

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Amended Pre-publication of Notice Statement)

Amend Section 475
Title 14, California Code of Regulations (CCR)
Re: Methods of Take for Nongame Birds and Nongame Mammals

I. Date of Initial Statement of Reasons: September 10, 2007

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: August 27, 2007
Location: Sacramento

(b) Discussion Hearings: Date: October 12, 2007
Location: Concord

Date: November 2, 2007
Location: Sacramento

(c) Adoption Hearing: Date: December 7, 2007
Location: Sacramento

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

The existing regulations provide for methods to be used, as well as methods prohibited, for the take of nongame birds and nongame mammals. Traditionally, bullets made of lead have been used for take of many nongame birds and nongame mammals. Hunting or take of these species may result in killed animals being un-recovered (lost) in the field; it can also result in these animals being killed and "field-dressed" with lead bullet fragments remaining in the disposed of portions (e.g., internal organs) being left in the field. Scavengers typically feed on these remains. The endangered California condor is a scavenging species that feeds on carcasses of dead animals. In California, they are known to feed primarily on large mammals such as cattle, marine mammals, deer, wild pig, and possibly elk. Condors could encounter the remains of hunted nongame species in some cases and could potentially ingest lead fragments.

The regulation changes proposed would require “non-lead” projectiles for nongame hunting in the geographic area determined by the Fish and Game Commission as described in the legislation recently signed by the Governor (AB 821) to reduce risk of indirect lead toxicity to free-ranging California condors. AB 821, which is described in section 3004.5, Fish and Game Code, only addresses one species of nongame animal, the coyote. The changes proposed here will enable the Commission to bring all nongame hunting into consistency with the intent of the statute. A small percentage of lead would be allowed to account for the inclusion of trace elemental lead which may be contained within the projectile as part of the production process.

There has been known concern regarding potential risk of lead bullet fragmentation and potential toxicity to the California condor for several years, with the Department recommending that hunters voluntarily use non-lead projectile alternatives or bury internal organs and trimmed meat resulting from field-dressing a carcass in condor range. Additionally, a recent study indicates that considerable fragmentation of lead projectiles in the body occurs when large mammals are killed. Another study reported that examination of lead exposure and mortality in condors indicated that lead isotope ratios detected in blood samples from California condors closely matched lead isotope ratios from local, available lead ammunition. These results have caused some to infer that lead from hunters’ projectiles could be contributing to lead toxicity in the condor as it relates to big game hunting, and possibly nongame hunting as well.

The intent of the proposed regulation change is to reduce the risk of indirect lead poisoning to the California condor (as well as other scavenging birds) from nongame hunting activities by requiring “non-lead” projectiles. When used in this document and in the proposed regulation, “non-lead” projectiles means projectiles that contain only trace amounts of lead resulting from the projectile production process. The Commission will establish a maximum amount of lead allowable in projectiles that will be based on available information.

The proposed changes:

1. Establish the regulatory definition of projectile. A “projectile” is defined as any bullet, ball, sabot, slug, buckshot, shot, pellet or other device which is expelled from a firearm through a barrel by the force of any explosion.
2. Establish a maximum threshold of allowable lead in a projectile to account for trace elements present in the projectile production

process. The Commission will determine a maximum threshold based on input from ammunition manufacturers, scientists, and the public.

