

**Availability and Use of Nonlead Rifle Cartridges
and Nontoxic Shot for Hunting in California, with
Reference to Regulations used in Various
Jurisdictions
&
Survey of California Ammunition Retailers to
Assess Availability of Nonlead Ammunition**

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From the signing message

“I am directing the Department to work tirelessly with the Commission and its constituents to consider and act on any and all options for facilitating the least disruptive phase-in, including incentives for hunters to make this transition.”

http://gov.ca.gov/docs/AB_711_2013_Signing_Message.pdf



Requirements of the law

1. Maintain existing Condor zone restrictions
2. Maintain certification process
3. Establish regulations by July 2015 that phase-in requirements
4. Implement as soon as practicable
5. Exemption for potential ATF ban
6. Fully implement by July 2019
7. Maintains coupon (incentive) program



General considerations

1. Broad input needed
2. View least disruptive as availability
3. Current availability of alternatives is not fully known at this time
4. Meet statutory deadlines
5. Meet other administrative requirements
6. Regulations = simple and enforceable



DFW approach

1. Develop a starting point proposal that implements phases based on current understanding of availability (practicable)
2. Develop and implement an aggressive outreach program
3. Work with the WRC to develop regulation recommendation
4. Timing goal = one regulation recommendation by September 2014



Current uncertainties

1. True availability of existing nonlead ammunition – would it meet demand?
2. Potential availability – what would be the market response to regulation?
3. How much lead time does the market need?
4. Availability of field testing equipment for law enforcement

DFW starting point reflects these



Purpose of this report:

- (a) Provide an overview of market availability of various nonlead ammunition for the hunting of all designated species in California;**
- (b) Provide a snapshot of nonlead hunting ammunition retail availability as of summer 2014 in a substantial sampling of California retail stores; and,**
- (c) Document the reasons why some stores report little or no inventory of nonlead hunting ammunition.**

Table 1. A list of nontoxic shot cartridges available for hunting upland game species of birds and mammals in California. A + indicates that the type of nontoxic shot is appropriate for that species.

	Types of nontoxic shot			
	Steel shot ¹	Tungsten-Matrix ²	HEVI-Shot ³	RST Nice Shot ⁴
Shotshell gauge/caliber manufactured	10, 12, 20 ga	10,12, 20 ga	10,12,16, 20, 28, .410	10,12, 16, 20, 28
GAME SPECIES				
Ring-necked Pheasant <i>Phasianus colchicus</i>	+	+	+	+
Quail <i>Callipepla californica</i>	+	+	+	+
<i>C. gambelii</i>	+	+	+	+
<i>Oreortyx pictus</i>				
Chukar Partridge <i>Alectoris chukar</i>	+	+	+	+
Sage Grouse <i>Centrocercus urophasianus</i>	+	+	+	+
Ruffed Grouse <i>Bonasa umbellus</i>	+	+	+	+
Blue Grouse <i>Dendragopus obscurus</i>	+	+	+	+
White-tailed Ptarmigan <i>Lagopus leucurus</i>	+	+	+	+
Turkey <i>Meleagris gallopavo</i>	+	+	+	+
Mourning Dove <i>Zenaida macroura</i>	+	+	+	+
White-winged Dove <i>Zenaida asiatica</i>	+	+	+	+
Band-tailed Pigeon <i>Columba fasciata</i>	+	+	+	+
Exotic species of doves & pigeons	+	+	+	+
Snipe <i>Gallinago gallinago</i>	+	+	+	+
American Crow <i>Corvus brachyrhynchos</i>	+	+	+	+

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Shotshell gauge/caliber manufactured	10, 12, 20 ga	10,12, 20 ga	10,12,16, 20, 28, .410	10,12, 16, 20, 28
GAME SPECIES (continued)				
Tree Squirrel <i>Tamiasciurus sp</i> <i>Sciurus sp</i>	+	+	+	+
Hares <i>Lepus californicus</i> <i>L. townsendii</i> <i>L. alleni</i> <i>L. americanus</i>	+	+	+	+
Rabbit <i>Sylvilagus sp</i>	+	+	+	+

Table 2. A list of nontoxic shot cartridges available for hunting non-game species of birds and mammals in California. A + indicates that the type of nontoxic shot is appropriate for that species.

