

(2) Carriers may refuse to accept as checked baggage and, if unknowingly accepted, may disclaim any liability for loss or damage to the following articles:

(i) Articles whose transportation as checked baggage is prohibited by law or regulation;

(ii) Fragile or perishable articles, articles whose dimensions exceed the size limitations in the carrier's tariff, receptacles with articles attached or protruding, guns, and materials that have a disagreeable odor;

(iii) Money; and

(iv) Those other articles that the Commission decides, on a case-by-case basis on petition by the carrier, may be transported with no liability or may be refused as part of checked baggage.

(3) All other articles must be accepted as checked baggage and liability for them may not be eliminated. However, carriers need not offer excess value coverage on valuable articles. "Valuable articles" include negotiable instruments, valuable papers, manuscripts, irreplaceable publications, documents, jewelry, watches, and other articles of extraordinary value.

[FR Doc. 86-26277 Filed 11-20-86; 8:45 am]  
BILLING CODE 7035-01-M

#### 49 CFR Part 1152

[Ex Parte No. 274 (Sub-8) <sup>1</sup>]

#### Exemption of Out of Service Rail Lines

**AGENCY:** Interstate Commerce Commission.

**ACTION:** Final rules.

**SUMMARY:** On reopening, the Commission is reaffirming its decisions to exempt from regulation under 49 U.S.C. 10903-05 rail line abandonments and trackage rights and service discontinuances where no traffic has originated or terminated on the line for at least 2 years, subject to certain conditions, including the standard labor protective conditions set forth in *Oregon Short Line R. Co.—Abandonment—Goshen*, 360 I.C.C. 91 (1979) (OSL). The Commission is also reaffirming its adoption of the rules at 49 CFR 1152.50 with an amendment to clarify that parties seeking greater labor protection than the standard conditions set forth in OSL must file a petition for partial revocation of the exemption. These actions are being taken following the findings of the U.S. Court of Appeals for the D.C. Circuit that the Commission's

prior decision was inadequate in several areas.

**EFFECTIVE DATE:** The decision and rules are effective on December 22, 1986.

**FOR FURTHER INFORMATION CONTACT:** Joseph Dettmar, (202) 275-7245.

**SUPPLEMENTARY INFORMATION:** The final rules being reaffirmed in this decision were published at 48 FR 27547, June 16, 1983 and 49 FR 17002, April 23, 1984, as amended at 49 FR 396, January 4, 1984, 50 FR 8335, March 1, 1985 and 50 FR 24649, June 12, 1985.

Additional information is contained in the Commission's decision. To purchase a copy of the full decision write to T.S. InfoSystems, Inc., Room 2229, Interstate Commerce Commission Building, Washington, DC 20423, or call 289-4357 (DC metropolitan area) or toll free (800) 424-5403.

The Commission certified, in the prior proceedings, that these actions will not have a significant economic impact on a substantial number of small entities. We reaffirm that finding.

This action will not significantly affect either the quality of the human environment or energy conservation.

#### List of Subjects in 49 CFR Part 1152

Administrative practice and procedure, Railroads, and Labor.

Decided: November 3, 1986.

By the Commission, Chairman Gradison, Vice Chairman Simmons, Commissioners Sterrett, Andre, and Lamboley. Vice Chairman Simmons and Commissioner Lamboley dissented with separate expressions.

Noreta R. McGee,  
Secretary.

#### Appendix

Title 49 of the Code of Federal Regulations is amended as follows:

#### PART 1152—ABANDONMENT AND DISCONTINUANCE OF RAIL LINES AND RAIL TRANSPORTATION UNDER 49 U.S.C. 10903

1. The authority citation for 49 CFR Part 1152 continues to read as follows:

Authority: 5 U.S.C. 553, 559, and 704; 16 U.S.C. 1247(d); 31 U.S.C. 9701; 45 U.S.C. 904 and 915; and 49 U.S.C. 10321, 10362, 10505, and 10903 *et seq.*

2. Section 1152.50 is amended by adding a new paragraph (d)(5) to read as follows:

#### § 1152.50 Exempt abandonments and discontinuances of trackage rights.

(d) \*\*\*  
(5) To address whether the standard labor protective conditions set forth in *Oregon Short Line R. Co.—Abandonment—Goshen*, 360 I.C.C. 91

(1979), adequately protect affected employees, a petition for partial revocation of the exemption under 49 U.S.C. 10505(d) must be filed.

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#### DEPARTMENT OF THE INTERIOR

#### Fish and Wildlife Service

#### 50 CFR Part 20

#### Migratory Bird Hunting: Nontoxic Shot Approval Procedures

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** Traditionally, shotshell loads used for hunting waterfowl have been made of lead. As a consequence, spent lead shot is deposited in feeding areas by hunters, where it is frequently mistaken for seeds or grit and ingested by migratory birds and other wildlife. Moreover, spent lead shot that is lodged in the body tissues or contained in the digestive tract of the prey of certain predators, such as bald eagles, is sometimes ingested by these predators as they consume their prey. Ingested lead pellets from both these sources are known to cause sickness and/or death to migratory birds and other wildlife.

A procedure was developed in 1976 for obtaining nontoxic status for shotshell loads that might be used as an alternative to lead shot (50 CFR 20.134). The Fish and Wildlife Service (FWS) had finalized at that time a regulation requiring nontoxic shot for waterfowl hunting in certain areas (50 CFR 20.21(j)). The descriptions of areas in which nontoxic shot is required are presented in 50 CFR 20.108. The only approved nontoxic shot at the present time is steel shot.

It is the responsibility of the Director, FWS, to determine the nontoxic status of shot materials to be used for migratory bird hunting (50 CFR 20.134(a)). Considerable information has accumulated on the subject of lead poisoning among birds since nontoxic shot approval procedures were first developed in 1976. The procedures developed in 1976 were reviewed in 1984 and found to be inadequate in several respects. A proposed rule was offered by the FWS on July 22, 1985 (50 FR 29706) as a revision of 50 CFR 20.134. Comments on the proposal were accepted until September 22, 1985. This final rule establishes toxicity testing procedures that will be followed to

<sup>1</sup> The instant decision embraces Ex Parte No. 274 (Sub-No. 8A), *Exemption of Out of Service Rail Lines*, 1 I.C.C. 2d 55 (1984).



determine if candidate shot can be approved by the Director, FWS, as nontoxic shot.

**EFFECTIVE DATE:** This final rule becomes effective on December 22, 1986.

**FOR FURTHER INFORMATION CONTACT:**

Dr. Rollin D. Sparrowe, Chief, Office of Migratory Bird Management, U.S. Fish and Wildlife Service, Department of the Interior, Washington, DC 20240 (202/254-3207).

**SUPPLEMENTARY INFORMATION:** This revision differs from the former regulation in the following ways:

1. The former regulation required extensive ballistics and toxicity testing before an application could be made. This revision does not require ballistics testing and allows for exchanges of information between the developer and the Director, and guidance from the Director prior to extensive and relatively costly toxicity testing.

2. The former regulation was inflexible with respect to testing procedures. This revision allows for adjustments in procedures by the Director based upon information gathered during preliminary tests.

3. The former procedure compared the toxicity of the candidate material to the toxicity of lead. In this revision the candidate material is compared to steel shot and to lead shot.

4. The former rule had rigid timeframes for public comment and for decisions by the Director. This revision allows the Director to adjust these schedules to the information needs relating to a particular material being tested.

5. Both the former rule and the revision place responsibility for testing and the costs of testing on the developer. However, this revision establishes a procedure that allows the Director to consult with the developer to make certain that expenditures by the developer relate to questions essential to the Director's decision regarding the status of the shot material.

