NONTOXIC SHOT FOR UPLAND BIRDS

Beginning September 1, 1998, nontoxic shot will be required for all small game hunters and target shooters with shotguns on most public land in South Dakota.

The public lands where nontoxic shot is required for small game hunting and target

shooting with shotguns, include:

➤ State Game Production Areas

➤ State Park and Recreation Areas and Lakeside Use Areas

➤ State Water Access Areas

➤ U.S. Fish and Wildlife Service Waterfowl Production Areas

➤ U.S. Fish and Wildlife Service National Wildlife Refuges

➤ U.S. Army Corps of Engineers lands, except target shooting with toxic shot is allowed on Corps of Engineers lands not managed by Game, Fish and Parks

➤ U.S. Bureau of Reclamation lands managed by Game, Fish and Parks

Shot size and choke

For hunters who have been using steel shot for waterfowl hunting in South Dakota since the 1970s, making the change shouldn't be too difficult.

For those who haven't used steel shot for waterfowl hunting, the hunters who have used steel on upland birds have a few simple guidelines that might help. Steel is lighter than lead, so the best results will usually be had using larger shot sizes. Experience has shown that for pheasants, the best shot sizes are #2, #3 and #6. Sixes are very effective at the short ranges typical for much upland hunting. The larger sizes are better at longer ranges.

Steel shot patterns significantly tighter than lead, so most hunters have found that improved cylinder choke is the most effective for upland hunting with steel. Finally, since upland hunters typically take shots at much closer range than waterfowlers do, experience has shown that steel shot is actually more effective than lead.

Why use nontoxic shot for upland hunting?

Hunters who have never seen lead-poisoned birds in the field wonder why upland hunters are being required to use nontoxic shot on public lands.

The following information on lead poisoning and the difficulty of detecting it explain why this new rule is the right thing to do.

Problems associated with documenting lead poisoning waterfowl losses

A comprehensive research study in Texas concluded, "Lead poisoning mortality differs from the volatile, epidemic diseases that kill hundreds of healthy birds within hours. Lead poisoning mortality is a slow, lingering malady with casualties scattered over thousands of square miles of habitat. In addition, it occurs during lengthy time periods. Not all birds die at one time and location."

To determine the accuracy of documenting waterfowl die-offs, researchers deposited 100 duck carcasses in a 100-acre marsh. Fifty birds were placed in typical escape cover and the other 50 were placed at random on top of vegetation and were completely exposed. Approximately 30 minutes after placement of birds, a search crew of eight persons was sent in to look for the birds, with no time limit. None of the birds in cover were found and only 12% of the birds on top of cover were found.

In another part of the study, 47 duck carcasses were placed in three types of locations: under cover, on top of cover or tied to poles in open water. Those in cover were eaten by predators and scavengers in an average of 2.6 days, those exposed on cover were gone in an average of 3.8 days, and those in open water disappeared in an average of 11.2 days.

The conclusion was that "The carcass longevity study demonstrated that low density waterfowl die-offs are difficult if not impossible to document because carcasses are quickly assimilated into the environment. Further, the information demonstrated that only large-scale losses are prone to be discovered, when birds die in sufficient numbers to exceed the capabilities of predators and scavengers to remove evidence, and when the dead birds are not in cover."

Other problems related to lead shot

In 1996 avian cholera caused a die-off of Canada geese and mallards at Lac Qui Parle Wildlife Area in Minnesota near the South Dakota border. During the investigation, the discovery was made that about 15% of the birds picked up were suffering from lead poisoning. This lead to additional speculation that sublethal lead poisoning contributed to the avian cholera outbreak. The exact source of the lead shot is unknown but apparently was either from lead shot deposited by waterfowl hunters prior to 1991 or by upland bird hunters in near-by fields.

