Federal Register

Thursday
June 17, 1999

Part VII

Department of the Interior

Fish and Wildlife Service

50 CFR Part 20

Migratory Bird Hunting; Final Approval of Tungsten-Iron and Tungsten-Polymer Shots and Temporary Approval of Tungsten-Matrix and Tin Shots as Nontoxic for Hunting Waterfowl and Coots; Proposed Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 20

RIN 1018–AF65

Migratory Bird Hunting; Final Approval of Tungsten-Iron and Tungsten-Polymer Shots and Temporary Approval of Tungsten-Matrix and Tin Shots 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-iron and tungsten-polymer shots as nontoxic for hunting waterfowl and coots. We also propose to grant temporary approval of tungsten-matrix and tin shots as nontoxic for hunting waterfowl and coots during the 1999–2000 hunting season only. Acute toxicity studies reveal no adverse effects over a 30-day period on mallards (*Anas platyrhynchos*) dosed with either tungsten-iron, tungsten-polymer, tungsten-matrix, or tin shot. Reproductive/chronic toxicity testing over a 150-day period indicated that tungsten-iron and tungsten-polymer administered to adult mallards did not adversely affect them or the offspring they produced. We will not consider final approval of tungsten-matrix and tin shots until all required reproductive/chronic toxicity tests are successfully completed and the results are received and approved by the Director. Tungsten-iron and tungsten-polymer shots are produced by Federal Cartridge Company (Federal) of Anoka, Minnesota. Tungsten-matrix shot is produced by Kent Cartridge Company (Kent) of Kearneysville, West Virginia. Tin shot is produced by the International Tin Research Institute (ITRI) of Uxbridge, Middlesex, Great Britain.

DATES: Comments on the proposed rule must be received no later than July 19, 1999.

ADDRESSES: Comments may be sent to the Chief, Office of Migratory Bird Management (MBMO), U.S. Fish and Wildlife Service, 1849 C Street, NW., ms 634-ARLSQ, Washington, DC 20240. The public 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, Office of Migratory Bird Management, (703) 358–1714.

SUPPLEMENTARY INFORMATION: 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 and bismuth-tin shot are approved as nontoxic. We previously granted temporary approval for tungsten-iron shot during the 1997–98 (August 13, 1997; 62 FR 43444) and 1998–99 (October 7, 1998; 63 FR 54016) migratory bird hunting seasons. We also granted temporary approval for tungsten-polymer (October 7, 1998; 63 FR 54022) and tungsten-matrix (December 8, 1998; 63 FR 67619) shots during the 1998–99 migratory bird hunting season. 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.

Federal Cartridge Company's (Federal) tungsten-iron shot is an alloy of approximately 55 percent tungsten and 45 percent iron, by weight, and has a density of approximately 10.3 g/cm^3. Tungsten-polymer shot is a matrix of Nylon 6 or 11 polymer surrounding particles of elemental tungsten. Shot made from this material has a density of approximately 11.2 g/cm^3 or approximately the density of lead. The shot will contain approximately 95.5 percent tungsten and 4.5 percent Nylon 6 or 11 by weight.

Kent's original candidate shot was fabricated from what is described in their application as a mixture of powdered metals in a plastic matrix whose density is comparable to that of lead. All component metals are present as elements, not compounds. The tungsten-matrix material from which pellets are formulated has a specific gravity of 9.8 g/cm^3 and is composed of 88 percent tungsten, 4 percent nickel, 2 percent iron, 1 percent copper, and 5 percent polymers by mass. After consultation with us, Kent has subsequently changed the composition of their shot and removed nickel and copper. The new shot material being considered has a density of 10.7 g/cm^3 and is composed of approximately 95.9 percent tungsten and 4.1 percent polymers.

ITRI's candidate shot is made from commercially pure tin; no alloying or other alterations are intentionally made to the chemical composition of the shot. This shot material has a density of approximately 7.29 g/cm^3, and is 99.9 percent tin, with a low level of iron pickup due to the steel production equipment.