**Summary of Public Comment**

This rule was published as a proposal for public comment on July 22, 1985 (50 FR 29706). Public comment was received for 60 days following that date. Eleven letters of comment and one phone call were received. Seven of these contacts were from State wildlife agencies, three were from private wildlife organizations, and one from a munitions manufacturer. The State agencies were Delaware Division of Fish and Wildlife; New Jersey Division of Fish, Game, and Wildlife; New York Department of Environmental Conservation; Indiana Department of Natural Resources;

Illinois Natural History Survey Division; Nebraska Game and Parks Commission; and Kansas Fish and Game. Private wildlife conservation organizations offering comments were the National Wildlife Federation, Wildlife Legislative Fund of America, and Waterfowl Habit Owners Alliance. The Federal Cartridge Corporation provided a letter of comment. The following paragraphs summarize these comments and offer FWS responses.

**Comment:** Three States and one private organization expressed concern that under the new regulation the Director has too much latitude in approving or rejecting a candidate material.

**FWS response:** The Director was given this latitude in order to permit the termination of those tests found not to be necessary, or to add new tests, if necessary. The final rule has been modified to make it clearer that this latitude relates to testing procedures, not to approval of the candidate shot. A candidate must pass the described tests, or their equivalent, to be approved. In some cases the Director could be required to make major changes in the testing procedures, depending on the composition of the material being tested. Prior to final approval of a nontoxic shot, the Director will publish this proposed action for comment. Included in that proposal will be a summary of all test results relating to the proposed action. Consequently, the Director's decision will not be made without public participation, and that point is now included in the final rule.

**Comment:** Two States and one private organization expressed concern over the comparisons being made in tests and the manner in which acceptable or unacceptable levels of mortality are to be determined. These included (1) objections to using lead shot instead of steel shot as a benchmark, (2) use of an arbitrary percentage, and (3) use of no actual limit of acceptable mortality.

**FWS response:** The use of steel shot and lead shot in tests of the candidate shot allows several comparisons among a negative control (lead), acceptable control (steel), neutral control (sham-dose), and the candidate. This type of testing yields the most information possible for making decisions, and the FWS has decided to retain it in this final rule. With regard to statistical significance, the proposal permitted a range from 0.01 to 0.10. A more positive statement is made by setting this level at 0.05, and that is how the final rule is worded. A maximum mortality level of 20 percent of that occurring with similar doses of lead shot was included in the proposed rule. That level of mortality

was criticized in comments as arbitrary and contrary to the statistical procedures that were outlined in the proposal. This percentage was introduced into the process to give a finite level of tolerance for mortality as compared to other statements of a statistical nature. However, the FWS agrees that the statistical statements are adequate for the decision process and has removed the statement regarding 20 percent of the mortality due to lead shot. Instead, judgments regarding the performance of the candidate shot are based on its performance relative to steel shot, lead shot, and sham-dosings, and the statistical significance of the various comparisons that result from this experimental design. The terms *significant* and *significantly*, as used in these test procedures, refer to a ( $P < 0.05$ ) finding of significance. A statistical test that achieves a specified significance level provides objective support for the conclusion that the tested data sets are different. A significance level of 0.05 indicates that if the experiment were to be conducted 100 times under identical conditions, the results would be different from those observed not more than five times.

**Comment:** Two States and one private organization expressed concern over the term, *sublethal*, and how it is to be defined.

**FWS response:** We have deleted the term, *sublethal effects*, and replaced it in this final rule with, *effects on the previously mentioned physiological parameters*.

**Comments:** Two States requested a definition of the term *cold weather*.

**FWS response:** The FWS has revised the rule to utilize test sites where the mean monthly temperature (December-February) is between 30° and 40° F.

**Comment:** One State and one private organization expressed concern over the soft food diet used in Tests 1 and 3 and no grit accessibility.

**FWS response:** Commercially developed duck foods were chosen for Test 1 to provide an initial test that would not be a worst case situation (corn diet, cold weather) but would show mortality from lead shot at some but probably not all of the prescribed doses. A desired result of the first test was to establish a dose response that could be compared among controls, lead shot, and steel shot. Any candidate that did poorly here would not be tested further. If the candidate passed this test, it would be subjected to a worst case (corn diet, cold weather) in Test 2. A candidate shot would have to be relatively nontoxic in order to pass Tests 1 and 2. The final test, Test 3, is an



effort to determine if any effects on reproduction can be demonstrated.

Grit accessibility is omitted in the test design because: (1) it is not needed for a commercial food or corn diet, and (2) grit would have to be standardized to permit valid comparisons between tests performed at different locations. For example, all grit must contain no calcium, or all grit must contain a fixed amount of calcium, and so on, or a variety of other elements. This would be difficult, if not impossible, to standardize. Consequently, we have chosen to remove grit from the tests.

*Comment:* A toxicity test for raptors should be included, since raptors are known to feed on crippled, sick, or dead waterfowl that contain lead shot.

*FWS response:* Toxicity tests for raptors would be desirable but have not been developed at this time. Captive stocks of raptors suitable for testing in this manner do not exist. Based on previous research, we believe it reasonable to assume that shot types that are nontoxic to ducks will be nontoxic to raptors.

*Comment:* The age of mallards to be tested should be standardized. The proposal implies all ages less than 8 months are acceptable.

*FWS response:* The age is now stated as approximately 6 to 8 months.

*Comment:* In Test 3 eggs are left to be incubated by the mallard female rather than collected and placed in an incubator. Captive mallard females are notoriously poor mothers, and this will confound results.

*FWS response:* In similar tests conducted at the FWS' Patuxent Wildlife Research Center, mallard females have not been poor mothers. In this test, we are more interested in the incubation behavior of the female than in the hatchability of the eggs.

*Comment:* Fluoroscopy is being used to check on the retention of dosed shot. Daily examination of feces would be a more positive check on this.

*FWS response:* The cost of pen construction and labor to examine the feces of each test animal on a daily basis was considered excessive in relation to the gains to be made over fluoroscopy.

*Comment:* The type of hand-reared mallard to be tested should be specified in the regulation.

*FWS response:* At this point we have no evidence that the genetic makeup of the test mallard is critical to the outcome of the tests. Wild mallards brought into captivity for this purpose are under stress and do not survive as well as birds that are accustomed to pens. It is important that the test animals be mallards of approximately

the same size and plumage as wild mallards, and they should be hatched in captivity. We have reworded the regulation to make this point clear.

*Comment:* These tests are unrealistic with respect to numbers of pellets dosed that diets used. They do not simulate what is happening to wild waterfowl that consume lead shot.

*FWS response:* It is not the purpose of these tests to simulate what will happen to a wild duck that ingests a pellet. These tests have a single purpose of comparing the relative toxicity to mallards of lead, steel, and a candidate material under a standard set of experimental conditions.

*Comment:* The Federal Cartridge Corporation recommended a 6-part ballistics testing procedure for determining the ballistic performance and acceptability of a candidate shot type, that would strengthen those currently at § 20.134.

*FWS response:* The necessity for the FWS to set ballistics standards for candidate shot has been reconsidered and a determination made that the existing ammunition industry standards and market forces are sufficient to regulate ballistic acceptability of candidate shot types.

*Comment:* Numerous wording changes were recommended by the State Natural History Survey of Illinois and by the National Wildlife Federation. These changes were to clarify meaning or improve the instructions in various ways.

*FWS response:* Many of these wording changes have been incorporated into this final rule.

