

W. with a power of 16, a height above average terrain HAAT of 305 meters.

**DATES:** Comments must be filed on or before June 24, 2002, and reply comments on or before July 10, 2002.

**ADDRESSES:** The Commission permits the electronic filing of all pleadings and comments in proceeding involving petitions for rule making (*except in broadcast allotment proceedings*). See *Electronic Filing of Documents in Rule Making Proceedings*, GC Docket No. 97-113 (rel. April 6, 1998). Filings by paper can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). The Commission's contractor, Vistrionix, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE., Suite 110, Washington, DC 20002. The filing hours at this location are 8 a.m. to 7 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, SW., Washington, DC 20554. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner, or its counsel or consultant, as follows: Donald T. Stepka, Arnold & Porter, 555 Twelfth Street, NW., Washington, DC 20004-1206 (Counsel for Georgia Public Telecommunications Commission).

**FOR FURTHER INFORMATION CONTACT:** Pam Blumenthal, Media Bureau, (202) 418-1600.

**SUPPLEMENTARY INFORMATION:** This is a synopsis of the Commission's Notice of Proposed Rule Making, MB Docket No. 02-94, adopted April 26, 2002, and released May 3, 2002. The full text of this document is available for public inspection and copying during regular business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW., Room CY-A257, Washington, DC 20554. This document may also be purchased from the Commission's duplicating contractor, Qualex International, Portals II, 445 12th Street, SW., Room CY-B402,

Washington, DC 20554, telephone 202-863-2893, facsimile 202-863-2898, or via e-mail [qualexint@aol.com](mailto:qualexint@aol.com).

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contacts.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

#### List of Subjects in 47 CFR Part 73

Digital television broadcasting, Television.

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 73 as follows:

#### PART 73—RADIO BROADCAST SERVICES

1. The authority citation for part 73 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 334 and 336.

##### § 73.622 [Amended]

2. Section 73.622(b), the Table of Digital Television Allotments under Georgia is amended by removing DTV channel \*22 and adding DTV channel \*12 at Athens.

Federal Communications Commission.

**Barbara A. Kreisman,**  
Chief, Video Division, Media Bureau.

[FR Doc. 02-11672 Filed 5-9-02; 8:45 am]

**BILLING CODE 6712-01-P**

#### DEPARTMENT OF THE INTERIOR

##### Fish and Wildlife Service

##### 50 CFR Part 20

**RIN 1018-AI33**

#### Migratory Bird Hunting; Approval of Tungsten-Iron-Nickel-Tin 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 proposes to approve shot formulated with tungsten, iron, nickel, and tin as nontoxic for hunting

waterfowl and coots. We assessed possible effects of the tungsten-iron-nickel-tin (TINT) shot, and we believe that it does not present a significant toxicity threat to wildlife or their habitats and that further testing of TINT shot is not necessary. In addition, approval of TINT shot may induce more waterfowl hunters to change from the illegal use of lead shot, reducing lead risks to species and habitats.

**DATES:** Comments on the proposed rule must be received no later than June 10, 2002.

**ADDRESSES:** You may send comments about this proposal to the Chief, Division of Migratory Bird Management, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 634, Arlington, Virginia 22203-1610. You may inspect comments during normal business hours at the same address.

**FOR FURTHER INFORMATION CONTACT:** Jon Andrew, Chief, or John J. Kreilich, Jr., 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.

Since the mid-1970s, we have sought to identify shot that is not significantly toxic to migratory birds or other wildlife. Compliance with the use of nontoxic shot has increased over the last few years (Anderson *et al.* 2000), and we believe that it will continue to increase with the approval and availability of other nontoxic shot types. Currently, steel, bismuth-tin, tungsten-iron, tungsten-polymer, tungsten-matrix, and tungsten-nickel-iron shot are approved as nontoxic.

The purpose of this proposed rule is to approve the use of TINT shot in the tested formulation (65% tungsten, 10.4% iron, 2.8% nickel, and 21.8% tin by weight) for waterfowl and coot hunting. We propose to amend 50 CFR 20.21 (j), which describes prohibited types of shot for waterfowl and coot hunting.