3. Establish the geographic area in which non-lead projectiles would be required for nongame hunting (the minimum area for coyote hunting has been established by section 3004.5, Fish and Game Code. Options for geographic area for nongame hunting are:
 - a. ~~Current California condor range as represented by the area shown in **Figure 1**. Based on information available to the Department, the condor currently inhabits these areas. The area described in recently passed Legislation (Fish and Game Code 3004.5) (Figure 1).~~
 - b. Current and historical range as represented by deer hunt zones in Title 14, CCR, Section 360 as South A (Unit 110), D7, D8, D9, D10, D11, and D13 as shown in **Figure 2**. This would expand the area defined in section 3004.5, Fish and Game Code, to follow the corresponding deer hunt zones. ~~Based on information available to the Department, the condor does not currently inhabit areas of Zones D7, D8, or D9.~~
 - c. Statewide. Based on information available to the Department, the condor does not currently inhabit the entire State.
4. Establish that it is unlawful to possess any projectile containing lead in excess of the amount permitted and a firearm capable of firing the projectile while taking or attempting to take any nongame species (exempting .22 caliber or less as described in proposed change #5 below).
5. Exempt .22 caliber or smaller, rimfire cartridges and their projectiles from the non-lead projectile requirement. These calibers would be exempted because there are no feasible non-lead alternatives. Therefore, coyote hunting with a .22 caliber or smaller, rimfire cartridge and their projectiles is prohibited per section 3004.5, Fish and Game Code. Nongame species killed with a .22 caliber or smaller cartridges are typically small mammals that are not considered a staple food source for condors to scavenge.

Enforcement of the proposed projectile regulations is expected to be problematic, but the Department continues to work with the ammunition and

bullet manufactures, and other industries to develop tools to better enforce the proposed regulations regarding non-lead projectiles.

Figure 1. Option 3a, proposed non-lead area for nongame hunting, per 3004.5, Fish and Game Code.

[note: original Figure 1 has been deleted. For reference, it was the shaded area shown as "Condor Range" in Figure 2 below]