Effects of lead pellets on upland game birds

The susceptibility of upland game and raptors to lead shot poisoning has been documented in studies and natural occurrences dating back to 1882. Reports of poisoned birds found incidentally in the wild include pheasants in England, Nebraska and California; bobwhite quail in Florida, Illinois, Alabama and Texas; scaled quail in New Mexico; Hungarian partridge in Denmark; sandhill crane in Wisconsin, Nebraska, Texas and Mississippi; mourning dove in several states; rock dove in Maryland; and wild turkey in New York. Lead poisoned raptors found have included bald eagle, golden eagle, red-tailed hawk, rough-legged hawk, peregrine falcon, prairie falcon, Andean condor, and king vulture.

Mourning doves are commonly affected by lead pellet ingestion. This is a concern because South Dakota has one of the highest mourning dove breeding population in the United States. In states where the mourning dove is a more popular game bird more research has been done on factors affecting dove populations. In Maryland, a sample of hunter-killed doves had 6.4% with one or more ingested lead pellets. Additionally, Illinois had 3.6%, New Mexico 3.6%, Virginia 2.9%, Tennessee 1.1%, Alabama 1.0%, and a study covering several mid-Atlantic states showed an incident rate of 2.4%.

In a study measuring the impact of ingested shot, no control birds died but 24% died with 1 ingested lead pellet, and 60% died with 2 pellets. In the same study, female doves that did not die from shot ingestion experienced a significant reduction in hatchability of eggs laid.

Lead shot deposited by upland bird hunters

Much pheasant hunting is conducted in wetlands, especially late in season when hunters can walk on ice and frozen ground in and near vegetative cover, such as cattails, rushes and phragmites, where pheasants are frequently found. Lead shot deposited on ice will drop to the bottom when the ice melts in the spring and become a potential problem to feeding ducks, geese, and swans in some wetlands during some years. Wetlands are dynamic an ever changing, and wetland bottoms are not all the same. A wetland may have a soft bottom but if the wetland becomes dry and the bottom hardens, the bottom may remain hard for a year or so after it has water on it again. Also, a wetland bottom may be naturally hard enough so that deposited lead may be available to bottom-feeding waterfowl and shorebirds for a number of years. Furthermore, in years when a wetland is dry the wetland vegetation is excellent cover for pheasants and cottontails, and therefore hunted throughout the fall hunting season.

Additionally, nearly all State Game Production Areas (GPA's) have wildlife food plots planted on them which are used by upland birds and waterfowl for feeding, especially in the fall when crops on private lands have been harvested. These food plots are obviously places where hunters go to find and shoot birds, and deposit shot on the ground. Food plots, then, concentrate birds which concentrate hunters which concentrate shot deposition which increases shot ingestion by feeding birds which increases lead poisoning if the shot is lead. The large die-off of geese discovered along the Missouri River in the late 1970's was a result of birds eating lead shot deposited by hunters in fields.

Public wildlife lands versus private lands

The nontoxic shot requirement will apply only to public lands where there is a management responsibility to provide habitat for attracting and producing wildlife. Since these lands also usually experience much higher hunting pressure than private lands, they subsequently receive more shot pellets than most private lands. The goal is not to eliminate lead shot for hunting but rather to reduce the threat of lead poisoning to wildlife. This responsible, reasonable, judicious approach will minimize the cost and inconvenience to hunters who still choose to use lead shot on private land, while continuing to make solid progress toward reducing the threat of lead poisoning to wildlife. Another step in this direction is encouragement of voluntary use of nontoxic shot for upland game hunting on private land as well.

Possible magnitude of lead shot deposition and waterfowl losses

A large number of birds can die of lead poisoning without being noticed because of a number of possible circumstances. These circumstances include continued pheasant hunting in food plots and in wetland marshes (either dry or frozen) by hunters in late fall and winter; birds scattered over thousands of square miles of wetlands; the secretive habits of dying birds; and the rapid disappearance of sick and dead birds to predators and scavengers. An example of the possible magnitude of unnoticeable losses is that if only 1 bird dies per 50 acres of wetland each week, then South Dakota's 80,000 acres of GPA wetlands over 32 weeks (7 months) of the year, could produce scattered deaths amounting to 50,000 ducks a year. The potential for this increases each year that hunters deposit lead shot in wetlands and food plots, and the shot continues to accumulate.