On October 12, 2001, we received an application from ENVIRON-Metal, Inc.

for approval of HEVI-SHOT™ brand of Soft Shot in a 65% tungsten, 10.4% iron, 2.8% nickel, and 21.8% tin formulation. The initial application (Tier 1), included information on chemical characterization, production variability, use volume, toxicological effects, environmental fate and transport, and evaluation. After reviewing the tier 1 application and assessing the possible effects of TINT shot, we believe that it does not pose a significant toxicity threat to wildlife or their habitats.

### Toxicity Information

Tungsten may be substituted for molybdenum in enzymes in mammals. Ingested tungsten salts reduce growth and can cause diarrhea, coma, and death in mammals (Bursian *et al.* 1996, Cohen *et al.* 1973, Karantassis 1924, Kinard and Van de Erve 1941, National Research Council 1980, Pham-Huu-Chanh 1965), but elemental tungsten is virtually insoluble and therefore essentially nontoxic. A dietary concentration of 94 parts-per-million (ppm) did not reduce weight gain in growing rats (Wei *et al.* 1987). Lifetime exposure to 5 ppm tungsten as sodium tungstate in drinking water produced no discernible adverse effects in rats (Schroeder and Mitchener 1975). At 100 ppm tungsten as sodium tungstate in drinking water, rats had decreased enzyme activity after 21 days (Cohen *et al.* 1973).

Chickens given a complete diet showed no adverse effects of 250 ppm sodium tungstate administered for 10 days in the diet. However, 500 ppm in the diet had detrimental effects on day-old chicks (Teekell and Watts 1959). Adult hens had reduced egg production and egg weight on a diet containing 1,000 ppm tungsten (Nell *et al.* 1981a). EPT (1999) concluded that 250 ppm in the diet would produce no observable adverse effects. Kelly *et al.* (1998) demonstrated no adverse effects on mallards dosed with tungsten-iron or tungsten-polymer shot according to nontoxic shot test protocols.

Most toxicity tests reviewed were based on soluble tungsten compounds rather than elemental tungsten. As we found in our reviews of other tungsten shot types, we have no basis for concern about the toxicity of the tungsten in TINT shot to fish, mammals, or birds.

Nickel is a dietary requirement of mammals, with necessary consumption set at 50 to 80 parts per billion for the rat and chick (Nielsen and Sandstead 1974). Though it is necessary for some enzymes, nickel can compete with calcium, magnesium, and zinc for binding sites on many enzymes. Water-

soluble nickel salts are poorly absorbed if ingested by rats (Nieboer *et al.* 1988). Nickel carbonate caused no treatment effects in rats fed 1,000 ppm for 3 to 4 months (Phatak and Patwardhan 1950). Rats fed 1,000 ppm nickel sulfate for 2 years showed reduced body and liver weights, an increase in the number of stillborn pups, and decrease in weanling weights through three generations (Ambrose *et al.* 1976). Nickel chloride was even more toxic; 1,000 ppm fed to young rats caused weight loss in 13 days (Schnegg and Kirchgessner 1976).

Soluble nickel salts are toxic to mammals, with an oral LD<sub>50</sub> of 136 mg/kg in mice, and 350 mg/kg in rats (Fairchild *et al.* 1977). Nickel catalyst (finely divided nickel in vegetable oil) fed to young rats at 250 ppm for 16 months, however, produced no detrimental effects (Phatak and Patwardhan 1950).

In chicks from hatching to 4 weeks of age, 300 ppm nickel as nickel carbonate or nickel acetate in the diet produced no observed adverse effects. However, concentrations of 500 ppm or more reduced growth (Weber and Reid 1968). A diet containing 200 ppm nickel as nickel sulfate had no observed effects on mallard ducklings from 1 to 90 days of age. Diets of 800 ppm or more caused significant changes in physical condition of the ducklings (Cain and Pafford 1981). Eastin and O'Shea (1981) observed no apparent significant changes in pairs of breeding mallards fed diets containing up to 800 ppm nickel as nickel sulfate for 90 days. We have no basis for concern about the toxicity of nickel in TINT shot to fish, mammals, or birds.