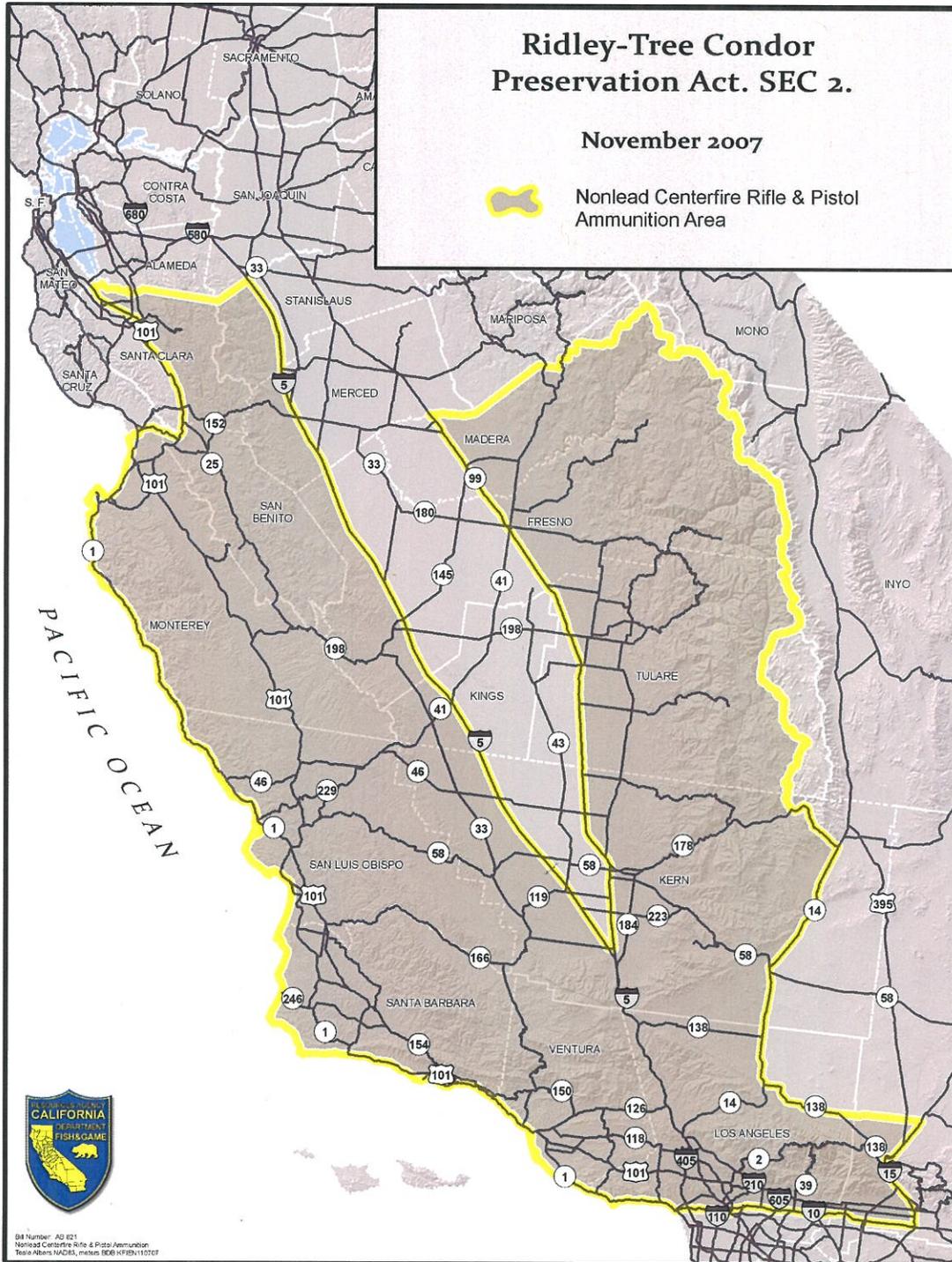
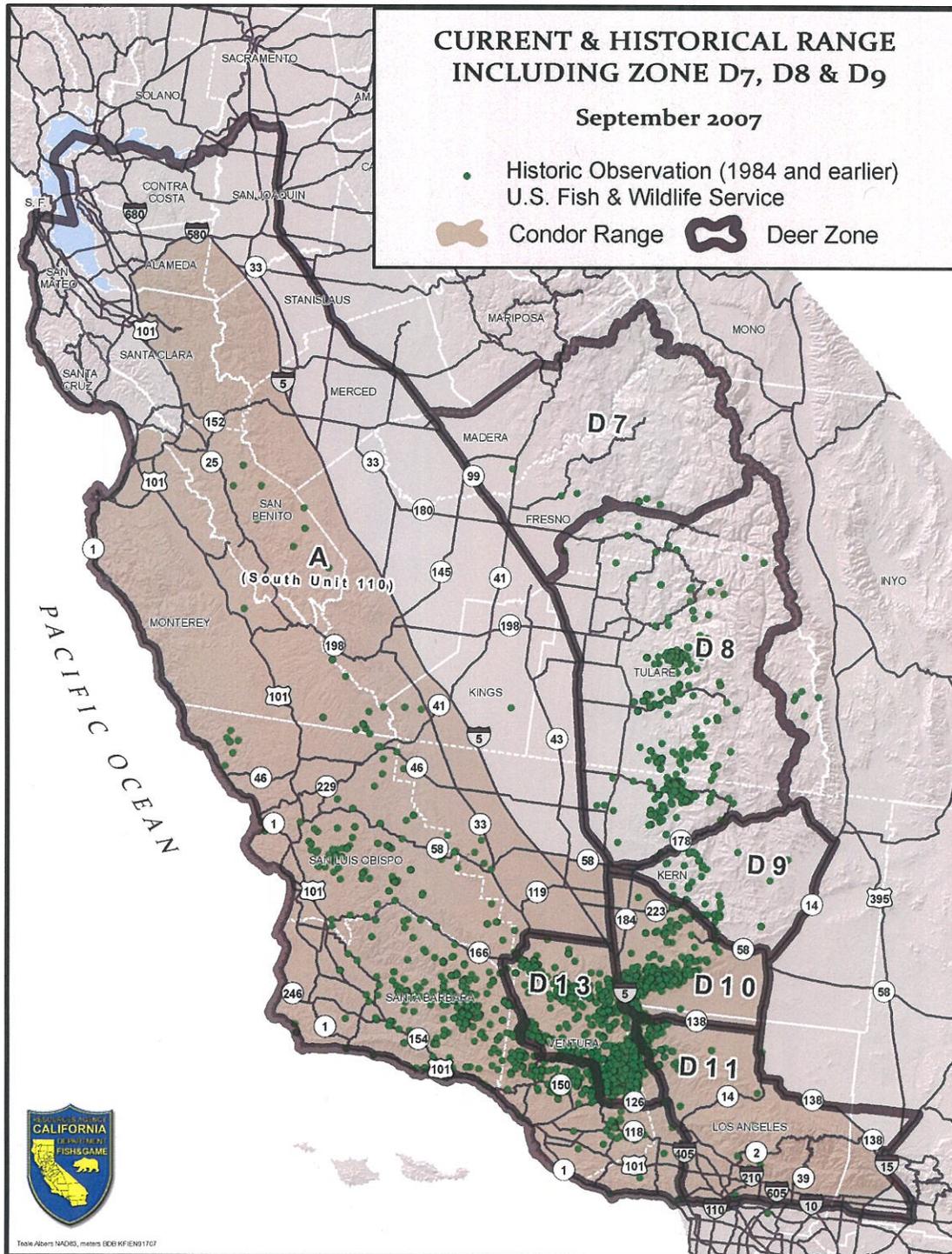


