

**SUMMARY OF THE PETITION FOR RULEMAKING
TO ADDRESS LEAD POISONING FROM TOXIC AMMUNITION IN CALIFORNIA**

Petitioners request that the California Fish and Game Commission adopt regulations requiring the use of non-lead ammunition, including bullets and shot, for all hunting within the State of California. Petitioners request that regulations requiring the use of non-lead ammunition within California condor habitat be promulgated on an emergency basis.

Lead has long been identified as a highly toxic substance. Health effects from lead exposure can run the gamut from acute, paralytic poisoning and seizures to subtle, long-term mental impairment, miscarriage, and impotence. General prohibitions on the use of lead in media that affect human populations are widespread. We have eliminated lead from gasoline, prohibit its use in water supply systems, and are deeply invested in remediating its widespread occurrence in paint.

The metal remains, however, widely encountered and distributed in the environment in the form of lead ammunition. The continued preference of many hunters for traditional lead bullets and shot exposes any animal that preys or scavenges on targeted wildlife to lead's toxic effects. Particularly susceptible are avian species such as eagles and vultures, with 97% of bald eagles and 86% of golden eagles showing elevated blood levels of lead in one study (Harmata and Restani 1995). They encounter lead in carcasses left in the wild, in gut piles from animals cleaned in the wild, and in wounded prey species that survive hunting and carry lead ammunition in their bodies. Unequivocal evidence shows that California condors, bald and golden eagles and turkey vultures experience highly elevated blood lead levels as the result of ingesting ammunition. Numerous instances of individual bird mortalities associated with lead ammunition ingestion have been recorded.

Among these avian species, none is in such dire straits, and so plainly and urgently at risk from lead ammunition, as the California condor. Listed as endangered on federal and California endangered species lists and designated a "fully protected species" under California law, the condor is one of the world's most imperiled birds. Today, after an intensive captive breeding program, there are about 100 condors in the wild. The extraordinary, risky, and controversial strategy of bringing all then-remaining condors into a captive breeding program in 1985 was approved by both the Commission and the California Department of Fish and Game (CDFG) expressly because of the high risks the birds faced in the wild, particularly from lead poisoning.

As much progress as the condor recovery effort has made, the birds are being released back into an environment that is no more hospitable than it was when they were removed twenty years ago. Of the 67 condors released into the wild in Southern California from 1992 to 2002, fully 32 are dead or presumed dead (USFWS 2004a). Lead is now, or is rapidly becoming, the single greatest mortality factor for released condors. The California Condor Lead Exposure Reduction Steering Committee, a subcommittee of the U. S. Fish and Wildlife Service (USFWS) California Condor Recovery Team, concluded in a 2003 report that "lead poisoning is a demonstrable

obstacle in the recovery of the California condor.” This committee is made up of wildlife biologists, conservationists, and game managers, as well as hunting and gun advocates - a strikingly broad coalition of stakeholders. CDFG commissioned a recent study by University of California, Davis researchers that came to the same conclusions (Fry and Maurer 2003). With 35% of released condors experiencing acute lead poisoning by 2001 (Wiemeyer 1988; Risebrough et al. 2001), numerous researchers have concluded that reintroduction efforts cannot be expected to result in viable condor populations until sources of lead contamination in the environment are effectively addressed (Meretsky et al. 2000, 2001; Snyder and Snyder 2000; Beissinger 2001, 2002; Snyder and Schmidt 2002). Previous studies of reintroduction programs corroborate that unless the threats and limiting factors for a species are controlled or eliminated over biologically significant areas, there is a very high probability that the reintroduction will fail (see Griffith et al. 1990).

Human beings are also at risk from lead ammunition. Those who handle or hunt with lead are exposed to lead residues and airborne lead particles. Graver risks are faced by those who consume wildlife taken with lead ammunition, which can leave particles too fine to find and remove. Also at risk are people in communities where lead from shooting ranges and dumps accumulates up in soils and water near homes.

Fortunately, alternatives to the use of lead in bullets and in shot are now available, and some of them have superior performance characteristics to their lead counterparts. Switching to alternative ammunition does not entail the problems encountered when waterfowl hunters changed to steel shot years ago. Even without the presence at this time of a large market to drive down prices, purchase of alternative ammunitions represents a very small increase in the total price of a hunting trip, on the order of \$15.

The Commission, through its authority to regulate all aspects of hunting in California, can directly and substantially reduce the adverse impacts of lead on the State's environment. The Commission has a clear, legal responsibility to halt the harmful exposure of California's protected and endangered species, including the condor and the bald and golden eagles, to the toxic effects of lead ammunition. The Commission has the opportunity to take the significant step of ending one of the last vestiges of our society's once widespread, unthinking, and disastrous use of a highly toxic compound in everyday materials and goods.