Iron is an essential nutrient, so reported iron toxicosis in mammals, such as livestock, is primarily a phenomenon of overdosing. Maximum recommended dietary levels of iron range from 500 ppm for sheep to 3,000 ppm for pigs (National Research Council [NRC] 1980). Chickens require at least 55 ppm iron in the diet (Morck and Austic 1981). Chickens fed 1,600 ppm iron in an adequate diet displayed no ill effects (McGhee *et al.* 1965), and turkey poult fed 440 ppm in the diet also suffered no ill effects. The tests in which eight #4 tungsten-iron shot were administered to each mallard in a toxicity study indicated that the 45% iron content of the shot had no adverse effects on the test animals (Kelly *et al.* 1998). We have no basis for concern about the toxicity of iron in TINT shot to fish, mammals, or birds.

Elemental and inorganic tins have low toxicity, due largely to low absorption rate, low tissue accumulation, and rapid excretion rates. Inorganic tin is only

slightly to moderately toxic to mammals. The oral LD<sub>50</sub> values for tin (II) chloride for mice and rats are 250 and 700 mg/kg of body weight, respectively (WHO 1980).

A 150-day chronic toxicity/reproductive study conducted for tin shot revealed no adverse effects in mallards dosed with eight No. 4 sized shot. There were no significant changes in egg production, fertility, or hatchability of birds dosed with tin when compared to steel-dosed birds (Gallagher *et al.* 2000).

### Environmental Fate

Elemental tungsten and iron are virtually insoluble in water and do not weather or degrade in the environment. Tungsten is stable in 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).

Nickel is common in fresh waters, though usually at concentrations of less than 1 part per billion in locations unaffected by human activities. Pure nickel is not soluble in water. Free nickel may be part of chemical reactions, such as sorption, precipitation, and complexation. Reactions of nickel with anions are unlikely. Complexation with organic agents is poorly understood (U.S. Environmental Protection Agency [EPA] 1980). Water hardness is the dominant factor governing nickel effects on living things (Stokes 1988).

Tin occurs naturally in soils at 2 to 200 mg/g with areas of enrichment at much higher concentrations (up to 1000mg/g) (WHO 1980). However, in the United States, soil concentrations are between 1 and 5 ppm (Kabata-Pendias and Pendias 2001).

### Environmental Concentrations

Calculation of the estimated environmental concentration (EEC) of a candidate shot in a terrestrial ecosystem is based on 69,000 shot per hectare (2.47 acre) (Bellrose 1959, 50 CFR 20.134). Assuming complete dissolution of the shot, the EEC for tungsten in soil is 15.09 mg/kg. The EECs for nickel and iron would be 0.65 and 2.41 mg/kg, respectively. The EEC for nickel (the only one of the four elements with an application limit) is substantially below the U.S. Environmental Protection Agency (EPA) biosolid application limit. The 0.65 mg/kg EEC for nickel also is far below the 16 to 35 mg/kg concentrations suggested as minimum sediment concentrations at which effects of the

metal are likely to occur (EPA 1997, Ingersoll *et al.* 1996, Long and Morgan 1991, MacDonald *et al.* 2000, Smith *et al.* 1996). The EEC for tungsten from TINT shot is below that for the already-approved TNI shot. The EEC for iron is less than 0.01% of the typical background concentration, and the iron is in an insoluble form. The EEC for tin in soil is 5.06 mg/kg, one order of magnitude smaller than the 50 mg/kg suggested maximum concentration in surface soil tolerated by plants (Kabata-Pendias and Pendias 2001).