Figure 2. Option 3b, alternative non-lead area for nongame hunting that illustrates deer zone boundaries for option 3b, overlaid on the proposed Option 3a area.



- (b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority: Sections 200, 202, 203, 355, 3003.1, 3800, and 4150 Fish and Game Code.

Reference: Sections 200, 202, 203, 203.1, 207, 355, 356, 2055, 3004.5, 3800, and 4150 Fish and Game Code.

- (c) Specific Technology or Equipment Required by Regulatory Change:

The proposed change requires hunters in specified areas of the State who use centerfire bullets, muzzleloading balls, slugs, buckshot, shot and/or pellets for take of nongame birds and nongame mammals, to use projectiles containing a specified percentage of lead, by weight.

- (d) Identification of Reports or Documents Supporting Regulation Change:

2007 Draft Environmental Document entitled: "DRAFT ENVIRONMENTAL DOCUMENT REGARDING: Sections 353 and 475 of Title 14, California Code of Regulations, Methods Authorized for Taking Big Game and Methods of Take for Nongame Birds and Nongame Mammals".

Michael Fry, January 24, 2003. Assessment of Lead Contamination Sources Exposing California Condors – Final Report.

Christine Kreuder Johnson et al., February 2007. Lead Exposure in California Condors and Sentinel Species in California.

Church ME, Gwiazda R, Risebrough RW, Sorenson K, Chamberlain CP, Farry S, Heinrich W, Rideout BA, Smith DR. 2006. Ammunition is the principal source of lead accumulated by California condors re-introduced to the wild. *Environ Sci Technol.* 40(19):6143-50.

Hunt, W.G., W. Burnham, C.N. Parish, K.K. Burnham, B. Mutch, and J.L. Oaks. 2006. Bullet fragments in deer remains: Implications for lead exposure in avian scavengers. *Wildl. Soc. Bull.* 34(1): 167-170.

- (e) Public Discussions of Proposed Regulations Prior to Notice Publication: The Department held one public scoping meeting (October 11, 2006) regarding environmental concerns related to the mammal hunting regulations. The topic of lead projectiles in condor range was the dominant issue brought up at the meeting. On December 7, 2006, the Department provided the Fish and Game Commission information on the status of the coming regulation cycle and identified the proposed

regulation change as one alternative that was being prepared for consideration.