	Types of nontoxic shot			
	Steel shot ¹	Tungsten-Matrix ²	HEVI-Shot ³	RST Nice Shot ⁴
Shotshell gauge/caliber manufactured	10, 12, 20 ga	10,12, 20 ga	10,12,16, 20, 28, .410	10,12, 16, 20, 28
NON-GAME SPECIES				
English Sparrow <i>Passer domesticus</i>	+	+	+	+
Starling <i>Sturnus vulgaris</i>	+	+	+	+
Weasels <i>Mustela frenata</i>	+	+	+	+
Skunks <i>Mephitis mephitis</i> <i>Spilogale gracilis</i>	+	+	+	+
Opossum <i>Didelphis virginiana</i>	+	+	+	+

Table 3. Market availability of nontoxic shot types to hunters in USA. Cartridges in 12 and 20 gauge constitute the vast majority of cartridges used by most hunters.

Type of nontoxic shot cartridge	Available online from maker/supplier	Available in retail stores
Steel shot cartridges	Readily available from many online dealers across USA, and in CA	Widely and readily available in CA retail stores
Tungsten-Matrix shot cartridges	17 online dealers across USA	Available from larger CA retail hunting/sporting goods stores
HEVI-Shot cartridges	10 online dealers, plus maker	Over 80 retail dealers across the USA. Available in 6 retail stores in CA
RST Nice Shot cartridges	Many online dealers in 22 USA states	Available from many specialized retail stores. No retail presence established yet in CA
Bulk nontoxic (Tungsten-Iron) shot for hand-loading shotgun cartridges: ITX shot density 10.0g/cc Shot sizes 2, 4, 6 ITX shot density 13.0g/cc Shot sizes 2,4, 6	Available online from Ballistic Products, Minnesota, USA http://www.ballisticproducts.com	Unclear
Bulk nontoxic HEVI-Shot (Tungsten-Nickel-Iron) for hand-loading cartridges. Shot sizes 2,4,5,6,7.5, 9	Available online from Ballistic Products	Unclear
Bulk nontoxic steel shot for hand-loading cartridges. Shot sizes 4,5,6,7,8	Available online from Ballistic Products and many other outlets	Readily available from gun/shooting stores

Table 4. Market availability of nonlead rifle bullets and shotgun slugs to hunters in continental USA.

Type of nontoxic projectile	Available online from maker/supplier	Available in retail stores
Center-fire rifle cartridges with nonlead bullets	Readily available in at least 48 different rifle calibers and cartridge designations	Common rifle calibers available from large retail hunting/gun stores
Bulk sales of nonlead bullets for hand-loaders	Readily available in all regular rifle calibers, from makers (e.g., Barnes Bullets) and their distributors	Available from specialized hunting and gun stores, especially through back orders from US makers
Muzzle-loading rifle nonlead bullets	Readily available from leading US makers (e.g., Remington Arms and Barnes Bullets) and their distributors	Available from specialized hunting and gun stores, especially through back orders from US makers
Shotgun copper slug cartridges in 12, 16, & 20 gauge	Readily available from leading US makers and their distributors	Available from specialized hunting/gun stores, especially through back orders from manufacturers

Table 5. Market availability of nonlead rifle ammunition and nontoxic shotgun slugs for effective use on species of California big game, non-game, and furbearing species. A + indicates that nonlead rifle bullets are made in calibers, bullet weights, and cartridge designations suitable for taking each species. The term “Inappropriate” means that the bullet/slug is not suited to longer range shooting for the species, or that it is too large and destructive for that species.

GAME SPECIES	Center-fire rifle ammunition	Muzzle-loading rifle ammunition	Shotgun slugs in 12, 16 & 20 gauge
Black Bear <i>Ursus americanus</i>	+	+	+
Wild Pig <i>Sus scrofa</i>	+	+	+
Deer species	+	+	+
Desert Bighorn Sheep <i>Ovis canadensis</i>	+	+	Inappropriate
Elk <i>Cervus elaphus</i>	+	+	Inappropriate
Pronghorn Antelope <i>Antilocapra americana</i>	+	+	Inappropriate