Calculation of the EEC in an aquatic ecosystem assumes complete erosion of 69,000 shot in one hectare (2.47 acre) of water 1 foot deep. The EECs for the elements in TINT shot in water are 3,218 µg/L for tungsten, 515 µg/L for iron, 139 µg/L for nickel, and 1,079 µg/L for tin. We concluded that a tungsten concentration of 10,500 µg/L posed no threat to aquatic life (62 FR 4877). The EEC for nickel from TINT shot is below the EPA acute water quality criterion of 1,400 µg/L in fresh water, but would exceed the 75 µg/L criterion for salt water. However, tests showed that corrosion of TINT shot occurs at very low rates. The amount of nickel liberated into seawater by eight No. 4 TINT shot for a 30-day exposure was 23% of the amount liberated by TNI. TINT shot is predicted to release 1.8 µg/L of nickel into 1 ha-ft of seawater over 1 year. This value is 2.4% of the acute criterion and less than 23% of the chronic criterion.

The EEC for iron is below the chronic criterion for protection of aquatic life and for tin; it is four times less than the Minnesota Water Quality Standard. Previous assessments of tungsten demonstrated dissolution at a rate of 10.5 mg/L (equal to 10,500 µg/L) and concluded no risk to aquatic life (62 FR 4877). The EEC of tungsten from TINT shot is 3,218 µg/L. This level is three times less than the 10,500 µg/L level previously mentioned.

#### Effects on Birds

Kraabel *et al.* (1996) surgically embedded tungsten-bismuth-tin shot in the pectoralis muscles of ducks to simulate wounding by gunfire and to test for toxic effects of the shot. The shot neither produced toxic effects nor induced adverse systemic effects in the ducks during the 8-week period of their study.

Nell *et al.* (1981a) fed laying hens (*Gallus domesticus*) 0.4 or 1.0 g/kg tungsten 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 and a decreased concentration of molybdenum (Nell *et al.* 1981b). 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 ppm in the liver.

A 150-day chronic toxicity/reproductive study conducted for tin shot revealed no adverse effects in mallards dosed with eight No. 4 sized shot. In this investigation, there were no significant changes in egg production, fertility, or hatchability of birds dosed with tin when compared to steel-dosed birds (Gallagher *et al.* 2000).

#### Toxicity Studies

Ringelman *et al.* (1993) conducted a 32-day acute toxicity study that involved dosing game-farm mallards with tungsten-bismuth-tin shot in a relative composition of 39%, 44.5%, and 16.5% by weight, respectively. No dosed birds died during the trial, and their behavior was normal. Post-euthanization examination of tissues revealed no toxicity or damage related to shot exposure. Blood calcium differences between dosed and undosed birds were judged as unrelated to shot exposure. That study indicated that tungsten presented little hazard to waterfowl.

The Tier 1 application of TINT shot included analyses comparing corrosion data of TNI shot to TINT shot. Samples of both shot types were exposed to seawater for 10.8 days. The two seawater samples were then analyzed for nickel, iron, tungsten, and tin. Samples were then returned to fresh seawater and exposed for an additional 44.5 days, whereupon the seawater solutions were again analyzed for nickel, iron, tungsten, and tin.

The total release of nickel from TINT shot over the 55.3-day exposure was only 13% that of TNI shot. The results indicate that TINT shot shows lower rates of nickel release due to the collection of corrosive materials on surfaces that inhibit additional corrosion.

Assuming that a duck eats 10 # 4 TINT shot in one day and that the shot are completely eroded in the gizzard in 24 hours, the duck would be exposed to .061g of nickel. This amount is slightly more than half of the .102g/day that Eastin and O'Shea (1981) found

produced no ill effects on mallards. We believe, therefore, that consumption of nickel from TINT shot is unlikely to have detrimental effects on waterfowl.

#### Ingestion by Fish, Amphibians, Reptiles, or Mammals

Based on the best available information and past reviews of tungsten-based and tin shot, we expect no detrimental effects due to tungsten, iron, or tin on animals that might ingest TINT shot. We know of no studies of ingestion of nickel by reptiles or amphibians. The exposure of nickel to any animal in these taxa that might consume a TINT shot pellet would be lower, because the pellet likely would not be retained in most animals that might consume one. Their exposure to nickel would therefore be much lower than the worst-case scenario for waterfowl.

#### Nontoxic Shot Approval Process

The first condition for nontoxic shot approval is toxicity testing. Based on the results of past toxicity tests, we conclude that TINT shot does not pose a significant danger to migratory birds, other wildlife, or their habitats.

