability of a noninvasive field detection device (60 FR 43315). We incorporated a requirement for a noninvasive field detection device in the revised nontoxic shot approval process published on December 1, 1997 (62 FR 63608). The most common electronic field testing device used by wildlife law enforcement officers can distinguish shells containing tungsten-matrix from shells containing lead. Therefore, the tungsten-matrix application meets the final condition for approval.

As stated previously, this proposed rule would amend 50 CFR 20.21(j) by approving tungsten-matrix shot as nontoxic for hunting waterfowl and coots. It is based on the toxicological report, acute toxicity study, and the reproductive/chronic toxicity study submitted by Kent. Results of these studies indicate the absence of any deleterious effects of tungsten-matrix shot when ingested by captive-reared mallards. This proposed rule would also amend § 20.21(j) by removing paragraph (3), which pertains to the legal use of tin shot during the 1999–2000 hunting season. Because the 1999–2000 hunting season is over, this regulation is no longer in effect.

This proposed rule would further amend 50 CFR part 20, by removing and reserving subpart M-Criteria and Schedule for Implementing Nontoxic Shot Zones for the 1987–1988 and Subsequent Waterfowl Hunting Season. A need for this Subpart no longer exists, as implementation of nontoxic shot zones in the United States was completed in 1991. Nontoxic shot zones are defined in § 20.108 for the purpose of hunting waterfowl, coots, and certain other species as being the contiguous 48 United States, and the States of Alaska and Hawaii, the Territories of Puerto Rico and the Virgin Islands, and the territorial waters of the United States.

References

Bursian, S. J., M. E. Kelly, R. J. Aulerich, D. C. Powell, and S. Fitzgerald. 1996a. Thirty-day dosing test to assess the toxicity of tungsten-iron shot in game-farm mallards. Report to Federal Cartridge Co. 77 pp.

Bursian, S. J., M. E. Kelly, R. J. Aulerich, D. C. Powell, and S. Fitzgerald. 1996b. Thirty-day dosing test to assess the toxicity of tungsten-polymer shot in game-farm mallards. Report to Federal Cartridge Co. 71 pp.

Bursian, S. J., R. M. Mitchell, R. J. Tempelman, R. J. Aulerich, and S. D. Fitzgerald. 1999. Chronic dosing study to assess the health and reproductive effects of tungsten-iron and tungsten-polymer shot on game-farm mallards. Report to Federal Cartridge Co. 115 pp.

Gallagher, S.P., J.B. Beavers, R. Van Hoven, M. Jaber. 2000. Tungsten-matrix shot: A chronic exposure study with the mallard including reproductive parameters. Wildlife International, Ltd. Project No. 475–102. Easton, Maryland. 324pp.

Gigiema I. Sanitariya. 1983. Mezhdunarodnaya Kniga. Moscow, USSR. 48(7):71.

Industrial Medicine. 1946. 15:482.

Kabata-Pendias, A. and H. Pendias. 1984. Trace elements in soil and plants. CRC Press, Inc. Boca Raton, FL.

Karantassis, T. 1924. On the toxicity of compounds of tungsten and molybdenum. Ann. Med. 28:1541–1543.

Kraabel, F. W., M. W. Miller, D. M. Getzy, and J. K. Ringleman. 1996. Effects of embedded tungsten-bismuth-tin shot and steel shot on mallards. J. Wildl. Dis. 38(1):1–8.

Nell, J. A., E. F. Annison, and D. Balnave. 1981. The influence of tungsten on the molybdenum status of poultry. Br. Poult. Sci. 21:193–202.

Pain, D. J. 1990. Lead shot ingestion by waterbirds in the Carmarque, France: an investigation of levels and interspecific difference. Environ. Pollut. 66:273–285.

Patty's Industrial Hygiene and Toxicology. 1982. Wiley Interscience. Wiley & Sons, Inc. NY, NY. Third Ed.

Peterson, J. E. 1977. Industrial Health. Prentice-Hall, Englewood Cliffs, NJ.

Ringelman, J. K., M. W. Miller, and W. F. Andelt. 1992. Effects of ingested tungsten-bismuth-tin shot on mallards. CO Div. Wildl., Fort Collins, 24 pp.

Ringelman, J. K., M. W. Miller, and W. F. Andelt. 1993. Effects of ingested tungsten-bismuth-tin shot on captive mallards. J. Wildl. Manage. 57:725–732.

Thomas, V.G. 1997. Application for approval of tungsten-matrix shot as non-toxic for the hunting of migratory birds. 39 pp.

Wildlife International, Ltd. 1998. Tungsten-matrix shot: An oral toxicity study with the mallard. Project No. 475–101. 162 pp.

NEPA Consideration

In compliance with the requirements of section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(C)), and the Council on Environmental Quality's regulation for implementing NEPA (40 CFR 1500–1508), we prepared a draft Environmental Assessment (EA) for approval of tungsten-matrix shot in May 2000. The EA is available to the public at the location indicated under the **ADDRESSES** caption.