NON-GAME SPECIES	Center-fire rifle ammunition	Muzzle-loading rifle ammunition	Shotgun slugs in 12, 16 & 20 gauge
Bobcat <i>Lynx rufus</i>	+	+	+
Coyote <i>Canis latrans</i>	+	+	Inappropriate
Feral Goats <i>Capra hircus</i>	+	+	Inappropriate
Weasels <i>Mustela frenata</i> <i>Mustela ermine</i>	+.17 Cal or .22 Cal Rimfire	Inappropriate	Inappropriate
Skunks <i>Mephitis mephitis</i> <i>Spilogale gracilis</i>	+.17 Cal or .22 Cal Rimfire	Inappropriate	Inappropriate
Opossum <i>Didelphis virginiana</i>	+.17 Cal or .22 Cal Rimfire	Inappropriate	Inappropriate
Moles and Rodents	+.17 Cal or .22 Cal Rimfire	Inappropriate	Inappropriate
FURBEARERS			
Badger <i>Taxidea taxus</i>	+	Perhaps inappropriate	Inappropriate
Gray Fox <i>Urocyon cinereoargentus</i>	+	Perhaps inappropriate	Inappropriate
Muskrat <i>Ondatra zibethicus</i>	+	Inappropriate	Inappropriate
Mink <i>Neovison vison</i>	+	Inappropriate	Inappropriate
Beaver <i>Castor canadensis</i>	+	Inappropriate	Inappropriate
Raccoon <i>Procyon lotor</i>	+	Inappropriate	Inappropriate

Survey: Availability of Nonlead Ammunition in California

Purpose:

- provide a snapshot of nonlead hunting ammunition available for purchase as of summer 2014 in a substantial sampling of California retail stores; and,
- document the reasons why some stores report little or no inventory of nonlead hunting ammunition.

Methodology

Participants:

Employees from 111 stores in California provided answers by phone regarding nonlead ammunition inventory.

Methodology

Timeframe:

Survey was conducted from April 21, 2014 to July 14, 2014 and includes responses from 111 stores.

Stores:

- were selected at random using Google maps and web browser.
- ranged from small standalone shops to large box store chains (Walmart, Sportsman's Warehouse, and Big 5 Sporting Goods).

Methodology

Responses:

- Responses were collected over the phone by volunteers and recorded using a customized SurveyMonkey survey.
- Stores that carried nonlead but were temporarily out of stock and awaiting weekly restocking shipment were recorded to be without that ammunition.

Methodology

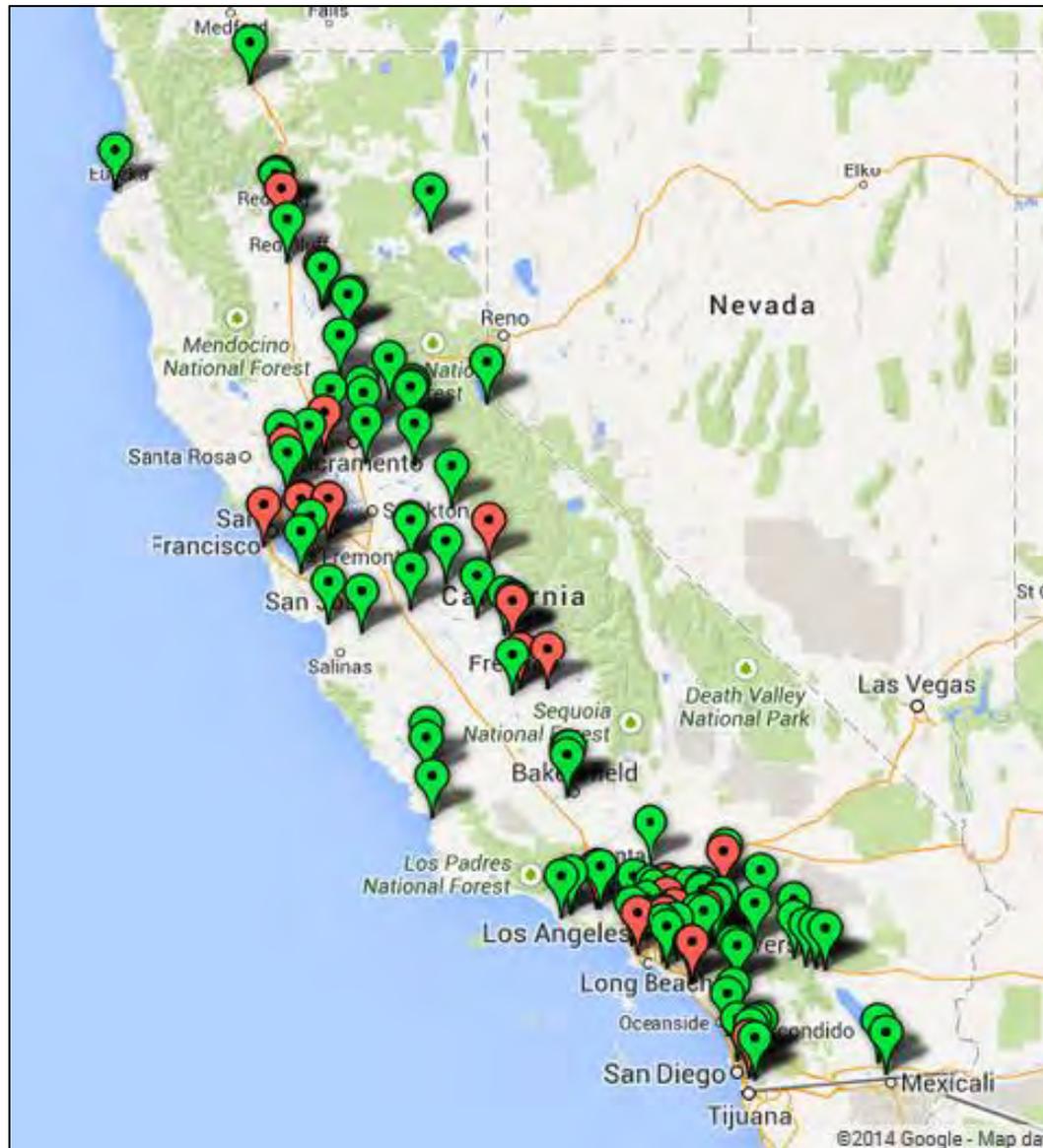
Data that were not used:

- Some Walmart locations – when a knowledgeable employee was not available to take the survey or in cases where no sporting section existed.
- Some standalone stores – when retailers clarified that their businesses did not sell hunting ammunition and instead offered other services like range shooting or self defense.

Data that were used:

- Are based on the best available knowledge and the extent of cooperation of the answering retail employee.

Figure 1. Nonlead Ammunition Availability. Stores represented in green (n=85) had either nontoxic shot, nonlead rifle ammunition, or both on the shelf and available for purchase; stores in red (n=26) had no nonlead hunting ammunition available at the time of the survey.



Results

- Of 111 California stores surveyed, 77 percent (85 stores) carried at least some nonlead ammunition (bullets, shot, or both) for the purposes of hunting.

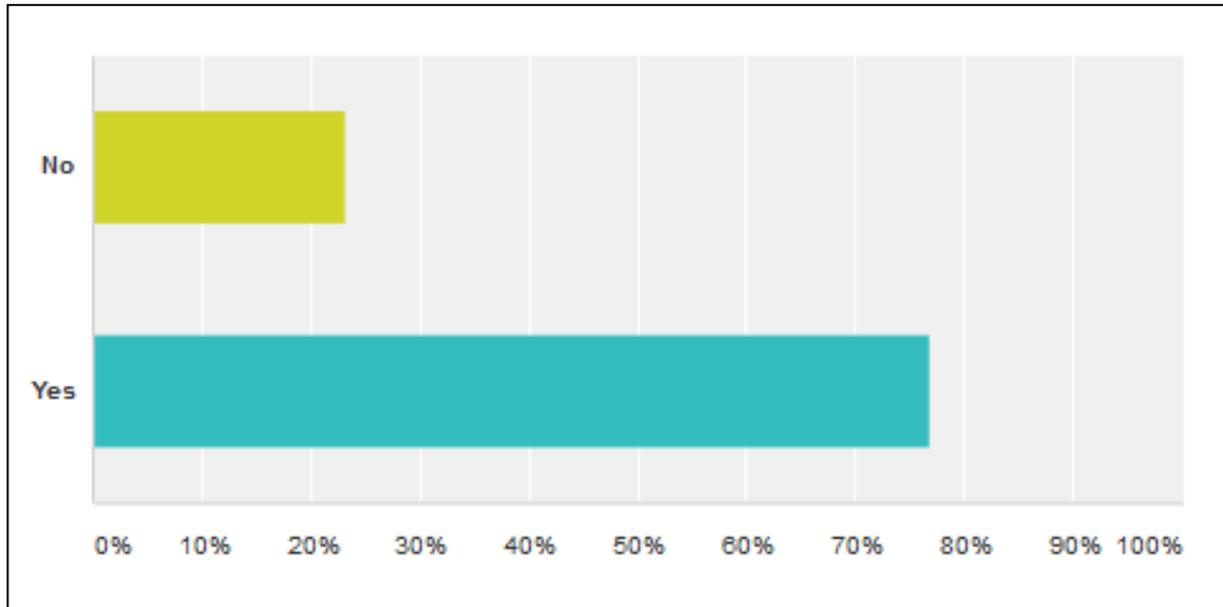
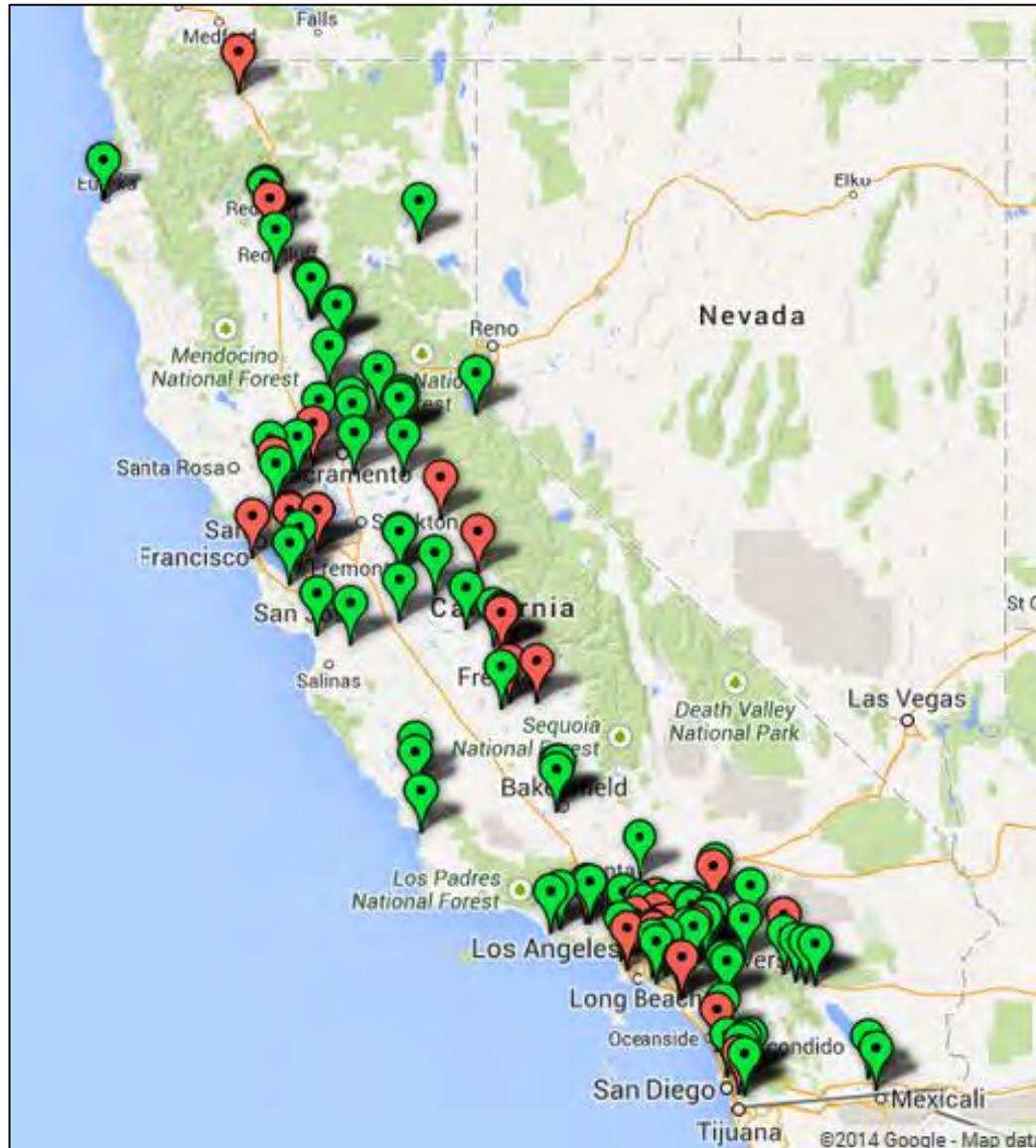


Figure 2. Nonlead Rifle Ammunition Availability. Stores represented in green (n=80) had nonlead rifle ammunition on the shelf and available for purchase; stores in red (n=31) had no nonlead rifle ammunition available at the time of the survey.



Results

- When asked if nonlead rifle ammunition was available on shelf, 72 percent (80 stores) responded yes.