The second condition for approval is testing for residual lead levels. We determined that the maximum environmentally acceptable level of lead in shot is 1%, and incorporated this requirement in the nontoxic shot approval process we published on December 1, 1997 (62 FR 63608). ENVIRON-Metal, Inc. has documented that TINT shot meets this requirement.

The third condition for approval involves enforcement. On August 18, 1995 (60 FR 43314), we stated 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. TINT shotshells can be drawn to a magnet as a simple field detection method.

This proposed rule will amend 50 CFR 20.21(j) by approving TINT shot as nontoxic for migratory bird hunting. It is based on the toxicological reports, acute toxicity studies, and assessment of the environmental effects of the shot. Those results indicate no deleterious effects of TINT shot to ecosystems or when ingested by waterfowl.

#### Public Comments Solicited

Past proposed rules on approval of nontoxic shot have generated fewer than five comments. Also, tungsten and iron already have been reviewed extensively for use in nontoxic shot. Therefore, we

will accept comments on this proposal for a 30-day period.

## References

- Anderson, W. L., S. P. Havera, and B. W. Zercher. 2000. Ingestion of lead and nontoxic shotgun pellets by ducks in the Mississippi flyway. *Journal of Wildlife Management* 64:848–857.
- Ambrose, P., P. S. Larson, J. F. Borzelleca, and G. R. Hennigar, Jr. 1976. Long term toxicologic assessment of nickel in rats and dogs. *Journal of Food Science and Technology* 13:181–187.
- Bellrose, F. C. 1959. Lead poisoning as a mortality factor in waterfowl populations. *Illinois Natural History Survey Bulletin* 27(3): 235–288.
- Bursian, S. J., M. E. Kelly, R. J. Aulerich, D. C. Powell, and S. Fitzgerald. 1996. Thirty-day dosing test to assess the toxicity of tungsten-polymer shot in game-farm mallards. Report to Federal Cartridge Company. 71 pages.
- Cain, B. W. and E. A. Pafford. 1981. Effects of dietary nickel on survival and growth of mallard ducklings. *Archives of Environmental Contamination and Toxicology* 10:737–745.
- Cohen, H. J., R. T. Drew, J. L. Johnson, and K. V. Rajagopalan. 1973. Molecular basis of the biological function of molybdenum: the relationship between sulfite oxidase and the acute toxicity of bisulfate and SO<sub>2</sub>. *Proceedings of the National Academy of Sciences* 70:3655–3659.
- Eastin, W. C., Jr. and T. J. O'Shea. 1981. Effects of dietary nickel on mallards. *Journal of Toxicology and Environmental Health* 7:883–892.
- Ecological Planning and Toxicology, Inc. 1999. Application for approval of t-n-i metal™ nontoxic shot: Tier 1 report. Cherry Hill, New Jersey. 28 pages plus appendices.
- Fairchild, E. J., R. J. Lewis, and R. L. Tatken (editors). 1977. Registry of toxic effects of chemical substances, Volume II. Pages 590–592. U.S. Department of Health, Education, and Welfare Publication (NIOSH) 78–104B. 227 pages.
- Gallagher, S.P., J.B. Beavers, R. Van Hoven, M. Jaber. 2000. Pure tin shot: A chronic exposure study with the mallard including reproductive parameters. *Wildlife International, Ltd. Project No. 476–102*. Easton, Maryland. 322pp.
- Ingersoll, C. G., P. S. Haverland, E. L. Brunson, T.J. Canfield, F. J. Dwyer, C. E. Henke, N. E. Kemble, and D. R. Mount. 1996. Calculation and evaluation of sediment effect concentrations for the amphipod *Hyalella azteca* and the midge *Chironomus riparius*. EPA 905–R96–008, Great Lakes National Program Office, Region V, Chicago, Illinois. Mixed pagination.
- Kabata-Pendias, A. and H. Pendias. 1984. Trace elements in soils and plants. CRC Press, Inc. Boca Raton, FL. 315 pages.
- Kabata-Pendias, A. and H. Pendias. 2001. Trace elements in soils and plants. 3rd edition. CRC Press, Inc. Boca Raton, FL. 411 pages.
- Karantassis, T. 1924. On the toxicity of compounds of tungsten and molybdenum. *Annals of Medicine* 28:1541–1543.
- Kelly, M. E., S. D. Fitzgerald, R. J. Aulerich, R. J. Balander, D. C. Powell, R. L. Stickle, W. Stevens, C. Cray, R. J. Tempelman, and S. J. Bursian. 1998. Acute effects of lead, steel, tungsten-iron and tungsten-polymer shot administered to game-farm mallards. *Journal of Wildlife Diseases* 34:673–687.