#### Economic Assessment

In accordance with Executive Order 12291, it has been determined that this rule is not a major rule. Since no application has been received since 1976, and few applications are likely to occur in the future, it is unlikely that the current regulations or this proposed revision will have any economic effect on small entities. Therefore, in accordance with the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), it was determined that this rule would not have a significant economic effect on a substantial number of small entities. A copy of the analysis relating to these decisions, the "Determination of Effects of Proposed Revision of Nontoxic Shot Approval Procedures," can be obtained from the U.S. Fish and Wildlife Service (MBMO), Washington, DC 20240.

#### Paperwork Reduction Act

This final rule will result in the collection of information from, or place recordkeeping on, the public. The

information collection requirements contained in § 20.134 (nontoxic shot approval procedures) have been approved by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1018.0067.

#### Authorship

The primary author of this final rule is Keith A. Morehouse, Office of Migratory Bird Management, working under the direction of Rollin D. Sparrowe, Chief.

#### List of Subjects in 50 CFR Part 20

Exports, Hunting, Imports, Transportation, Wildlife.

#### PART 20—[AMENDED]

In light of the foregoing, 50 CFR Part 20 is amended as follows:

1. The authority citation continues to read as follows:

*Authority:* Migratory Bird Treaty Act, sec. 3, Pub. L. 65-186, 40 Stat. 755 (16 U.S.C. 701-708h) sec. 3(h), Pub. L. 95-616, 92 Stat. 3112 (16 U.S.C. 712); Alaska Game Act of 1925, 43 Stat. 739, as amended, 54 Stat. 1103-04, unless otherwise noted.

2. Section 20.134 is revised to read as follows:

#### § 20.134 Nontoxic shot.

(a) *Approval.* (1) The information collection requirements contained in § 20.134 have been approved by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1018-0067. The information is being collected to provide a basis for which the Director, Fish and Wildlife Service, can conduct a methodical an objective review to approve/disapprove nontoxic shot status sought by an applicant. The information will be used for toxicity assessment of candidate shot submitted for approval by applicant. Response is required to obtain a benefit.

(2) The Director, U.S. Fish and Wildlife Service, shall determine that a specific type of shot material is acceptable for the purposes of 50 CFR 20.21(j), if after a review of applications and supporting data submitted in accordance with this section, together with all other relevant evidence, including public comment, it is concluded that the spent shot material does not impose a significant danger to migratory birds and other wildlife or their habitats.

(b) *Application and review.* (1) All applications under this section shall be submitted to the Director and shall include:

(i) A minimum of 25 pounds of the candidate shot in size equivalent to #4.



(ii) A description of the chemical composition of the candidate shot and a statement of the expected composition variability during large-scale production.

(iii) The applicant's assessment of the potential toxicity of the candidate shot to migratory birds and other wildlife species as compared to lead shot and steel shot.

(iv) The applicant's assessment of the environmental fate of the candidate shot when spent and of any human health or safety issues that may be of concern.

(2) If the Director concludes, on the basis of the technical and scientific data contained in the applicant's submission, that this candidate shot is worthy of further testing, the applicant is notified to submit a plan for conducting initial screening evaluations as outlined in paragraph (c) of this section. The Director shall specify what portion of paragraph (c)(1) should be conducted and any modifications to the procedures that might be necessary. The Director will then announce in the **Federal Register** that a candidate material that shows promise has been identified and further testing will be considered when the developer submits a satisfactory initial screening plan. This announcement will include a description of the chemical composition of the candidate shot.

(3) The initial screening plan submitted by the applicant will be reviewed by the Director. The Director may decline to approve the plan, or any part of it, if deficient in any manner with regard to timing, format, or content requirements that he has placed upon it. The Director, or authorized representative, may inspect laboratory facilities to be used.

(4) Initial screening tests, as described in paragraph (c)(1) of this section, will then be conducted, analyzed, and reported by the applicant to the Director.

(5) The Director will then review results, analytical procedures, and conclusions from screening tests. Within 30 days of receipt of the report, the Director will conditionally approve or unconditionally reject the candidate material and provide written explanation for these decisions.

(6) If the Director conditionally approves the candidate material, the applicant will be advised of the second phase of tests, as described in paragraph (c)(2) of this section. The applicant will be advised to develop and submit a plan for conducting a 30-day dosing test using mallards on a diet of commercial available duck food (paragraph (c)(2) of this section; Toxicity Test 1).

(7) The plan for conducting the 30-day dosing test (Toxicity Test 1) on a diet of commercially available duck food will be submitted to the Director for review and approval. The Director, or authorized representative, will then inspect the test facilities and review the test procedures.

(8) Toxicity Test 1, if approved, is then conducted, analyzed, and reported by the applicant to the Director.

(9) The Director reviews the results and within 30 days will conditionally approve or unconditionally reject the candidate material and provide written explanation for these decisions. If conditionally approved, guidance for further testing is provided the applicant.

(10) This process of requesting a plan, reviewing the plan, accepting or rejecting the plan, conducting tests, analyzing results, reporting results to the Director, followed by a decision by the Director to continue or terminate testing, with written explanation for the rationale, may be repeated as Tests 2 and 3 (described in paragraph (c)(2) of this section) are performed. Following satisfactory completion of Tests 1, 2, and 3, or their equivalent, and publication of a summary of results in the **Federal Register** for public comment, the candidate material is concomitantly proposed for inclusion in 50 CFR 20.21(j).

(11) For the purposes of § 20.134, the terms *significant* and *significantly* refer to a ( $P \leq 0.05$ ) finding of significance.

(c) *Outline of procedures for testing—*

(1) *Initial screening tests.* These tests will be performed on the candidate shot if the initial submission of information required under paragraphs (b)(1)(i) through (v) of this section by the applicant, indicates that it qualifies for further testing. The Director will provide instructions to the applicant concerning the conduct of the following tests.

(i) The candidate shot will be chemically analyzed by the Service or an independent laboratory and the results will be compared to the applicant's descriptions of shot composition and composition variability.

(ii) The candidate shot will be run through a standardized test *in vitro* (see below) that will assess its erosion, in an environment simulating *in vivo* conditions of a waterfowl gizzard, and any release of components into a liquid medium. Erosion characteristics will be compared to those of lead shot and steel shot of comparable size.

#### Standardized Test for Erosion Rate

*Reference:* Kimball, W.H., and Munir, Z.A. 1971. The corrosion of lead shot in a simulated waterfowl gizzard. *J. Wildl. Mgmt.* 35(2):360-365.

#### Materials

Atomic absorption spectrophotometer.  
Drilled aluminum block to support test tubes.  
Thermostatically controlled stirring hot plate.  
Small teflon coated magnets.  
Hydrochloric acid (pH 2.0) and pepsin.  
Capped test tubes.  
Lead, steel, and candidate shot.

#### Procedures

Hydrochloric acid and pepsin are added to each capped test tube at a volume and concentration that will erode a single #4 lead shot at a rate of 5 mg/day. Three test tubes, each containing either lead shot, steel shot, or candidate shot, are placed in the aluminum block on the stirring hot plate. A teflon coated magnet is added to each test tube and the hot plate is set at 42°C and 500 rpm. Erosion of shot will be determined on a daily basis for 14 consecutive days by weighing the shot and analyzing the digestion solution with an atomic absorption spectrophotometer. The 14-day procedure will be replicated five times.

#### Analysis

Erosion rates of the three types of shot will be compared by appropriate analysis of variance and regression procedures. The statistical analysis will determine whether the rate of erosion of the candidate shot is significantly greater or less than that of lead and steel. This determination is important to any subsequent toxicity testing.