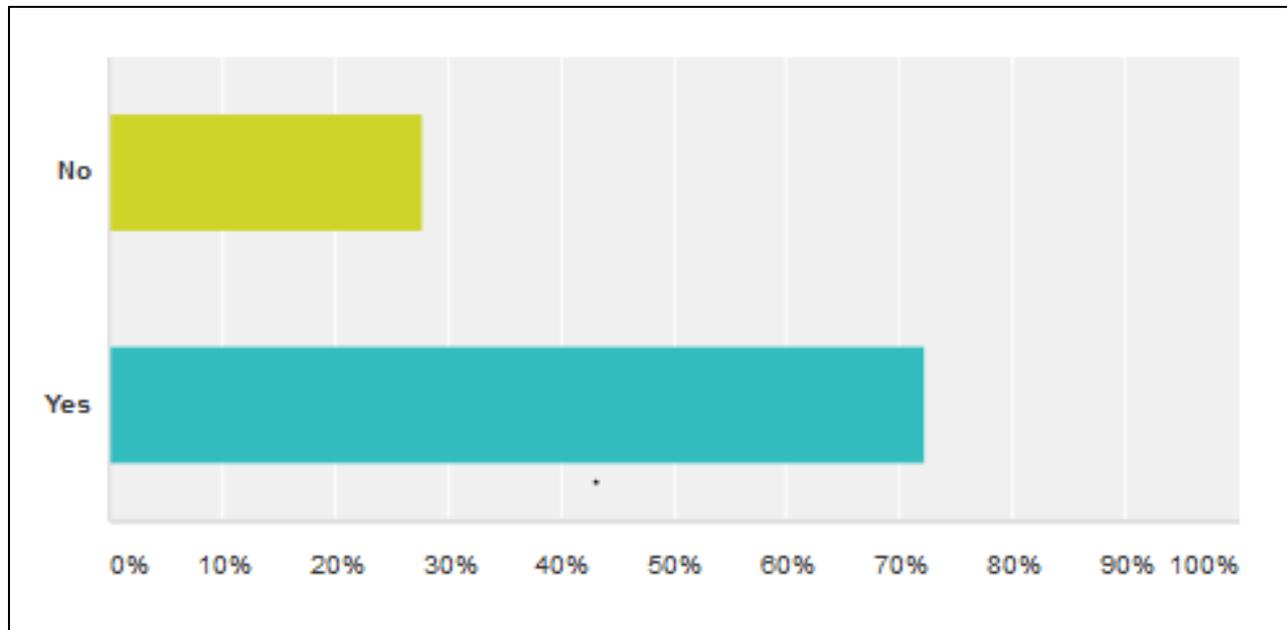
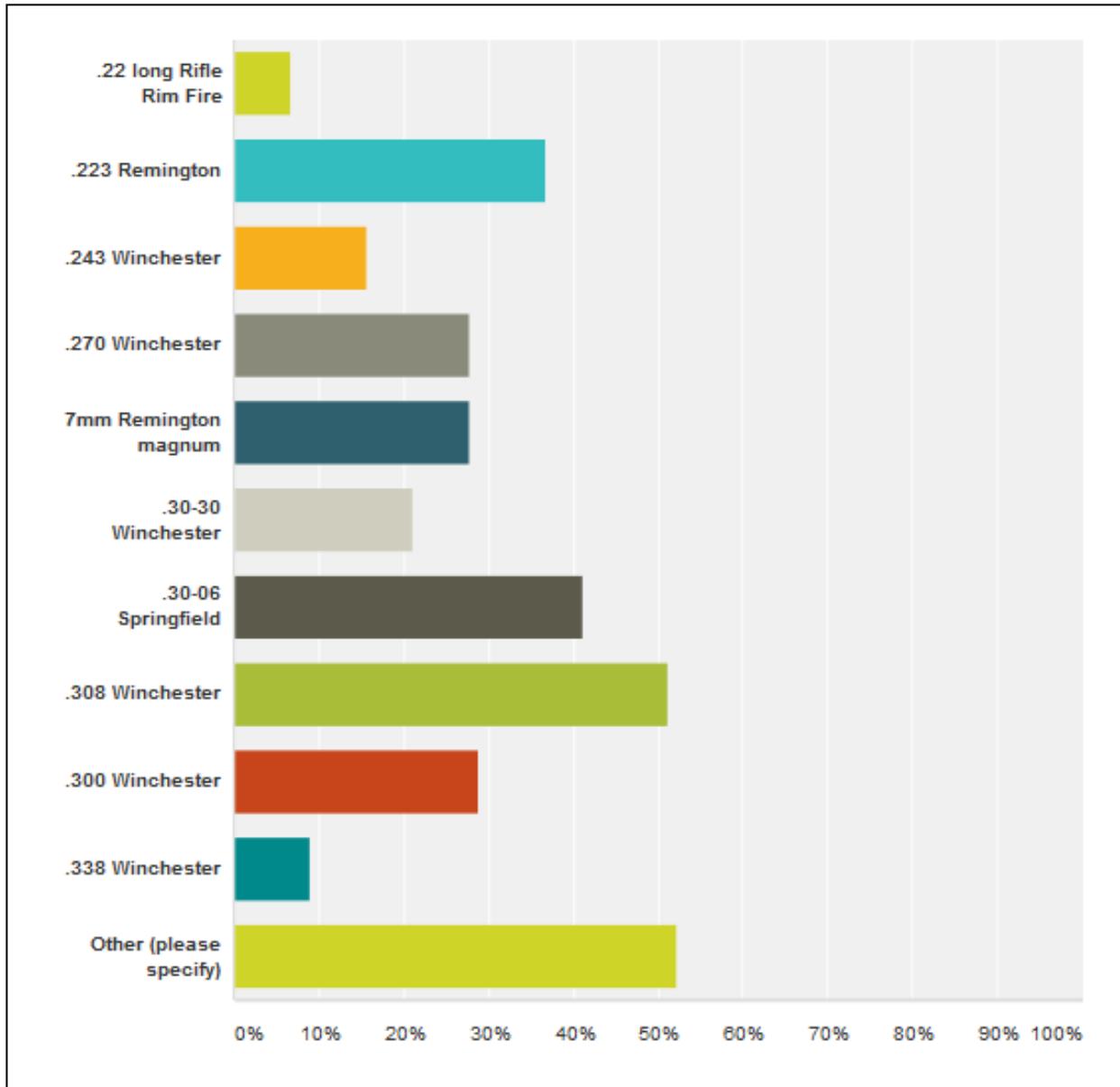