- Kinard, F. W. and J. Van de Erve. 1941. The toxicity of orally-ingested tungsten compounds in the rat. *Journal of Pharmacology and Experimental Therapeutics* 72:196–201.
- Kraabel, F. W., M. W. Miller, D. M. Getzy, and J. K. Ringelman. 1996. Effects of embedded tungsten-bismuth-tin shot and steel shot on mallards. *Journal of Wildlife Diseases* 38:1–8.
- Long, E. R. and L. G. Morgan. 1991. The potential for biological effects of sediment-sorbed contaminants tested in the National Status and Trends Program. NOAA Technical Memorandum NOS OMA 52, National Oceanic and Atmospheric Administration, Seattle, Washington. 175 pages + appendices.
- MacDonald, D. D., C. G. Ingersoll, and T. A. Berger. 2000. Development and evaluation of consensus-based sediment quality guidelines for freshwater ecosystems. *Archives of Environmental Contamination and Toxicology* 39:20–31.
- McGhee, F., C. R. Creger, and J. R. Couch. 1965. Copper and iron toxicity. *Poultry Science* 44:310–312.
- Morck, T. A. and R. E. Austic. 1981. Iron requirements of white leghorn hens. *Poultry Science* 60:1497–1503.
- National Research Council. 1980. Mineral tolerance of domestic animals. National Research Council, National Academy of Sciences, Washington, D.C. 577 pages.
- Nell, J. A., W. L. Bryden, G. S. Heard, and D. Balnave. 1981a. Reproductive performance of laying hens fed tungsten. *Poultry Science* 60:257–258.
- Nell, J. A., E. F. Annison, and D. Balnave. 1981b. The influence of tungsten on the molybdenum status of poultry. *British Poultry Science* 21:193–202.
- Nieboer, E., R. T. Tom, and W. E. Sanford. 1988. Nickel metabolism in man and animals. Pages 91–122 in *Metal ions in biological systems*, volume 23: nickel and its role in biology. H. Sigel and A. Sigel, editors. Marcel Dekker, New York.
- Nielsen, F. H. and H. H. Sandstead. 1974. Are nickel, vanadium, silicon, fluoride, and tin essential for man? *American Journal of Clinical Nutrition* 27:515–520.
- Pham-Huu-Chanh. 1965. The comparative toxicity of sodium chromate, molybdate, tungstate, and metavanadate. *Archives Internationales de Pharmacodynamie et de Therapie* 154:243–249.
- Phatak, S. S. and V. N. Patwardhan. 1950. Toxicity of nickel. *Journal of Science and Industrial Research* 9B:70–76.
- Ringelman, J. K., M. W. Miller, and W. F. Andelt. 1993. Effects of ingested tungsten-bismuth-tin shot on captive mallards. *Journal of Wildlife Management* 57:725–732.
- Schnegg, S. and M. Kirchgessner. 1976. [Toxicity of dietary nickel]. *Landwirtschaft. Forsch.* 29:177. Cited in Chemical Abstracts 86:101655y (1977).
- Schroeder, H. A. and M. Mitchener. 1975. Life-term studies in rats: effects of aluminum, barium, beryllium, and tungsten. *Journal of Nutrition* 105:421.
- Smith, S. L., D. D. MacDonald, K. A. Keenleyside, C. G. Ingersoll, and J. Field. 1996. A preliminary evaluation of sediment quality assessment values for freshwater ecosystems. *Journal of Great Lakes Research* 22:624–638.
- Stokes, P. 1988. Nickel in aquatic systems. Pages 31–46 in *Metal ions in biological systems*, volume 23: nickel and its role in biology. H. Sigel and A. Sigel, editors. Marcel Dekker, New York.
- Teekel, R. A. and A. B. Watts. 1959. Tungsten supplementation of breeder hens. *Poultry Science* 38:791–794.
- U.S. Environmental Protection Agency. 1980. Ambient water quality criteria for nickel. U.S. Environmental Protection Agency, Washington, D.C. 207 pages.
- U.S. Environmental Protection Agency. 1997. The incidence and severity of sediment contamination in surface waters of the United States: National sediment quality survey, Volume 1. EPA 823–R–97–006. Office of Science and Technology, Washington, D.C. 182 pages plus appendices.
- Weber, C. W. and B. L. Reid. 1968. Nickel toxicity in growing chicks. *Journal of Nutrition* 95:612–616.
- Wei, H. J., X–M. Luo, and X–P. Yand. 1987. Effects of molybdenum and tungsten on mammary carcinogenesis in Sprague-Dawley (SD) rats. *Chung Hua Chung Liu Tsa Chih* 9:204–7. English abstract.
- WHO [World Health Organization]. 1980. Tin and organotin compounds. A preliminary review. *Environmental Health Criteria* 15. World Health Organization. Geneva. 109pp.