(2) *Toxicity tests.* The three tests described in this section represent an evaluation of three major categories of toxic effects: short-term periodic exposure; chronic exposure under adverse environmental conditions; and chronic exposure impact on reproduction. The detail of the experimental procedure can be modified, if necessary, to address the specific composition and erosion characteristics of the candidate shot. The inclusion of lead shot and steel shot control groups is considered necessary for dealing with the experimental variability associated with tests being performed by different laboratories under a variety of conditions beyond control of the experimental protocol. Statistical analyses will be performed on all data from each test. Toxicity tests 1-3 are designed for testing the effects of metal or metalloid shot. If the candidate is not metal or metalloid, other testing procedures will have to be developed to evaluate the effects of the components of the candidate shot. In every case, the test animals will be exposed to the candidate material:

- Both acutely and chronically;
- Both stressed and non-stressed by diet and temperature; and
- With comparisons made to lead and steel shot regarding mortality and sublethal effects.



When special consideration is given to potential impacts on species other than migratory birds and to the environmental fate of nonmetal or nonmetalloid candidate shot, further testing beyond that outlined in this paragraph (c) might be required.

Test 1 (Short-term, 30-day toxicity test using a commercially available duck food).

#### Materials

100 male and 100 female hand-reared mallards approximately 6 to 8 months old. These mallards must have plumage and body conformation that resemble wild mallards. 200 elevated, outdoor 1-meter square pens of vinyl-coated wire equipped with food containers and waterers.

Laboratory equipped to perform fluoroscopy, required blood and tissue assays, tissue metal analyses, and necropsies.

Commercial duck food.

Lead, steel, and candidate shot.

#### Procedures

Mallards will be housed individually in outdoor pens and given *ad libitum* access to food and water. After 3 weeks, they will be randomly assigned to 10 groups (10 males and 10 females/group) and sham-dosed (control) or dosed with two, four, or eight pellets of lead, steel or the candidate shot. Birds will be fluoroscoped 1 week after dosage to check for shot retention. Birds will be observed daily for signs of intoxication and mortality over a 30-day period. Body weight will be determined at the time of dosing, and at days 15 and 30 of the test.

On days 0, 3, 9, 15 and 30, blood will be collected by venipuncture for determination of hematocrit, hemoglobin concentration, red blood cell delta-aminolevulinic acid dehydratase, and zinc protoporphyrin concentration. All survivors will be sacrificed on day 30, and liver delta-aminolevulinic acid dehydratase, and total and protein bound glutathione concentration will be determined. The liver and other appropriate organs will be removed from the sacrificed birds and from other birds dying prior to sacrifice on day 30. The organs will be analyzed for lead and other metals contained in the steel and candidate shot. All birds dying prior to sacrifice will be necropsied to determine pathological conditions associated with death.

#### Analysis

Mortality among the specified groups will be analyzed with appropriate chi-square statistical procedures. Any effects on the previously mentioned physiological parameters caused by the candidate shot must be significantly less than those caused by lead shot and must not be significantly greater than those caused by steel shot. Physiological data and tissue residue data will be analyzed by analysis of variance or other appropriate statistical procedures to include the factors of shot type, dose, and sex. Comparisons between sacrificed birds and birds dying before sacrifice will be made whenever sample sizes are adequate for a meaningful comparison. The applicant will ensure that copies of all the raw data and

statistical analyses accompany the report of this test when it is sent to the Director.

Test 2 (Chronic, 14-week toxicity test in cold weather using a nutritionally-deficient diet). This test will be conducted at a location where the mean monthly temperature during December, January, and February is between 30° and 40°F.

#### Materials

56 male and 56 female hand-reared mallards approximately 6 to 8 months old. The mallards must have plumage and body conformation that resemble wild mallards. 112 elevated, outdoor 1-meter square pens of vinyl-coated wire equipped with food containers and waterers.

Laboratory equipped to perform fluoroscopy, and required blood and tissue assays, tissue metal analysis, and necropsies.

Whole kernel corn.

Lead, steel, and candidate shot.

#### Procedures

Mallards will be individually assigned to outdoor, 1-meter square pens of vinyl-coated wire during the first week of December and acclimated to an *ad libitum* diet of whole kernel corn for 2 weeks. Birds will be randomly assigned to seven groups (8 males and 8 females/group) and sham-dosed (control) or dosed with one or four #4 pellets of lead, steel, or the candidate shot.

Birds will be weighed and fluoroscoped weekly. All recovered shot will be weighed to measure erosion. Blood parameters determined in Test 1 will be measured again in this test using blood samples drawn at the initiation of dosage, 24 hours after dosage, and at the end of weeks 1, 2, 4, 8 and 14. At the end of 84 days, all survivors will be sacrificed. The liver and other appropriate organs will be removed from the sacrificed birds and birds dying prior to sacrifice on day 84. The organs will be analyzed for lead and other metals contained in the steel and candidate shot. All birds dying prior to sacrifice will be necropsied to determine pathological conditions associated with death.

#### Analysis

Mortality among the specified groups will be analyzed with appropriate chi-square statistical procedures. Any effects on the previously mentioned physiological parameters caused by the candidate shot must be significantly less than those caused by lead shot and must not be significantly greater than those caused by steel shot. Physiological data and tissue residues will be analyzed by analysis of variance or appropriate statistical procedures to include the factors of shot type, dose, and sex. Comparisons between sacrificed birds and birds dying before sacrifice will be made whenever sample sizes are adequate for a meaningful comparison. The applicant will ensure that copies of all the raw data and statistical analyses accompany the report of this test when it is sent to the Director.

Test 3 (Chronic dosage study that includes reproductive assessment using a commercially available duck food diet).

#### Materials

200 male and 200 female hand-reared mallards that have not been through a reproductive season. These mallards must have plumage and body conformation that resemble wild mallards.

Pens capable of holding 5-10 ducks each. 200 elevated, outdoor pens at least 1-meter square, covered with vinyl-coated wire, and equipped with feeders, waterers and nest boxes.

Laboratory equipped to perform fluoroscopy and required blood assays.

Commercial duck food (developer pellets, breeder pellets, and starter mash).

Lead, steel and candidate shot.

#### Procedures

Mallards will be randomly assigned to 10 groups (20 males and 20 females/group) in January and held in same-sex groups of 5-10 individuals until mid-February. The mallards will then be randomly paired, within each group, and moved to outdoor pens (one pair per pen). Ducks will be provided with an *ad libitum* diet of commercial developer pellets until initiation of laying, when the pairs will be switched to breeder pellets. Ducks will be sham-dosed (controls) or dosed with three #4 pellets of lead, steel or candidate shot. Dosing will occur using three different dosing schedules: (1) In January; 2 weeks after initiation of the study; (2) at the initiation of laying; and (3) at both times designated in (1) and (2). The single control group will be sham-dosed at both times.

Birds will be fluoroscoped 1 week after dosage to check shot retention, and weighed every 2 weeks. Blood parameters determined in Tests 1 and 2 will be measured again in this test using blood samples drawn at initiation of the study, at time of dosing, at initiation of incubation, and at sacrifice. All birds will be sacrificed when reaching 7 days of age.

Clutches will be candled to determine fertility of the eggs. Nests will be checked daily to determine the fate of eggs and ducklings. Ducklings will be provided with starter mash after hatching.

#### Analysis

Any mortality, reproductive inhibition, or effects on the previously mentioned physiological parameters must be significantly less than those caused by lead shot and must not be significantly greater than those caused by steel shot. Physiological and reproductive data will be analyzed by analysis of variance or other appropriate statistical procedures. The applicant will ensure that copies of all raw data and statistical analyses accompany the report of this test when it is sent to the Director. (Information collection requirements approved by the Office of Management and Budget under control no. 1018-0067)

Dated: October 24, 1986.