Each of Federal's applications for tungsten-iron and tungsten-polymer include a description of the shot, a toxicological report (Barr 1996), results of a 30-day dosing study of the toxicity of the shot in game-farm mallards (Bursian *et al.* 1996a, Bursian *et al.* 1996b), and results of a 150-day reproductive/chronic toxicity study (Bursian *et al.* 1999). Kent's application for tungsten-matrix includes a description of the shot, a toxicological report (Thomas 1997a), and results of a 30-day toxicity study (Wildlife International, Ltd. 1998a). The tin shot application from ITRI contains a description of the shot, a toxicological report (Thomas 1997b), and results of a 30-day toxicity study (Wildlife International, Ltd. 1998b). Toxicological reports for each shot type 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: There is considerable difference in the toxicity of soluble and insoluble compounds of tungsten and iron. Elemental tungsten and iron are virtually insoluble and are therefore 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 either candidate shot via ingestion by fish or mammals (Bursian *et al.* 1996b, Gigiena 1983, Karantassis 1924, Patty 1982, Industrial Medicine 1946). Detailed reviews of the toxicological impacts of different tin compounds have been conducted by Eisler (1989) and Cooney (1988). Both reviews indicate that elemental tin is non-toxic to animals. Tin shot designed for waterfowl hunting is utilized in several European countries and no reports exist that suggest that tin shot is causing toxicity problems for wildlife in those countries.

The potential toxicity of nylon compounds due to degradation is primarily associated with the stabilizers, antioxidants, plasticizers, and unreacted prepolymers. Residual caprolactum has been found in some commercial Nylon 6 products, but little concern regarding this compound has been developed (Patty, 1982). The toxicity of Nylon 6 and 11 are negligible due to their insolubilities.

Environmental Fate and Transport: Tungsten is insoluble in water and therefore not mobile in hypergenic environments. Tungsten is very stable

with acids and does not easily complex. Preferential uptake by plants in acid soil suggests uptake of tungsten in the anionic form associated with tungsten minerals rather than elemental tungsten (Kabata and Pendias 1984). Tin pellets will undergo slow surface oxidation to form hydrated tin oxide, which is extremely insoluble in water (Lide 1990). Therefore dissolution will be slow, and highly localized aqueous concentrations will not arise. This means that elemental tin will over time remain largely in the same inorganic form as when it is discharged. Tin pellets discharged into wetlands where sulphur ions are released during organic decomposition would become coated with tin sulphide, which is highly insoluble in water and resistant to aquatic hydrolysis (Hoiland 1995).

Environmental Concentration: The effective environmental concentration (EEC) for a terrestrial ecosystem was calculated based on 69,000 shot per hectare (Pain 1990), assuming complete erosion of material in 5 cm of soil. For tungsten-iron shot, the EEC for tungsten in soil was calculated at 32.9 mg/kg. For tungsten-polymer shot, the EECs for tungsten and Nylon (6 and 11) in soil are 58.3 mg/kg and 2.7 mg/kg, respectively. The EECs for tungsten and the 2 polymers found in tungsten-matrix are 25.7 mg/kg, 4.2 mg/kg, and 0.14 mg/kg, respectively. The EEC for tin in soil is 19.3 g/m^3.

The environmental concentration (EEC) for an aquatic ecosystem was calculated assuming complete erosion of the shot in one cubic foot of water. For tungsten-iron shot, the EEC in water for tungsten was 10.5 mg/L. For tungsten-polymer shot, the EECs in water for tungsten and Nylon (6 and 11) are 18.7 mg/L and 0.9 mg/L, respectively. The EECs in water for tungsten and the 2 polymers found in tungsten-matrix are 4.2 mg/L, 0.2 mg/L, and 0.02 mg/L, respectively. The EEC in water for tin is 19.3 mg/L.

Effects on Birds: An extensive literature review in each application provided information on the toxicity of elemental tungsten and tin 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 (TBT) pellets and monitored them for 32 days for evidence of intoxication. No birds died during the trial, gross lesions were not observed during the postmortem examinations, histopathological examinations did not reveal any evidence of toxicity or tissue damage, and tungsten was not detectable in kidney or liver samples. The authors concluded that TBT shot presented virtually no potential for acute intoxication in mallards.

