DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 20

RIN 1018-AC66

Migratory Bird Hunting; Decision on the Conditional Approval of Bismuth-Tin Shot as Nontoxic for the 1995–96 Season

AGENCY: Fish and Wildlife Service,

Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) is publishing this proposed rule to amend Section 20.21(j) and provide for the conditional approval of bismuth-tin shot for the 1995–96 migratory bird hunting season. Concluded acute toxicity studies, ongoing toxicity reproductive studies undertaken by the Bismuth Cartridge Company, and other pertinent materials indicate that bismuth-tin shot is nontoxic when ingested by waterfowl. DATES: Comments on this proposal must be received by July 14, 1995.

ADDRESSES: Written comments should be sent to: Chief, Office of Migratory Bird Management, U.S. Fish and Wildlife Service, ms 634 ARLSQ, 1849 C Street NW., Washington D.C. 20240.

FOR FURTHER INFORMATION CONTACT: Paul R. Schmidt, Chief, or Keith Morehouse and Pete Poulos, Staff Specialists, Office of Migratory Bird Management, (703/358–1714).

SUPPLEMENTARY INFORMATION: The Service published a final regulation in the January 3, 1995, Federal Register (60 FR 61) to provide for conditional approval of bismuth-tin shot (in a mixture of [nominally] 97-3 percent, respectively) as nontoxic for the taking of waterfowl and coots during the 1994-1995 hunting season. This action was in response to a petition for rulemaking from the Bismuth Cartridge Company received June 24, 1994. The petition requested that the Service modify the provisions of 50 CFR section 20.21(j), to legalize the use of bismuth-tin shot on an interim, conditional basis for both the 1994-95 and the 1995-96 seasons. The petition cited the following reasons in support of the proposal: (a) Bismuth is nontoxic; (b) the proposed rule is conditional; and (c) the evidence presented in the record, i.e., the application from the Bismuth Cartridge Company. This petition acknowledged responsibility by the Bismuth Cartridge Company to complete all the nontoxic shot approval tests as outlined in 50 CFR section 20.134. The Service granted conditional approval (effective December 30, 1994) of the use of bismuth-tin shot for the 1994–95 hunting season only. For a complete review of the bismuth-tin shot application and review process, refer to the Supplementary Information Section of the January 3, 1995, **Federal Register** (60 FR 61).

This proposed regulatory action is now taken to further amend Section 20.21(j) to extend the conditional approval for bismuth-tin shot to the 1995–96 hunting season. This is based on a request made to the Fish and Wildlife Service by the Bismuth Cartridge Company on March 20, 1995. Results of the concluded 30-day acute toxicity test and progress made by the Bismuth Cartridge Company in their current reproductive toxicity testing are viewed as justification for extending conditional approval into the next hunting season.

The reproductive toxicity test is being conducted by Dr. Glenn Sanderson and follows a testing protocol reviewed and approved by the Service, with technical assistance provided by the Branch of Environmental Contaminants Research of the Patuxent Environmental Service Center. The general outline of the reproductive toxicity test given below is not a complete description of the testing protocol, but gives the basic outline of the test procedures being conducted:

The test consists of 60 male and 60 female mallards and uses No. 4 lead, steel, and candidate (bismuth-tin) shot. Males and females will be paired randomly and divided into four groups that will be dosed with lead, steel, bismuth-tin, and sham dosed. After diet and light manipulation, birds will be brought into breeding condition. Nests will be checked twice daily with recorded data including clutch initiation, number of eggs laid, egg fertility, egg hatchability, and number of ducklings produced. Eggs collection will continue until 21 uncracked eggs have been collected or until 150 days have elapsed. Eggs will be place in an incubator and after hatching, ducklings will be examined for signs of intoxication and illness. Blood will be collected with hematocrits determined and the blood analyzed. Livers, kidneys, and gonads from adults will be examined for gross and microscopic lesions, and analyzed for major elements found in the candidate shot and for major essential and trace elements. Livers and kidneys will be collected from ducklings and will be examined for gross and microscopic lesions, and analyzed for major elements contained in the candidate shot and for major essential and trace elements. Blood, liver, kidneys, and gonads will be analyzed by ICP for calcium, potassium, magnesium, zinc, copper, tin, iron, and any metal other than Bismuth or lead. Bismuth and lead in the livers, kidneys, and gonads, and blood will be analyzed by graphite furnace atomic absorption spectrometry.

Since the mid-1970s, the Service has sought to identify shot that, when spent, does not pose a significant hazard to migratory birds and other wildlife. Currently, only steel shot has been approved by the Service Director as nontoxic. The Service believes, however, that there may be other suitable candidate shot materials that could be approved for use as nontoxic shot. The Service is eager to consider these other materials for approval as nontoxic, and does not feel constrained to limit nontoxic shot options.

Resistance to the use of steel shot, however, is undoubtedly creating an unknown level of noncompliance with the requirement to use nontoxic shot for waterfowl and coot hunting. Although compliance with the use of nontoxic shot has increased moderately over the last few years, the Service believes that this level of compliance may continue to increase with the use of bismuth-tin shot in conjunction with the use of adequate field testing equipment by law enforcement personnel.

In summary, this rule extends conditional approval for the use of bismuth-tin shot for waterfowl and coot hunting to the 1995–96 season. Additionally, the applicant, wishing to obtain final unconditional approval for bismuth-tin shot as nontoxic, is required to obtain season-by-season approval until successfully completing the remaining tests required by 50 CFR section 20.134.

One additional standard will be applied to the unconditional approval of bismuth-tin shot. Since bismuth is a byproduct of the smelting of iron, copper, and tin, it is not surprising that traces of lead may be present in bismuth-tin shot. The Service has initiated discussion with the Branch of **Environmental Contaminants Research** at the Patuxent Environmental Science Center to determine the maximum environmentally acceptable level of lead in bismuth-tin shot. Once this maximum level is determined, it will be stated in any regulation granting unconditional approval for the use of bismuth-tin shot. It will be the Service's position that any bismuth-tin shot manufactured with lead levels exceeding those stated in the regulation will be considered toxic and therefore,

We are encouraged by the progress that has been made to develop a noninvasive field testing device to assist law enforcement personnel in detecting the use of illegal shot. However, those devices currently available still appear to need refinement. We are hopeful that additional development and testing is planned since noninvasive enforcement