William P. Horn,  
Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-26292 Filed 11-20-86; 8:45 am]

BILLING CODE 4310-55-M



## 50 CFR Part 20

**Migratory Bird Hunting; Criteria and Schedule for Implementing Nontoxic Shot Zones for 1987-1988 and Subsequent Waterfowl Hunting Seasons.**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** When consumed by waterfowl, bald eagles and other migratory birds, spent lead shot often produce lead poisoning and death. As lead poisoning is a significant annual mortality factor for certain species of migratory birds that indirectly results from sport harvest of waterfowl, the annual process of deciding whether, where, and how migratory bird hunting will be allowed under the Migratory Bird Treaty Act must take into account where further curtailment of shot deposition is necessary to protect these species from lead shot exposure and the resultant mortality. To eliminate lead poisoning as a major mortality factor in waterfowl, bald eagles, and certain other migratory birds, the Fish and Wildlife Service (FWS) will ban the use of lead shot for hunting waterfowl and coots nationwide by the 1991-1992 season. This final rule describes the mechanism and schedule by which the nationwide ban on the use of lead shot for hunting waterfowl and coots will be implemented.

**EFFECTIVE DATE:** December 22, 1986.

**FOR FURTHER INFORMATION CONTACT:** Dr. Rollin D. Sparrowe, Chief, Office of Migratory Bird Management, U.S. Fish and Wildlife Service, Matomic Building—Room 536, Washington, DC 20240 (202/254-3207).

**SUPPLEMENTARY INFORMATION:** Wildlife biologists and others have known at least for the last 100 years that spent lead shot deposited during hunting can cause sickness and death when ingested by waterfowl. In earlier decades, when waterfowl populations were greater in number, this incidental hunting-related mortality was judged too insignificant to warrant measures to attempt to eliminate the problem.

Increasingly, continental waterfowl populations have come under stress from destruction and degradation of their habitat, periodic adverse weather cycles and disease on crowded migration and wintering habitats. By the 1960's and 1970's it became obvious to wildlife managers that there was a need to find an alternative to lead shot because of its toxicity. In 1976, the Department of the Interior published a Final Environmental Statement (FES-76)

on the proposed use of steel shot for hunting waterfowl in the United States. The action presented at that time sought to limit further deposition of lead shot in areas used by waterfowl in order to eliminate lead poisoning from ingested lead shot as a significant mortality factor among these birds. This action continues to be implemented 10 years after it was first presented.

Since 1976, nontoxic shot has been required for hunting waterfowl at numerous locations throughout the United States. These requirements are now reflected in both State and Federal hunting regulations. In 1985, about 30 percent of the average annual waterfowl harvest in the United States occurred in designated nontoxic shot zones in 33 States. In 1986, about 49 percent of the average annual waterfowl harvest in the United States will occur in nontoxic shot zones in 44 States.

The majority of wildlife managers and many hunters understand the need for conversion to a nontoxic shot in order to maintain waterfowl populations. However, there are those who believe that steel shot (currently the only approved nontoxic shot available) is not the answer, that it will damage their guns and cripple more waterfowl than lead shot. These concerns are true in part. Shotguns with thin-walled barrels or barrels made of soft steel should not be used for firing steel loads. However, modern shotguns available from the major American arms manufacturers and others are safe for use with steel shot. Numerous tests relating to crippling loss with steel shot have produced results as varied as their individual objectives. There is no clear evidence that a greater crippling loss results from use of steel shot.

Criticism about the need to convert to nontoxic shot also centers on the lack of hunter-observed, lead poisoning mortality. This results from the fact that most lead poisoning occurs after the hunting season when waterfowl can feed undisturbed on hunted areas where shot has been deposited recently and the fact that lead poisoning is a slow, debilitating disease that makes its victims susceptible to predation or other diseases. When encountered, these birds are often mistaken for cripples. Although these factors make it difficult to provide absolute numbers of lead poisoned birds, it is known that significant losses are occurring annually across the nation, and they are controllable as an acceptable nontoxic substitute for lead shot is available.

In making the annual decision whether, where, and how migratory bird hunting will be allowed under the terms of the Migratory Bird Treaty Act, as

amended (16 U.S.C. 703 *et seq.*; 40 Stat. 755), the Secretary of the Interior is required to determine the capability of waterfowl and other migratory bird resources to sustain a sport harvest throughout the various portions of their range. The Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543; 87 Stat. 884) requires Federal agencies to conserve endangered species and avoid jeopardizing their continued existence; the Secretary must consider where it is necessary to require nontoxic shot in order to reduce exposure of bald eagles to lead shot in their waterfowl prey. If a determination is made that the use of lead shot must be avoided for the migratory bird hunting to remain in compliance with the requirements of these statutes, the Secretary must implement a program that meets those requirements.

As previously stated, the FWS has implemented a nontoxic shot program since 1976 to alleviate the lead poisoning problem in waterfowl. Only in the past few years, since FES-76 was completed, has it become apparent that lead poisoning from waterfowl hunting is manifesting itself in the endangered and threatened bald eagle populations of the United States. To date, 125 bald eagles have been diagnosed by the FWS' National Wildlife Health Center as dying from lead poisoning; the major source of this lead exposure is believed to be lead pellets embedded in or ingested by hunter-crippled or -killed waterfowl. Accordingly, the FWS has completed a Final Supplemental Environmental Impact Statement (SEIS) on the use of lead shot for hunting migratory birds in the United States, in which a complete review and analysis of the lead poisoning problem in migratory birds is made. Evidence is presented in the Final SEIS that lead poisoning among waterfowl and bald eagles is of sufficient magnitude that a program to ban the use of lead shot for waterfowl and coot hunting nationwide is necessary for the Secretary to comply with statutory requirements.

Information detailing the developing of the Final SEIS strategy to eliminate lead toxicity as a major mortality factor in waterfowl and coots appears in the preamble to the proposed rule for this final rule published in the **Federal Register** on Friday, June 27, 1986 (51 FR 23444). Information on the justification for selecting this strategy (Alternative VII) has also been set out in the Final SEIS; the June 27, 1986, **Federal Register** proposed rule for this final rule; and in the Record of Decision (ROD) confirming selection of the preferred alternative and published in the **Federal**



Register on August 20, 1986 (51 FR 29673). In compliance with 40 CFR 1505.2, the ROD was signed by the Director, FWS, and the Assistant Secretary for Fish and Wildlife and Parks, Department of the Interior, on August 11, 1986.

This rule will fully implement the preferred alternative of the Final SEIS by setting criteria and a schedule for establishing nontoxic shot zones for the 1987-1988 waterfowl hunting season and beyond, culminating in a nationwide ban on the use of lead shot by the 1991-1992 hunting season. The decision criteria noted in the amendatory language of this rule (recommended to the FWS by comments of the International Association of Fish and Wildlife Agencies) are similar to those published at 50 FR 30849 and are discussed also in the Final SEIS. The current FWS strategy, utilizing criteria for identifying areas necessary for bald eagle and waterfowl protection, is an integral part of this alternative and will apply for the 1986-1987 waterfowl hunting season (see 51 FR 31429).