Additionally, this topic has been an item of discussion at each regularly scheduled Fish and Game Commission Meeting since February 2, 2007 (a total of seven (7) meetings). The Fish and Game Commission held a special meeting on August 27, 2007 in Sacramento dedicated solely to the discussion of this issue.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

1. For all nongame except coyote, allow continued use of traditional lead projectiles in obsolete and/or "wildcat" cartridges with the hunter required to remove all portions of the animal from the field so that the remains are unavailable to scavengers (note: a wildcat cartridge is a cartridge that uses the case of a commercially sold cartridge fitted with a bullet of a different caliber. A wildcat cartridge is usually not sold commercially and no complete weapons are made for it. However, barrels for the caliber are often manufactured by both weapons manufacturers and gunsmiths specialized in making barrels).

This alternative would allow nongame hunters to continue to use lead projectiles as ammunition for which, due to low demand, high manufacturing costs, and inherent product design, suitable non-lead projectile alternatives are not available. Hunting of coyote with lead projectiles is prohibited as described in section 3004.5, Fish and Game Code. This alternative would require the Department to anticipate the development of unknown custom cartridges which is an impossible task. Additionally, avoidance of the lead exposure pathway in this alternative primarily relies upon hunter retrieval of every animal shot and killed so that lead is not available. Long-term data on wounding loss of big game indicates that some animals will not be recovered by hunters, thereby posing an indirect risk. The same would apply to hunted and shot nongame species.

2. For all nongame except coyote, allow continued use of all traditional lead projectiles and require hunters to remove from the field all portions of the animal or bury internal organs and trimmings resulting from the field dressing process. Hunting of coyote with lead projectiles in the historic range of the condor is prohibited as described in section 3004.5, Fish and Game Code.

Avoidance of the lead exposure pathway in this alternative primarily relies upon hunter retrieval of every animal shot and killed so that lead is not

available. However, some nongame birds and mammals, as with big game, will not be recovered by hunters, thereby posing an indirect risk.

(b) No Change Alternative:

The no change alternative would result in continued risk of indirect lead poisoning from legal nongame hunting activities of species other than the coyote to the California condor; and more importantly, would now be inconsistent with section 3004.5, Fish and Game Code.

Recommendations to all nongame bird and mammal hunters, hunting species other than coyote, to voluntarily use non-lead ammunition in condor range would continue as would recommendations to bury or dispose of remains so they are unavailable to scavengers.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purposes for which the regulation is proposed or would be as effective and less burdensome to the affected private persons than the proposed regulation.

V. Mitigation Measures required by the Regulatory Action:

The proposed regulatory action will have no significant negative impacts on the environment, therefore, no mitigation measures are needed.

These alternatives and the proposed action are further described in the 2007 Draft Environmental Document entitled "DRAFT ENVIRONMENTAL DOCUMENT REGARDING: Sections 353 and 475 of Title 14, California Code of Regulations, Methods Authorized for Taking Big Game and Methods of Take for Nongame Birds and Nongame Mammals".

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations regarding the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The Department does not believe that the proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

Based on information currently available, the Department does not believe that requiring the use of non-lead ammunition for the hunting of nongame birds and nongame mammals in California condor range will cause any significant changes to hunting programs administered by the Department or to the public.

- (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California:

Ammunition retailers not offering non-lead ammunition options will likely experience a reduction in sales and revenue. Those can be mitigated by including non-lead ammunition in their sales inventory. Additionally, the demand for non-lead ammunition alternatives for a variety of purposes (enforcement, security, target practice) in addition to hunting is increasing.

- (c) Cost Impacts on a Representative Private Person or Business:

Department research indicates that although the number of manufacturers currently producing non-lead ammunition is limited and the price of non-lead ammunition is higher in cost than lead ammunition, neither of these factors will result in significant adverse cost impact to California's nongame hunters:

The difference in price for a box (20 rounds) of non-lead ammunition compared to lead ammunition varies depending on caliber and ranges from \$1.00 (2%) for 7mm caliber to \$5.00 (22%) for .243 caliber.

Differences in non-lead bullet costs for reloading (50 bullets/box) ranged from \$8.60 (37%) for .270 caliber to \$11.04 (65%) for .224 caliber.