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

Nell (1981) fed laying hens (*Gallus domesticus*) 0.4 or 1.0 g/kg tungsten in a commercial mash for five 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 and a decreased concentration of molybdenum (Nell 1981). The loss of tungsten from the liver occurred in an exponential manner with a half-life of 27 hours. The alterations in molybdenum metabolism seemed to be associated with tungsten intake rather than molybdenum deficiency. Death due to tungsten occurred when tissue concentrations increased to 25 mg/g liver. At that concentration, xanthine dehydrogenase activity was zero.

Ringelman *et al.* (1992) conducted a 32-day acute toxicity study which involved dosing game-farm mallards with a shot alloy of tungsten-bismuth-tin (TBT), which was 39, 44.5 and 16.5 percent by weight, respectively. 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 ''* * * TBT shot presents virtually no potential for acute intoxication in mallards under the conditions of this study.''

Several studies have been conducted in which pellets made of tin or tin alloys have been placed inside the digestive tract or tissues of ducks to determine if toxic effects occur. Grandy *et al.* (1968) and the Huntingdon Research Centre (1987) conducted 30- and 28-day, respectively, acute toxicity tests on mallard ducks and reported that all treatment ducks survived with insignificant weight loss or development of pathological lesions. The potential for bismuth-tin (BT) shot to produce toxicological effects in ducks during reproduction has been investigated under both acute and chronic testing conditions. Tin as a 2% component of the tested shot, did not pose a toxic risk to ducks when fed a nutritionally-imbalanced, corn-based diet. Neither has BT shot been shown to pose an adverse risk to the health of ducks, the reproduction by male and female birds, nor the survival of ducklings over the long term (Sanderson *et al.* 1997a, b).

Nylon 6 is the commercially important homopolymer of caprolactum. Most completely polymerized nylon materials are physiologically inert, regardless of the toxicity of the monomer from which they are made (Peterson 1977). Few data exist on the toxicity of Nylon 6 in animals. Most toxicity studies are related to thermal degradation products and so are not relevant to the exposure of wildlife to shot containing nylon. Montgomery (1982) reported that feeding Nylon 6 to rats at a level of 25 percent of the diet for 2 weeks caused a slower rate of weight gain, presumably due to a decrease in food consumption and feed efficiency. However, the rats suffered no anatomic injuries due to the consumption of nylon.

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.

Acute Toxicity Studies: Federal contracted with Michigan State University—Department of Animal Science, to conduct an acute toxicity study of tungsten-iron and tungsten-polymer. Both Kent and ITRI contracted with Wildlife International Ltd. to conduct an acute toxicity study of tungsten-matrix and tin shots, respectively. 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 hematocrit, and organ analysis are recorded.

Tungsten-iron and tungsten-polymer: The 30-day dosing study revealed no adverse effects when mallards were dosed with either 8 BB size tungsten-iron shot or 8 BB size tungsten-polymer shot and monitored over a 30-day period (Bursian *et al.* 1996a, Bursian *et al.* 1996b). Eight male and 8 female adult mallards were dosed with either 8 No. 4 steel shot, 8 No. 4 lead shot, 8 BB size tungsten-iron shot, or 8 BB size tungsten-polyer shot and observed over a 30-day period. An additional 8 males and 8 females received no shot. Fifty percent of the lead-dosed birds (5 males and 3 females) died during the 30-day test while there were no mortalities in

the other groups. Lead-dosed birds were the only ones to display green excreta, lethargy, and ataxia. Body weights were not significantly altered by any of the treatments, although lead-dosed birds which died during the trial lost an average of 30 percent of their body weight. Hematocrit, hemoglobin concentrations, and ALAD activity were significantly depressed at day 15 in the lead-dosed females, while lead-dosed males had significantly depressed hematocrit and hemoglobin concentration compared with the other four groups. There were no significant differences in these whole-blood parameters at day 30. Three tungsten-polymer-dosed males developed mild biliary stasis. The authors attributed this to the intubating of mallards with 8 BBs of tungsen-polymer shot inducing a pathological condition—however slight—that was not found in the control birds. No other histopathological lesions were found. Tungsten was detected in the femur of two tungsten-polymer-dosed females and the kidneys of two tungsten-polymer-dosed birds; in both tissues, concentrations were only slightly above detection limits. In general, no adverse effects were seen in mallards given 8 BB-size tungsten-polymer shot and monitored over a 30-day period.