Since 1978, the FWS has not been able to implement or enforce nontoxic shot zones in a State without approval of the appropriate State authorities. This restriction on use of funds by the FWS has been contained in the Interior Department Appropriations Act each year since 1978 (Pub. L. 98-473, Section 305). As a consequence of this restriction the FWS can only implement and enforce nontoxic shot zones for waterfowl and coot hunting with the approval of State authorities. If States do not approve nontoxic shot zones when current FWS guidelines and criteria indicate that such zones are necessary to protect migratory birds, the FWS will not open the areas to waterfowl and coot hunting. This action is taken pursuant to the FWS' responsibilities under the Migratory Bird Treaty Act and, in the case of zones proposed for bald eagle protection, the Endangered Species Act, and the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. 668-668d; 54 Stat. 250).

#### Summary of Comments on the Proposed Rule

Over 175 comments on the proposed rule have been received; only 46 were received prior to comment period closure. Of those received subsequent to comment period closure, virtually all support FWS action to ban the use of lead shot nationwide by 1991-1992 for hunting waterfowl and coots. All letters have been reviewed for relevancy to this particular proposal and substantive

comments are addressed in this final rule, or elsewhere as noted.

Of the 46 comments received during the comment period, 17 are from State fish and game organizations and the remainder are from national, State, or local conservation/wildlife organizations, a Member of Congress, a waterfowl hunting group, a Flyway Council, and private individuals. States providing comments are AZ, CA, DE, FL, GA, IL, MD, ME, MI, MO, NE, NH, NJ, RI, TX, VT, and WI. One copy of a letter to "State and Federal Fish and Wildlife Administrators" urging observance of the zone conversion schedule in Appendix N of the Final SEIS was received from the Federal Arms Corporation. Overall, 20 letters were in general support of the proposed rule, 22 generally against, 2 had no stated or obvious position, and 2 supported a nationwide lead to steel shot conversion but not as proposed by the FWS. Of the States responding, 11 supported the proposal, 3 States opposed the proposal, 2 States had no stated position for or against, and 1 State supported a conversion but not as proposed by the FWS in this rule. The comments noted below are represented in approximately 15-20 of the 46 letters, but not all cite each and every issue. These comments are not responded to in this final rule as they are similar, if not identical, to comments received from the general public on the proposed rule titled "Zones in which lead shot will be prohibited for waterfowl and coot hunting in the 1986-1987 hunting season" of January 6, 1986 (51 FR 409) and were responded to as a preliminary final rule in Appendix O of the Final SEIS on the use of lead shot for hunting migratory birds in the United States completed in June of 1986 and announced in the Federal Register on June 27, 1986 (51 FR 23443) and July 11, 1986 (51 FR 25249). This preliminary final rule (Appendix O), with comments and responses, was published as a final rule on September 3, 1986 (51 FR 31429). Further, most of the subjects listed are treated in the Final SEIS and referenced accordingly so that the reader may obtain and review scientific studies upon which this final rule action is taken. The list of issues (with the September 3, 1986 (51 FR 31429) 1986-1987 nontoxic shot zone rule Issue and/or SEIS reference) is as follows:

- Arguments against the lead shot-lead poisoning connection in waterfowl and bald eagles, including situations involving shooting over fields and over deep water, observers noting absence of carcasses, perceived documentation deficiencies, etc. (see, for example,

Issues 1, 2, 7, and 8 and Chapter III of the SEIS);

- Relative merits of the "hotspots" approach vs. the current phase-in strategy (see, for example, Issue 5 and Chapters II and IV of the SEIS);
  - Crippling and shooting performance of lead vs. steel shot (see, for example, Issue 12 and Chapter III, page 86, of the SEIS);
  - Cost of steel vs. lead shot and availability of steel shot (see, for example, Issue 14 and Chapter III, page 90, of the SEIS);
  - Compatibility of steel shot with weapons and safety (see, for example, Issue 13 and Chapter IV, pages 11-15 of the SEIS);
  - Feasibility of implementing a nationwide ban earlier than the 1991-1992 hunting season (see, specifically, page S-3 and Chapter IV of the SEIS);
  - General allegations of arbitrariness in FWS' actions to eliminate lead poisoning as a mortality factor in waterfowl and coot (see, for example, Issue 3);
  - Enforcement concerns (see, Chapter IV, page 57, of the SEIS);
  - Proposed adoption of alternatives which were discussed in the SEIS (see, page S-3 and Chapter IV of the SEIS);
  - Proposal that the FWS should redouble efforts to find a suitable nontoxic alternative to lead (see, for example, Issue 14 and Chapter III, page 90, of the SEIS); and
  - An argument that the FWS, through this and other actions establishing nontoxic (steel) shot zones, is violating the Stevens amendment to the Interior Department Annual Appropriations Act (see, for example, Issue 22).
- Other, specific issues raised by commentators and not previously publicly analyzed by the Service are responded to as follows:

#### Responses to General Comments on the Proposed Rule

**Issue 1:** The National Wildlife Federation (NWF) commented that the FWS should promulgate a single, final steel shot regulation (zones) for all years for the reasons that: (a) It will help assure adequate ammunition inventories; (b) it will assist the interpretation and education (I&E) efforts of the States; (c) it will be an affirmative action that will reinforce public confidence in the FWS' intent to phase out lead shot by 1991-92; and (d) "up to the minute biological factors" are not considered in establishing steel shot zones.

**Response:** The FWS believes that it would be neither appropriate nor time effective to attempt to promulgate one



rule that covers all zones for all hunting years through the nationwide ban year of 1991-1992. "Up to the minute biological factors" may not be a prominent part of the strategy to establish nontoxic shot zones; however, it is quite likely that the zone establishment process leading to a nationwide ban will be a dynamic one. It is anticipated that the acceleration and deferral provisions of this final rule, especially the former, will create some State-by-State deviation from the proposed schedule published in Appendix N of the SEIS. Acceleration and/or deferral within the schedule would necessitate amending the NWF's suggested single, total phase-in encompassing rule on an annual basis, in effect requiring unnecessary and burdensome replication of State and Federal efforts. Further, the Stevens amendment to the Department's annual appropriations act, that requires State concurrence on implementation and enforcement on an annual basis, would be in conflict with such an action. Too, there may yet be future Congressional repeal or other modification of the Stevens Amendment to the Interior Department Annual Appropriations Act that would impact this rulemaking process.

The FWS believes that there is adequate advance notice within Appendices N and O of the SEIS to facilitate supply of nontoxic shot ammunition in 1986-1987 and in future years, and to allow the States to be effective in their I&E programs. There has been no request by the major American ammunition manufacturers for a single rule to facilitate their distribution of ammunition supplies; their only concern has been for a 12-14 month period over which to plan for yearly distribution.

In light of this final rule and other recent developments, there should remain little doubt what the intentions of the Department and the FWS are in regard to the elimination of lead toxicity as a significant mortality factor in certain migratory birds.

**Issue 2:** The National Rifle Association of America and the Wisconsin Department of Natural Resources stated that these nontoxic shot restrictions should be placed on shotshells only and, thus, allow the use of lead shot by muzzleloading waterfowl and coot hunters.

**Response:** The FWS believes that a "fairness" principle should be a primary consideration; lead shot from muzzleloading contributes to the lead poisoning problem. Thus, the FWS will require all waterfowlers using firearms to use nontoxic shot in established

nontoxic shot zones. Further, the FWS believes that it is unnecessary to make this exemption given what is known about pressures that are generated by muzzleloading weapons. However, as with those using shotshells, it is likely not a good safety practice to use firearms with thin-walled barrels. At least one reloading manual provides data on steel shot loading in muzzleloading shotguns; this source acknowledges that the data were developed using a barrel that will accommodate higher than normal pressures (i.e., a pressure barrel) but that this use is a common practice in loading data development.