Endangered Species Act Considerations

Section 7 of the Endangered Species Act (ESA) of 1972, as amended (16 U.S.C. 1531 *et seq.*), provides that Federal agencies shall ''insure that any action authorized, funded or carried out * * * is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of (critical) habitat * * * '' We are completing a Section 7 consultation under the ESA for this proposed rule. The results of our Section 7 consultation will be available to the public at the location indicated under the **ADDRESSES** caption.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) requires the preparation of flexibility analyses for rules that will have a significant effect on a substantial number of small entities, which includes small businesses, organizations, or governmental jurisdictions. This rule proposes to approve an additional type of nontoxic shot that may be sold and used to hunt migratory birds; this proposed rule would provide one shot type in addition to the existing four that are approved. We have determined, however, that this proposed rule will have no effect on small entities since the approved shot merely will supplement nontoxic shot already in commerce and available throughout the retail and wholesale distribution systems. We anticipate no dislocation or other local effects, with regard to hunters and others.

Executive Order 12866

This proposed rule is not a significant regulatory action subject to Office of Management and Budget (OMB) review under Executive Order 12866. OMB makes the final determination under E.O. 12866.

E.O. 12866 requires each agency to write regulations that are easy to understand. We invite comments on how to make this rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the rule clearly stated? (2) Does the rule contain technical language or jargon that interferes with its clarity? (3) Does the format of the rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (5) Is the description of the rule in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the rule? What else could we do to make the rule easier to understand?

Paperwork Reduction Act

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. We have examined this regulation under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501) and found it to contain no information collection requirements. However, we do have OMB approval (1018–0067; expires 08/30/2000) for information collection relating to what manufacturers of shot are required to provide to us for the nontoxic shot approval process. For further information see 50 CFR 20.134.

Unfunded Mandates Reform

We have determined and certify pursuant to the Unfunded Mandates Reform Act, 2 U.S.C. 1502, *et seq.*, that this proposed rulemaking will not impose a cost of $100 million or more in any given year on local or State government or private entities.

Civil Justice Reform—Executive Order 12988

We, in promulgating this proposed rule, have determined that these proposed regulations meet the applicable standards provided in Sections 3(a) and 3(b)(2) of Executive Order 12988.

Takings Implication Assessment

In accordance with Executive Order 12630, this proposed rule, authorized by the Migratory Bird Treaty Act, does not have significant takings implications and does not affect any constitutionally protected property rights. This proposed rule will not result in the physical occupancy of property, the physical invasion of property, or the regulatory taking of any property. In fact, this proposed rule allows hunters to exercise privileges that would be otherwise unavailable and, therefore, reduces restrictions on the use of private and public property.

Federalism Effects

Due to the migratory nature of certain species of birds, the Federal Government has been given responsibility over these species by the Migratory Bird Treaty Act. This proposed rule does not have a substantial direct effect on fiscal capacity, change the roles or responsibilities of Federal or State governments, or intrude on State policy or administration. Therefore, in accordance with Executive Order 13132, these proposed regulations do not have significant federalism effects and do not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951) and 512 DM 2, we have evaluated possible effects on Federally recognized Indian tribes and have determined that there are no effects.

List of Subjects in 50 CFR Part 20

Exports, Hunting, Imports, Reporting and recordkeeping requirements, Transportation, Wildlife.

Accordingly, we propose to amend part 20, subchapter B, chapter I of Title 50 of the Code of Federal Regulations as follows:

PART 20—[AMENDED]

1. The authority citation for part 20 continues to read as follows:

Authority: 16 U.S.C. 703–712 and 16 U.S.C. 742 a-j.

2. Section 20.21 is amended by revising paragraph (j) in its entirety to read as follows:

20.21 What hunting methods are illegal?

* * * * *

(j) While possessing shot (either in shotshells or as loose shot for muzzleloading) other than steel shot, or bismuth-tin (97 parts bismuth: 3 parts tin with <1 percent residual lead) shot, or tungsten-iron (40 parts tungsten: 60 parts iron with <1 percent residual lead) shot, or tungsten-polymer (95.5 parts tungsten: 4.5 parts Nylon 6 or 11 with <1 percent residual lead) shot, or tungsten-matrix (95.9 parts tungsten: 4.1 parts polymer with <1 percent residual lead) shot, or such shot approved as nontoxic by the Director pursuant to procedures set forth in § 20.134, provided that this restriction applies only to the taking of Anatidae (ducks, geese, [including brant] and swans), coots (Fulica americana) and any species that make up aggregate bag limits during concurrent seasons with the former in areas described in § 20.108 as nontoxic shot zones.

Subpart M—[Removed and Reserved]

3. Remove and reserve subpart M, consisting of §§ 20.140 through 20.143.

Dated: July 14, 2000.

Stephen C. Saunders,

Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 00–18806 Filed 7–25–00; 8:45 am]

BILLING CODE 4310–55–P