For example, if 80,000 resident pheasant hunters (who hunt an average of one day per year on a public

hunting area) each shoots three lead shot shells on an area, with each shell containing 280 pellets (1 1/4 ounces of #6 shot), then each hunter deposits 840 pellets and all resident hunters combined then deposit 67,200,000 lead pellets on public land per year.

Also, if 66,000 nonresident hunters (who spend average of one-half day hunting on public lands) shoot one-half as much lead shot per hunter on public lands as resident hunters, they deposit 420 pellets per hunter and all nonresidents combined deposit 27,720,000 lead pellets on public land per year. Residents and nonresidents then deposit a total of 94,920,000 lead pellets on public land per year. This equates to 339,000 shells, or 13.2 tons of lead.

In a more general perspective, available information supports the expectation that greater occurrences of both bird populations and deposited lead shot exist in habitat managed to attract birds. The U.S. Fish and Wildlife Service Final Supplemental Environmental Impact Statement on the Use of Lead Shot for Hunting Migratory Birds states that “deposition of spent lead shot associated with upland game hunting is almost five times greater (14.000 tons versus 3,000 tons/annum) than that associated with waterfowl hunting.”

States that have restricted/eliminated use of lead shot for upland bird hunting

Nontoxic shot is required for dove on state wildlife management areas in Indiana and Tennessee where dove hunting is the primary upland game bird. Nontoxic shot is required on state wildlife areas in Missouri for snipe and rail hunting. In Nebraska, nontoxic shot is required for all bird hunting on certain state wildlife areas. In Utah, sandhill cranes must be hunted with nontoxic shot, as well as all upland and small game on select wildlife areas.

Location and identification of public lands where nontoxic shot required for small game hunting

Location of all public lands, except U.S. Corps of Engineers land, for small game hunting can be determined by reference to area maps in the annual South Dakota Hunting Atlas published by the South Dakota Department of Game Fish and Parks. These public lands include Walk-In Areas, State Game Production Areas, State Park and Recreation Areas, State Lakeside Use Areas, State Water Access Areas, and U.S. Fish and Wildlife Service Waterfowl Production Areas and National Wildlife Refuges. State Game Production Areas also include U.S. Bureau of Reclamation and U.S. Corps of Engineers lands managed by Game, Fish and Parks.

Also published by the Department of Game, Fish and Parks is a South Dakota Public Hunting Areas booklet which lists names, locations, size, and common game species of each State Game Production Area and U.S. Fish and Wildlife Service Waterfowl Production Area in each county of the State. The Game, Fish and Parks publications can be obtained at the following address: 412 West Missouri, Pierre, SD 57501.

Maps of U.S Corps of Engineers land for each reservoir can be obtained from the following address: Department of the Army, Corps of Engineers - Omaha District, Operations Division - CEMRO-OP-N, 215 North 17th Street, Omaha, NE 68102-4987.

Identification of the State and U.S. Fish and Wildlife Service lands mentioned above can be made at their locations by boundary signs. U.S. Corps of Engineers land along the Missouri River reservoirs cannot always be easily identified by signs, markers or fences and, therefore, more care must be taken in using maps and becoming familiar with the areas.

Nontoxic Shot Required To Hunt Small Game On Public Lands

Small game hunters and target shooters with shotguns will be required to use nontoxic shot on most public lands beginning Sept. 1.

The following public lands are included:

- State Game Production Areas
- Federal Waterfowl Production Areas
- State Park and Recreation Areas and Lakeside Use Areas
- State Water Access Areas
- National Wildlife Refuges
- U.S. Army Corps of Engineers lands
- U.S. Bureau of Reclamation lands managed by Game, Fish and Parks

In addition, target shooting with shotguns using lead shot will be prohibited on the following public lands:

- State Game Production Areas
- State Water Access Areas
- State Park and Recreation Areas and Lakeside Use Areas.
- U.S. Corps of Engineers and U.S. Bureau of Reclamation lands managed by Game, Fish and Parks.

Although these prohibitions do not apply to Walk-in Areas, the use of nontoxic shot is recommended.

SOUTH DAKOTA GAME, FISH and PARKS