Although production may be limited at the present time, a variety of ammunition retailers do offer non-lead ammunition in most calibers used in nongame hunting.

When viewed as part of the total cost of a hunting trip however, (license, food, lodging, fuel, taxidermy, etc.) the increased amount (up to \$5.00 for a box of ammunition and up to \$11.04 for a box of bullets) is not considered significant.

- (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None. There has been some concern from the public that decreased hunting license sales would result, and in turn, decreased funding in

federal funds available to the state through the Federal Aid in Wildlife Program (Pittman-Robertson Act). The Department of Fish and Game has no data to substantiate that this will happen, although a survey of hunters in Fall 2006 suggested some would not buy hunting licenses if this regulatory change were made.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4:

None.

(h) Effect on Housing Costs:

None.

Informative Digest/Policy Statement Overview

The existing regulations provide for methods to be used to take nongame birds and nongame mammals; and traditionally, projectiles (bullets) containing lead have been used. The regulation changes proposed would require "non-lead" projectiles for nongame bird and mammal hunting in the geographic area determined by the Fish and Game Commission to reduce risk of indirect lead toxicity to free-ranging California condors. Additionally, the proposed changes will reflect conformance with the recently passed AB 821 and language contained in Section 3004.5 of the Fish and Game Code. For nongame species other than the coyote, an exemption to this requirement is proposed for .22 caliber or less rimfire cartridges, for which no non-lead alternative is available. Lead-alternative projectiles are primarily made of copper, and are considered effective for hunting and are not considered to be toxic to the California condor.

The proposal will allow the Fish and Game Commission to:

1. Establish the regulatory definition of projectile. A "projectile" is defined as any bullet, ball, sabot, slug, buckshot, shot, pellet or other device which is expelled from a firearm through a barrel by the force of any explosion.
2. Establish a maximum threshold of allowable lead in a projectile to account for trace elements present in the projectile production process. The Commission will determine a maximum threshold based on input from ammunition manufacturers, scientists, and the public.
3. Establish the geographic area in which non-lead projectiles would be required for nongame hunting. Options for geographic area are:
 - a. ~~Current California condor range as represented by the area shown in Figure 1. Based on information available to the Department, the condor currently inhabits these areas. The area described in section 3004.5 Fish and Game Code (Figure 1).~~
 - b. Current and historical range as represented by deer hunt zones in Title 14, CCR, Section 360 as South A (Unit 110), D-7, D-8, D-9, D-10, D-11, and D-13 as shown in Figure 2. This would expand the area defined in section 3004.5 Fish and Game Code to follow the corresponding deer hunt zones. ~~Based on information available to the Department, the condor does not currently inhabit areas of Zones D-7, D-8, or D-9.~~

- c. Statewide. Based on information available to the Department, the condor does not currently inhabit the entire State.
4. Establish that is unlawful to possess any projectile containing lead in excess of the amount permitted and a firearm capable of firing the projectile while taking or attempting to take any nongame species (exempting .22 caliber or less as described in proposed change #5 below).
5. Exempt .22 caliber or smaller, rimfire cartridges and their projectiles from the non-lead projectile requirement. These calibers would be exempted because there are no feasible non-lead alternatives. Therefore, coyote hunting with a .22 caliber or smaller, rimfire cartridge and their projectiles is prohibited per section 3004.5, Fish and Game Code. Nongame species killed with a .22 caliber or smaller are typically small mammals that are not considered a staple food source for condors to scavenge.

Since the 1980s, State, federal, and non-profit organizations have diligently worked to save and reintroduce the endangered California condor into the wilds of its former range. These conservation efforts, including substantial research investigations, have resulted in the determination that lead toxicity/lead poisoning is a factor affecting condor health and survival. The Department mission is to conserve California's wildlife for use and enjoyment by the public. The intent of this regulation change is to reduce the risk to the condor from lead poisoning through nongame bird and nongame mammal hunting activities.