Tungsten-matrix: Kent's 30-day dosing study (Wildlife International Ltd. 1998a) included 4 treatment and 1 control group of game-farm mallards. Treatment groups were exposed to 1 of 3 different types of shot: 8 #4 steel, 8 #4 lead, or 8 #4 tungsten-matrix; whereas the control group received no shot. The 2 tungsten-matrix treatment groups (1 group deficient diet, 1 group 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 8 #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.

Tin: ITRI's 30-day dosing study (Wildlife International Ltd. 1998b) included 4 treatment and 1 control group of game-farm mallards. Treatment groups were exposed to 1 of 3 different types of shot: 8 #4 steel, 8 #4 lead, or 8 #4 tin shot; whereas the control group received no shot. The 2 tin treatment groups (1 group deficient diet, 1 group 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 tin-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 tin 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 8 #4 size tin shot and monitored over a 30-day period. No levels of tin above the limit of detection were observed in any tissues collected from either tin treatment group.

Reproductive/chronic Toxicity Study: Federal contracted with Michigan State University—Department of Animal Science, to conduct an a reproductive/chronic toxicity studies for both tungsten-iron and tungsten-polymer shot types. 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, organ analysis, and reproductive performance are recorded.

Tungsten-iron and Tungsten-polymer: The reproductive/chronic toxicity study revealed no adverse effects when mallards were dosed with either 8 No. 4 size tungsten-iron shot, or 8 No. 4 size tungsten-polymer shot, and monitored over a 150-day period (Bursian et al. 1999). Sixteen male and 16 female adult mallards were orally dosed with either 8 No. 4 steel shot, 8 No. 4 tungsten-iron shot, or 8 No. 4 tungsten-polymer shot. An additional 6 male and 6 female mallards were dosed with 8 No. 4 lead shot. All lead-dosed birds died by day 25 of the study, whereas no mortalities occurred in the other test groups. Lead-dosed birds had significantly decreased hematocrit, hemoglobin concentration and whole-blood delta aminolevulinic dehydratase activity on day 7 of the study. Mallards dosed with tungsten-iron or tungsten-polymer shot had occasional significant differences in hematocrit and plasma chemistry values when compared to steel-dosed mallards over the 150-day period, but these changes were within the normal range reported for mallards and were not considered to be deleterious. Relative kidney, heart, brain and gizzard weights of lead-dosed birds were significantly greater in comparison to relative weights of those organs in the other 3 treatment groups. Marked liver hemosiderosis was present in all steel and tungsten-dosed males, in 5 of 8 steel- and 3 of 8 tungsten-iron-dosed females, and in 1 tungsten-polymer-dosed male examined. Small amounts of tungsten were detected in gonad and kidney samples from males and females, in femur samples of males, and in liver samples from females dosed with tungsten-polymer shot. Higher concentrations of tungsten were detected in femur, gonad, kidney, and liver samples from tungsten-iron-dosed ducks. The rate of shot erosion was 99% for tungsten-polymer, 72% for tungsten-iron, 55% for steel, and 37% for lead. There were no significant differences in percent egg production, and percent fertility and hatchability of eggs from tungsten-iron- and tungsten-polymer-dosed ducks when compared to steel-dosed ducks. There were no biological differences in percent survivability and body weight of ducklings from tungsten-iron- or tungsten-polymer-dosed ducks when compared to ducklings from steel-dosed ducks. The hematocrit of ducklings from tungsten-iron-dosed ducks was slightly but significantly lower when compared to ducklings from steel-dosed ducks. Histological examination of duckling kidneys and liver indicated no abnormalities. Tungsten was detected in 25%, 9%, and 13% of the femur, kidneys, and liver samples, respectively, from ducklings of the tungsten-iron and tungsten-polymer groups. Overall, results of this study indicated that tungsten-iron and tungsten-polymer shot repeatedly administered to adult mallards did not adversely affect them or the offspring they produced during the 150-day trial.