For this current 1986-1987 hunting year, a contradiction within the regulations, those at 50 CFR 20.108 and those in the "taking" section (§ 20.21), will allow muzzleloading waterfowl hunters to use lead shot. However, the FWS intends to resolve this contradiction in favor of steel shot for 1987 and beyond by amending § 20.21(j) in a separate rulemaking.

**Issue 3:** The Central Flyway Council, Delaware Department of Natural Resources and Environmental Control, Maine Department of Inland Fisheries and Wildlife, New Jersey Department of Environmental Protection, Rhode Island Department of Environmental Management, Texas Parks and Wildlife Department, and Vermont Department of Fish and Game all expressed in some way concern that counties were not necessarily logical units on which to base nontoxic shot zone establishment.

**Response:** The FWS agrees that adhering strictly to county boundaries may confuse or otherwise make difficult management and enforcement of nontoxic shot zones. However, maintaining the integrity of the strategy to convert in a systematic and priority manner is of paramount importance. Thus, to accommodate problems where, for example, county boundaries are indistinct and where enforcement may be difficult, a provision has been added in § 20.143 that allows States, at their prerogative, to extend nontoxic shot zones into adjacent counties to complete logical ecological units, or for other reasons. Nonetheless, the minimum unit that must be converted, according to the schedule, will be the county listed for that particular year. This provision is consistent with that allowing acceleration of the schedule.

**Issue 4:** The Central Flyway Council, Maine Department of Inland Fisheries and Wildlife, Michigan Department of Natural Resources, and Missouri Department of Conservation each expressed a desire to allow a State to move forward to conversion on an

independent schedule or to maintain current zones as status quo until a statewide conversion date could be targeted.

**Response:** The FWS believes that the acceleration option of this strategy provides sufficient flexibility needed by a State to develop a statewide conversion plan consistent with the national plan. For the purposes of converting areas in priority order, there is a need to preserve the integrity of the strategy that was adopted by the majority of the International Association of Fish and Wildlife Agencies' member States and subsequently recommended to the FWS and selected as the strategy for eliminating lead toxicosis as a major mortality in certain migratory birds.

**Issue 5:** One commentator stated that the most effective means of obtaining compliance with a ban on lead shot is to place restrictions on ammunition manufacture and import.

**Response:** The FWS is not authorized to regulate the manufacture of shot, but only the manner and extent of migratory bird hunting. Moreover, the FWS believes that manufacture and import restrictions are not viable means of obtaining compliance with nontoxic shot use in nontoxic shot zones. Lead shot loads in sizes that would be affected are legally used in upland gamebird shooting (pheasants, turkey) and in hunting marshbirds (crane, gallinule, rail) and other wildlife species as well. Thus, it would not be reasonable to simply ban the manufacture or import of certain lead shot sizes such as those larger than 4's or 6's, for example.

**Issue 6:** One commentator requested clarification of the use of eagle criteria and eagle zoning beyond the 1986-1987 waterfowl hunting season, and the New Jersey Department of Environmental Protection also asked if existing nontoxic shot zones would be eligible for study and deferral.

**Response:** There is no provision for utilizing eagle criteria for expanding nontoxic shot zones after the 1986-1987 waterfowl hunting season; the expansion of zoning for nontoxic shot use after this season is based only on waterfowl harvest density. Inasmuch as the conversion to nontoxic shot for 1987 and beyond is based on waterfowl harvest density, beginning with the most and ending with the least dense areas, this strategy should also provide a priority protection for bald eagles utilizing lead shot contaminated waterfowl in their food base.

This adopted strategy (51 FR 29673) calls for all established nontoxic shot zones to remain for the 1987-1988 and future waterfowl hunting seasons.



Further, the schedule provides a 2-year lag period between study and deferral for data collection, data synthesis, and reporting of results in a manner that is sensitive to the need for public awareness. It will not be possible to study an area in 1986-1987 for deferral in 1987-1988; the study, analyses, reporting and negotiation aspects would leave insufficient time for publication and scheduling. The SEIS has clearly stated (page II-13) that the schedule has progressed beyond the point in time that 20+ zones would be triggered for monitoring, i.e., they would have had to have been studied in 1985-1986.

Under this new strategy the rules changed sufficiently that areas having met the former criteria but that do not meet current criteria are exempt from conversion, except as per the schedule given in Appendix N of the SEIS. The FWS is discontinuing its Lead Poisoning Monitoring Program activities on Federal refuges.

There is no provision for rescinding nontoxic shot zones in the future as both the FWS and the Department are committed to the newly adopted strategy and schedule for eliminating lead toxicosis in waterfowl and other migratory birds caused by the use of lead shot in waterfowling. Section 20.143 has been changed to reflect that there will be no deferral or rescission of established nontoxic shot zones.

**Issue 7:** The New Jersey Department of Environmental Protection (NJDEP) requested information on the source of the harvest data used to derive the conversion schedule.

**Response:** It is assumed that this reference by the NJDEP is to the list of converting counties by year contained in Appendix N of the SEIS that resulted from the schedule in the proposed rule for this final rule. The harvest data per county was obtained from Carney et al. 1983 (Distribution of waterfowl species harvested in States and counties during 1971-1980. U.S. Fish and Wildlife Ser. Spec. Sci. Rpt.—Wildl. No. 254). The county area database, that included both land and water areas, was obtained from the U.S. Bureau of the Census. These data will be used in determining at what point in time a county must convert. The county harvest densities, i.e., the prioritized schedule of counties converting, obtained when using the U.S. Bureau of the Census database may vary from those results obtained when using county area data from other sources.

**Issue 8:** The Florida Game and Fresh Water Fish Commission suggested that to avoid confusion, inasmuch as "triggered" has been used in the past in a different context, "converted" should

be substituted for that term in § 20.143(d).

**Response:** Section 20.143(d) of the proposed rule, now (f) of the final rule, has been rewritten accordingly.

**Issue 9:** The Delaware Department of Natural Resources and Environmental Control has requested that some explanation be made for moving the 3-dead-waterfowl criteria from triggering for monitoring to [triggering for] conversion.

**Response:** The FWS believes that the 3-dead-bird criterion for converting areas being studied for deferral is a valid determination of an area's potential for lead shot exposure, and, therefore, lead poisoning in waterfowl and coots. The FWS will retain this criterion as a threshold for nondeferral; this is consistent with the way that the selected strategy is presented in the Final SEIS.

As a result of the foregoing public input and other supplementary information, three significant textual changes have been made to the proposed rule. These changes, contained in an expanded § 20.134, are as follows:

- For clarification, it is noted that established nontoxic shot zones may not be monitored for deferral or rescission from conversion in any manner;
- For clarification and to provide flexibility, States may accelerate conversion on less than a county basis for purposes of completing a biological or enforcement/management unit; however, the minimum conversion unit (county) must be adhered to; and
- For clarification, when a county is converted to nontoxic shot status it will be added to the list of nontoxic shot zones contained in § 20.108 and all the existing prohibitions on use of lead shot will apply.

Other changes made in proposed rule are editorially minor in nature.

#### Economic Effect

Executive Order 12291, "Federal Regulation," of February 17, 1981, requires the preparation of regulatory impact analyses for major rules. A major rule is one likely to result in an annual effect on the economy of \$100 million or more; a major increase in costs or prices for consumers, individual industries, government agencies or geographic regions; or significant adverse effects on the ability of United States-based enterprises to compete with foreign-based enterprises. The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) further requires the preparation of flexibility analyses for rules that will have a significant effect on a substantial number of small entities, which include

small businesses, organizations or governmental jurisdictions.