## 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 have prepared a draft Environmental Assessment (EA) for approval of TINT shot. The draft EA is available to the public at the location indicated in the ADDRESSES section.

## 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 in the **ADDRESSES** section.

### 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 economic impact 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 six 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.

### Small Business Regulatory Enforcement Fairness Act

Similarly, this policy is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This policy does not impose an unfunded mandate of more than \$100 million per year or have a significant or unique effect on State, local, or tribal governments or the private sector because it is the Service's responsibility to regulate the take of migratory birds in the United States.

### Executive Order 12866

This proposed rule is not a significant regulatory action subject to OMB review under Executive Order 12866. OMB makes the final determination under E.O. 12866. 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 *et seq.*) and found it to contain no information collection requirements.

### 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 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, 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 will allow 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, this proposed regulation does not have significant federalism effects and does 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) Executive Order 13175, and 512 DM 2, we have determined that this proposed rule has no effects on Federally recognized Indian tribes.

### Energy Effects

In accordance with Executive Order 13211, this proposed rule, authorized by the Migratory Bird Treaty Act, does not significantly affect energy supply, distribution, and use. This proposed rule is not a significant energy action and no Statement of Energy Effects is required.

### List of Subjects in 50 CFR Part 20

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

For the reasons discussed in the preamble, 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; 16 U.S.C. 742 a–j, Pub. L. 106–108.

2. In § 20.21, revise paragraph (j) to read as follows:

#### § 20.21 What hunting methods are illegal?

\* \* \* \* \*

(j) While possessing loose shot for muzzle loading or shotshells containing other than the previously approved shot types of steel, bismuth-tin (97 parts bismuth: 3 parts tin), tungsten-iron (40 parts tungsten: 60 parts iron), tungsten-polymer (95.5 parts tungsten: 4.5 parts Nylon 6 or 11), tungsten-matrix (95.9 parts tungsten: 4.1 parts polymer), tungsten-nickel-iron (50% tungsten: 35% nickel: 15% iron), and tungsten-iron-nickel-tin (65% tungsten: 10.4% iron: 2.8% nickel: 21.8% tin) all of which must contain less than 1% residual lead (see § 20.134). This restriction applies to the taking of ducks, geese (including brant), swans, coots (*Fulica americana*), and any other species that make up aggregate bag limits during concurrent seasons in areas described in § 20.108 as nontoxic shot zones.

\* \* \* \* \*

Dated: April 26, 2002.

**Craig Manson,**

*Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 02–11767 Filed 5–9–02; 8:45 am]

**BILLING CODE 4310–55–P**