Nontoxic Shot Approval

The first condition for nontoxic shot approval is toxicity testing. Based on the results of the toxicological report and the toxicity tests (Tiers 1, 2, and 3) discussed above, we conclude that tungsten-iron and tungsten-polymer shot does not pose a significant danger to migratory birds or other wildlife and their habitats. Based on the results of toxicological reports and acute toxicity tests (Tier 1 and 2), we conclude that tungsten-matrix and tin shots do not appear to pose a significant danger to migratory birds or other wildlife and their habitats. However, final approval of either shot type will not be considered until all required reproductive/chronic toxicity tests have been successfully completed and our Director has reviewed and approved the results.

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 incorporated this requirement in the nontoxic shot approval process that was published on December 1, 1997 (62 FR 63608). Federal has documented that tungsten-iron and tungsten-polymer shots meet this requirement. Kent and ITRI have documented that tungsten-matrix and tin shot, respectively, meet this requirement.

The third condition for approval involves enforcement. In the August 18, 1995, **Federal Register** (60 FR 43314), we indicated that approval of any nontoxic shot would be contingent upon the development and availability of a noninvasive field testing device. This requirement was incorporated in the nontoxic shot approval process that was published on December 1, 1997 (62 FR 63608). Tungsten-iron shotshells can be drawn to a magnet as a simple field detection method. Electronic field testing devices can distinguish shells containing tungsten-polymer and tungsten-matrix from shells containing lead. At the present time, we are not aware of any noninvasive field testing devices for distinguishing shells containing tin shot from those containing lead. We will not consider final approval of tin shot until such a device, or other noninvasive field testing method, has been developed for identifying tin shot.

This proposed rule would amend 50 CFR 20.21(j) by approving tungsten-iron and tungsten-polymer shots as nontoxic for migratory bird hunting. It is based on the toxicological reports, acute toxicity studies, and reproductive/chronic toxicity studies submitted by Federal. Results of these studies indicate the absence of any deleterious effects of tungsten-iron or tungsten-polymer shot when ingested by captive-reared mallards or to the ecosystem. We also propose to grant temporary approval to tungsten-matrix and tin shots for the 1999–2000 hunting season only. Temporary approval would be based on the toxicological reports and acute toxicity studies submitted by Kent and ITRI. We have reduced the public comment period from 60 days to 30 days in order to complete the rulemaking process prior to the start of the hunting season. This will facilitate planning efforts by vendors and State wildlife agencies.

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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 draft Environmental Assessments (EA) in May, 1999. The EAs are 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 result of our consultation under Section 7 of the ESA 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 would approve additional types of nontoxic shot that may be sold and used to hunt migratory birds; this rule would provide 4 types of shot in addition to the existing 2 that are approved. We have determined, however, that this 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. This rule was not subject to Office of Management and Budget (OMB) review under Executive Order 12866.

Executive Order 12866

This rule is not subject to Office of Management and Budget (OMB) review under Executive Order 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? Section 20.21 may be written in plain language format in the final rule.

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 06/30/2000) 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 Act, 2 U.S.C. 1502, *et seq.*, that this 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 rule, have determined that these 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, these rules, authorized by the Migratory Bird Treaty Act, do not have significant takings implications and do not affect any constitutionally protected property rights. These rules will not result in the physical occupancy of property, the physical invasion of property, or the regulatory taking of any property. In fact, these rules allow hunters to exercise privileges that would be otherwise unavailable; and, therefore, reduce 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. These rules do 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 12612, these 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.

Authorship

The primary author of this proposed rule is James R. Kelley, Jr., Office of Migratory Bird Management.

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 1 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 the section title, revising paragraph (j) introductory text, revising paragraphs (j)(2) and (j)(3), and removing paragraph (j)(4) 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 (55 parts tungsten: 45 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 tin (99.9 percent tin 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:

(1) * * *

(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, and

(3) Tin shot (99.9 percent tin with <1 percent residual lead) is legal as nontoxic shot for waterfowl and coot hunting for the 1999–2000 hunting season only.

Dated: June 8, 1999.

Stephen C. Saunders,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 99–15339 Filed 6–16–99; 8:45 am]

BILLING CODE 4310–55–P