In accordance with Executive Order 12291, a determination has been made that this rule is not a major rule. In accordance with the Regulatory Flexibility Act, a determination has been made that this rule, if implemented without adequate notice, could result in lead shot ammunition supplies for which there would be no local demand. Conversely, nontoxic shot zones could conceivably be established where little or no nontoxic shot ammunition would be available to hunters. The FWS believes, however, that adequate notice has been provided and that sufficient supplies of nontoxic shot ammunition will be available to hunters. Therefore, this rule would not have a significant economic effect on a substantial number of small entities.

#### Paperwork Reduction Act

This rule will not result in the collection of information from, or place recordkeeping requirements on, the public under the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*).

#### Environmental Considerations

As noted above, pursuant to the requirements of section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332), a Final SEIS on the use of lead shot for hunting migratory birds in the United States has been completed. As previously noted herein, a ROD on the SEIS has been completed as required by 40 CFR 1505.2. Pursuant to the Endangered Species Act, as section 7 consultation was done on the potential impacts of this action on bald eagles and is included in the Final SEIS. These documents are available for public inspection and copying in Room 536 Matomic Building, 1717 H Street NW., Washington, DC 20240, or may be obtained by mail, addressing the Director at the above location.

#### List of Subjects in 50 CFR Part 20

Exports, Hunting, Imports, Transportation, Wildlife.

Accordingly, Part 20, Subchapter B, Chapter I of Title 50 of the Code of Federal Regulations is amended as set forth below:

#### PART 20—[AMENDED]

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

**Authority:** Migratory Bird Treaty Act, sec. 3, Pub. L. 65-186, 40 Stat. 755 (16 U.S.C. 701-708h); sec. 3(h), Pub. L. 95-616, 92 Stat. 3112 (16 U.S.C. 712); Alaska Game Act of 1925, 43



739, as amended, 54 Stat. 1103-04, unless otherwise noted.

2. Subpart M is added to read as follows:

**Subpart M—Criteria and Schedule for Implementing Nontoxic Shot Zones for the 1987-1988 and Subsequent Waterfowl Hunting Seasons**

Sec.

20.140 Purpose and scope.

20.141 Definitions.

20.142 Applicability.

20.143 Criteria and schedule for conversion to nontoxic shot.

**Subpart M—Criteria and Schedule for Implementing Nontoxic Shot Zones for the 1987-1988 and Subsequent Waterfowl Hunting Seasons**

**§ 20.140 Purpose and scope.**

The regulations of this subpart apply to the designation, implementation and enforcement of nontoxic shot zones for waterfowl hunting in the United States for the 1987-1988 and subsequent hunting seasons. The regulations of this Subpart do not apply to the issuance of regulations under Part 21 of this title or under Subparts A through J and L and N of this part.

**§ 20.141 Definitions.**

As used in this subpart:

(a) "Nontoxic Shot" means any shot-type that does not cause sickness and death when ingested by migratory birds as determined by criteria established under § 20.134. The only nontoxic shot currently approved by the Director, U.S. Fish and Wildlife Service, is steel shot.

(b) "Nontoxic Shot Zones" means all land and water areas within the boundaries of the United States where the use of nontoxic shot is required for waterfowl hunting. A zone may be all or part of a county designated and/or established for nontoxic shot use.

(c) "Waterfowl" means the Anatidae (ducks, geese [including brant], and swans) and coots (*Fulica americana*).

**§ 20.142 Applicability.**

This subpart applies to persons of all ages engaged in waterfowl hunting in the established nontoxic shot zones and to all of the boroughs, counties, or parishes within the separate States, without exception. Possession and use of nontoxic shot (including shotshells and loose shot for use in muzzleloading), for all legal gauges of shotguns, is required for waterfowl hunting in

nontoxic shot zones. The Secretary of the Interior, acting through the Fish and Wildlife Service, will not open a zone to waterfowl hunting where the Fish and Wildlife Service is prevented from establishing the zone as a nontoxic shot zone under the criteria of this subpart.

**§ 20.143 Criteria and schedule for conversion to nontoxic shot.**

The criteria and procedures specified below will be followed in the conversion nationwide to the use of nontoxic shot for waterfowl hunting. As of the 1991-1992 season, nontoxic shot will be required in all waterfowl hunting in the United States.

(a) Beginning in the 1987-1988 waterfowl hunting season, implementation of nontoxic shot zones is on a decremental basis with regard to the intensity of average annual waterfowl harvest per square mile of a particular county; the initial harvest level triggering monitoring/conversion is 20 or more birds per square mile, decreasing by 5 birds per square mile each successive waterfowl hunting season until the nationwide ban season is reached in 1991-1992. Data on average annual waterfowl harvest are from Carney et al. 1983; data on county size have been obtained from the U.S. Bureau of the Census. Table I illustrates the schedule for conversion to nontoxic shot.

TABLE I.—SCHEDULE FOR MONITORING AND/OR CONVERTING COUNTIES TO NONTOXIC SHOT ZONES FOR HUNTING WATERFOWL

Average annual waterfowl harvest per mi <sup>2</sup> (by county)	Hunting season in which—		
	Monitoring must begin to defer implementation	Qualifying areas converted	Nontoxic shot required in deferred areas
20 or more	1985-86	1987-88	1991-92
15 or more	1986-87	1988-89	1991-92
10 or more	1987-88	1989-90	1991-92
5 or more	1988-89	1990-91	1991-92
less than 5	1989-90	1991-92	1991-92

\* Average harvest is based on Carney et al. 1983 (Distribution of waterfowl species harvested in states and counties during 1971-80 hunting seasons. U.S. Fish and Wildlife Service Special Scientific Report—Wildlife No. 254).

(b) If States, through monitoring, demonstrate during annual Fish and Wildlife Service Regulations Committee meetings that neither of the following two decision criteria are met in a county scheduled for conversion to a nontoxic shot zone, that conversion can be deferred until (but not beyond) the 1991-92 hunting season (monitoring of the latter must include a sample of at least

100 birds of waterfowl species susceptible to lead poisoning):

(1) Dead waterfowl; 3 or more individual specimens confirmed as lead-poisoned during the monitoring year, nor

(2) Ingested shot in gizzards; 5 percent or greater of the sample have gizzards with 1 or more lead shot, and

(i) Liver lead; 5 percent or greater of the sample have livers with concentrations of lead 2 ppm or higher (wet weight), or

(ii) Blood lead; 5 percent or greater of the sample have blood with concentrations of lead 0.2 ppm or higher (wet weight),

(iii) Protoporphyrin; 5 percent or greater of the sample have blood with protoporphyrin concentrations of 40 ug/dl or higher.

(c) Established nontoxic shot zones will not be eligible for deferral or rescission from conversion in any manner.

(d) There is no deferral past the 1991-1992 nationwide conversion year. States may elect to forgo monitoring and/or otherwise convert to nontoxic shot zones on an accelerated basis, i.e., less than a county, countywide or statewide.

(e) States may accelerate conversion on less than a county basis for purposes of completing a biological or enforcement/management unit; however, the minimum conversion schedule [set out in the June, 1986, Final Supplemental Environmental Statement on the use of lead shot for hunting migratory birds in the United States, Appendix N] will be adhered to.

(f) Where a portion, but not all, of a county is included in nontoxic shot zones for the 1986-87 or later waterfowl hunting season, the remainder of the county will convert in the year that it would otherwise be converted on the basis of its total county waterfowl harvest density.

(g) When a county is converted to nontoxic shot status under this paragraph, it will be added to the list of nontoxic shot zones contained in § 20.108 and all the prohibitions of § 20.21(j) will apply.

Dated: October 24, 1986.

William P. Horn,

Assistant Secretary for Fish and Wildlife and Parks.

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