toxicity study using commerciallyavailable duck food and including blood tests and organ analysis. Test 2 is a chronic 14-week toxicity test in cold weather using a nutritionally-deficient diet, and test 3 is a chronic-dosage study that includes reproductive assessment using a commercially-available duck food diet. For bismuth-tin shot to achieve interim conditional approval, results from test 1 (30-day acute toxicity) must show a finding of nontoxicity to waterfowl. Unconditional final approval will result when the second and third tests are concluded with a finding of nontoxicity.

The Bismuth Cartridge Company contracted with Dr. Glen Sanderson, Center for Wildlife Ecology, Illinois Natural History Survey, to conduct the 30-day (short-term) acute toxicity study. Results from the test indicate that bismuth-tin is not toxic when ingested by waterfowl. As stated in the proposed rule of August 22, 1994 (59 FR 43088), ". . . this concluding work will be completed before any final rulemaking 'Having received these test results and final report, the Service now issues this final rule providing interim conditional approval to the use of bismuth-tin shot for the remainder of the 1994–1995 migratory bird hunting

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. Ingestion of spent lead shot has long been identified as a source of significant mortality in migratory birds. The Service first addressed the issue of lead poisoning in waterfowl in a 1976 environmental impact statement (EIS), and later readdressed the issue in a 1986 supplemental EIS. The latter provided the scientific justification for the ban on the use of lead shot for hunting waterfowl and coots that was begun in 1986 and completed in 1991. 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.

In summary, this rule provides interim conditional approval for the use of bismuth-tin shot for waterfowl and coot hunting only for the 1994–1995 hunting season. Further approval will be granted only upon satisfactory completion of the remaining tests required by the Service and the regulations at 50 CFR 20.134, and upon availability of a field detection device to address law enforcement concerns.

Public Comments

The August 22 proposed rule invited comments from interested parties. Closing date for receipt of all comments was September 21, 1994. During this 30-day comment period, the Service received 351 comments. These comments consisted of 2 from Flyway Councils, 5 from Federal agencies, 19 from State fish and wildlife agencies, 23 from other organizations, and 302 from individuals, including a letter signed by 33 Congressmen. A brief summary of those comments is as follows:

The Mississippi and Pacific Flyway Councils both opposed the proposal. The Mississippi Council cited incomplete toxicity testing, enforcement problems caused by lack of a simple field identification technique and the timing of the approval. The Pacific Council stated that "this expedient action abandons the hard-fought standards set for waterfowling ammunition, fails to consider impacts on law enforcement and education programs, and unnecessarily sets a precedent for special exemptions."

Four of the Federal agency comments were submitted by law enforcement personnel and opposed the action, primarily on the basis of enforcement problems caused by lack of a noninvasive field method to distinguish bismuth-tin from lead. They suggested further that approving bismuth-tin will provide an additional opportunity for those using lead to go undetected. Comments reiterated the need for the development of a cheap, easy noninvasive field test to distinguish between bismuth-tin and lead. The Canadian Wildlife Service appeared to endorse the action with a statement that the conditional approval of bismuth shot would be consistent with actions taken in Canada. Bismuth is apparently considered nontoxic in Canada since the comment indicated that toxic shot is defined as anything containing more than one percent lead.

Nineteen comments were received that represented 18 States (2 comments from Maryland). Of the 19 comments, 6 endorsed the proposal, 13 opposed it. Opposition came from Arkansas, Colorado, Delaware, Indiana, Kentucky, Minnesota, Missouri, Montana, Washington, and Wisconsin. These comments also raised the issue of enforcement difficulties, incomplete toxicity testing, and concern about timing (delay approval until 1995–96 hunting season). Support for this action came from Louisiana, Maryland, Mississippi, Nevada, and New Jersey.

Organizations were represented by 23 comments. Of the 23 comments, 21

endorsed the proposal and 2 (McGraw Wildlife Foundation and National Wildlife Federation) opposed it. Opposition was based mainly on concerns that "shortcuts" were being taken on testing procedures for toxicity and that the process was "moving too fast." Support came from Ontario Federation of Anglers & Hunters, Safari Club International, Arkansas Wildlife Federation, International Association of Fish and Wildlife Agencies, Congressional Sportsman Foundation, National Rifle Association, South Carolina Waterfowl Association, The Wildlife Legislative Fund of America, Catahoula Lake Conservation Club. Alabama Waterfowl Association, Inc., California Waterfowl Association, Sporting Shooters' Association of Australia (Inc.), New Jersey State Federation of Sportsman's Clubs, Inc., Michigan United Conservation Clubs, Ducks Unlimited, The American Outdoorsman Hunting Club, International Joint Commission—Great Lakes, ASARCO, Inc., Smoking Barrel Duck Club, The Bismuth Cartridge Company, and the Sportsman's Council of Central California.

Individuals submitted 302 comments with 299 favoring the action and only 3 opposing it. The comments favoring the approval of bismuth-tin were, in fact, generally anti-steel, restating opposition to steel shot due to such factors as crippling loss and gun-barrel damage. The consensus expressed support of anything that could replace steel.

Response to Comments

Opposition to the regulation focused on 3 major areas: enforcement, toxicity testing, and timing.

1. Enforcement—Concern was expressed in the comments that there is no simple procedure to distinguish bismuth-tin shot from lead shot in the field, creating a burden on law enforcement personnel. The Service recognizes this difficulty and acknowledges that a prescribed field testing method (short of exposing the shot through invasive inspection) to determine shot composition should ideally be in place before approval. In fact, field methods are currently being developed to address this concern. Since resistance to steel shot is promoting a climate for noncompliance, however, it is important to provide an alternative to steel shot that could give the public greater choice during this interim period and improve hunter compliance, thereby reducing the amount of lead shot being used. In addition, increased hunter use of this alternative shot could benefit upland habitats, through the diminished use of