Figure 3. Breakdown by caliber of nonlead cartridges available in 8 retail stores at time of survey. Percentages refer to the proportion of stores stocking a given caliber.



Results

- Approximately 21 percent of the 111 stores had nonlead copper bullets for handloaders available (Fig. 4).

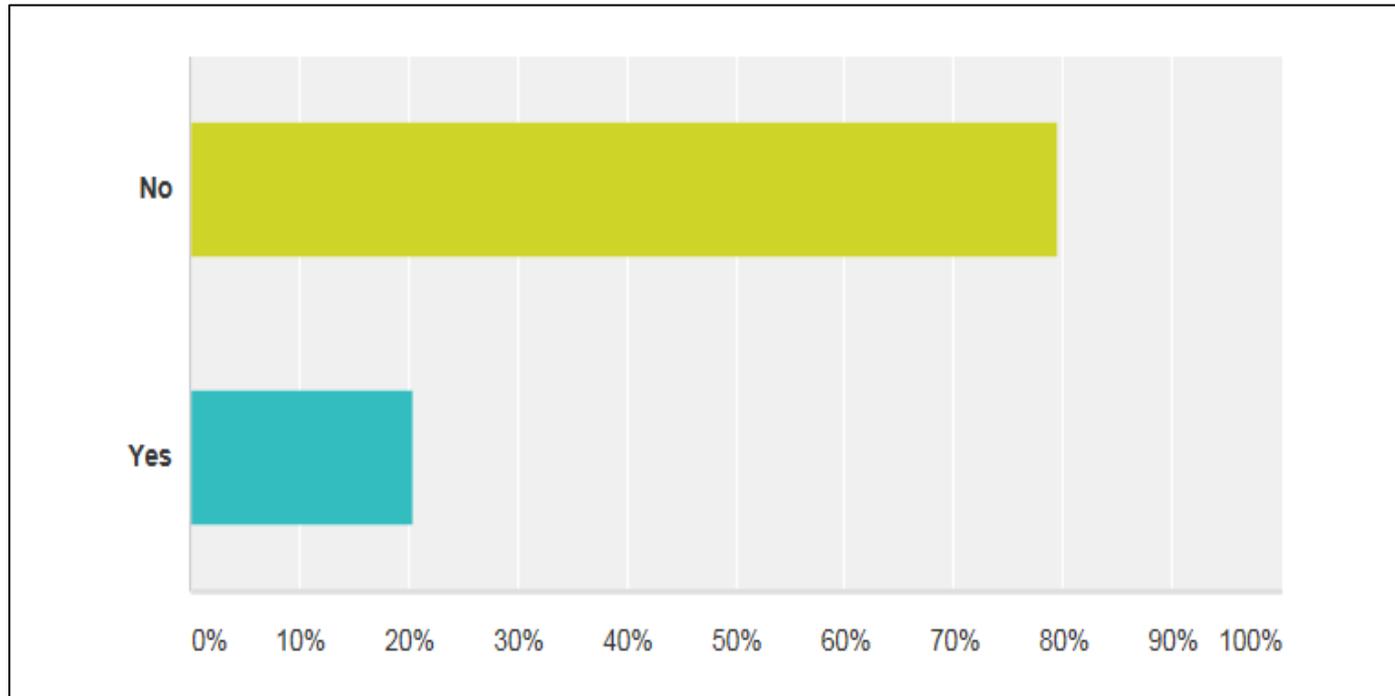
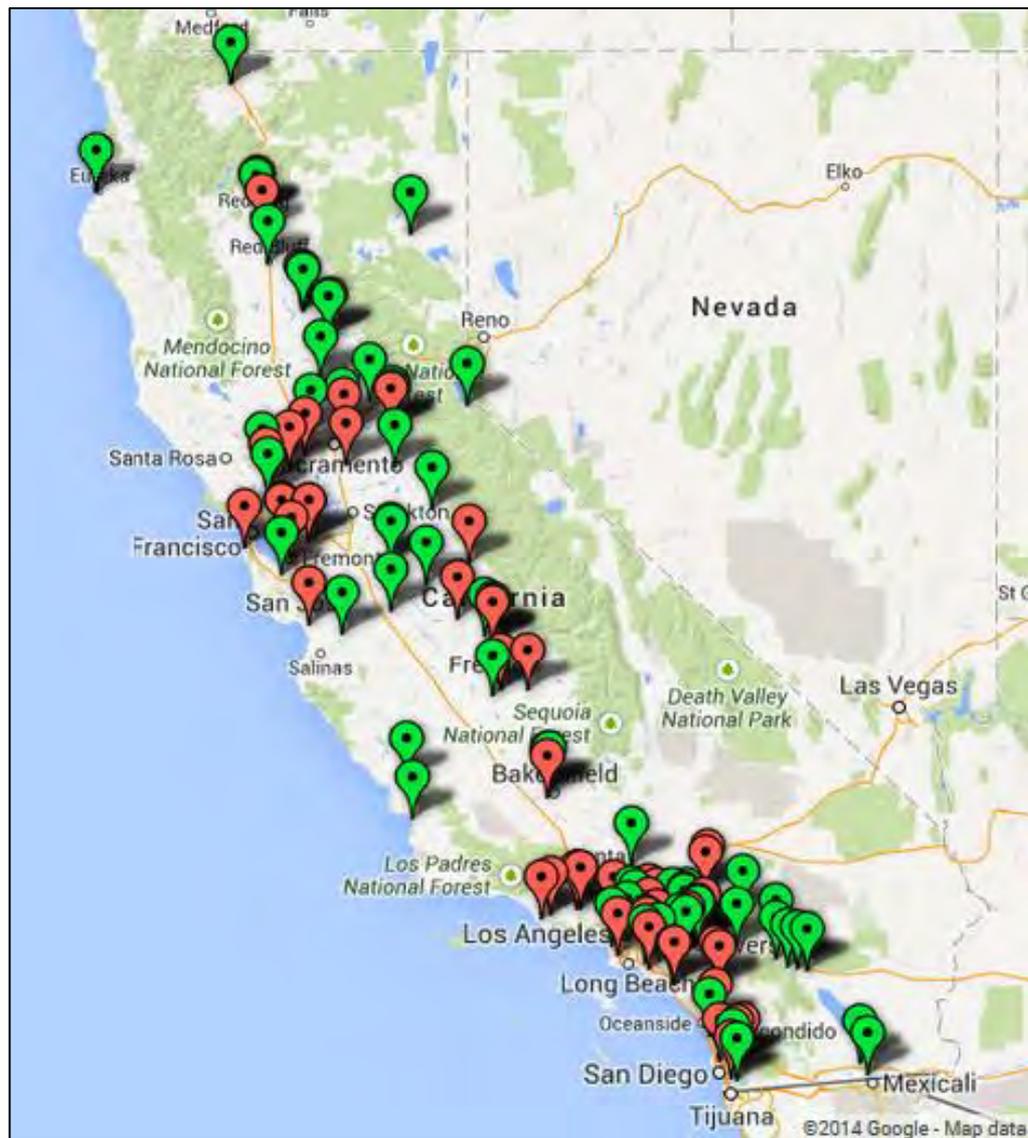


Figure 4. Percentage of 111 stores with nonlead copper bullets for handloaders on the shelf and available for purchase.

Figure 5. Nontoxic Shotgun Ammunition Availability. Stores represented in green (n=61) had nontoxic shotgun ammunition on the shelf and available for purchase; stores in red (n=50) had no nontoxic shotgun ammunition available at the time of the survey.



Results

- Nontoxic shotgun shells in size 5 or smaller were in about 55 percent of stores (Fig. 5 and Fig. 6).

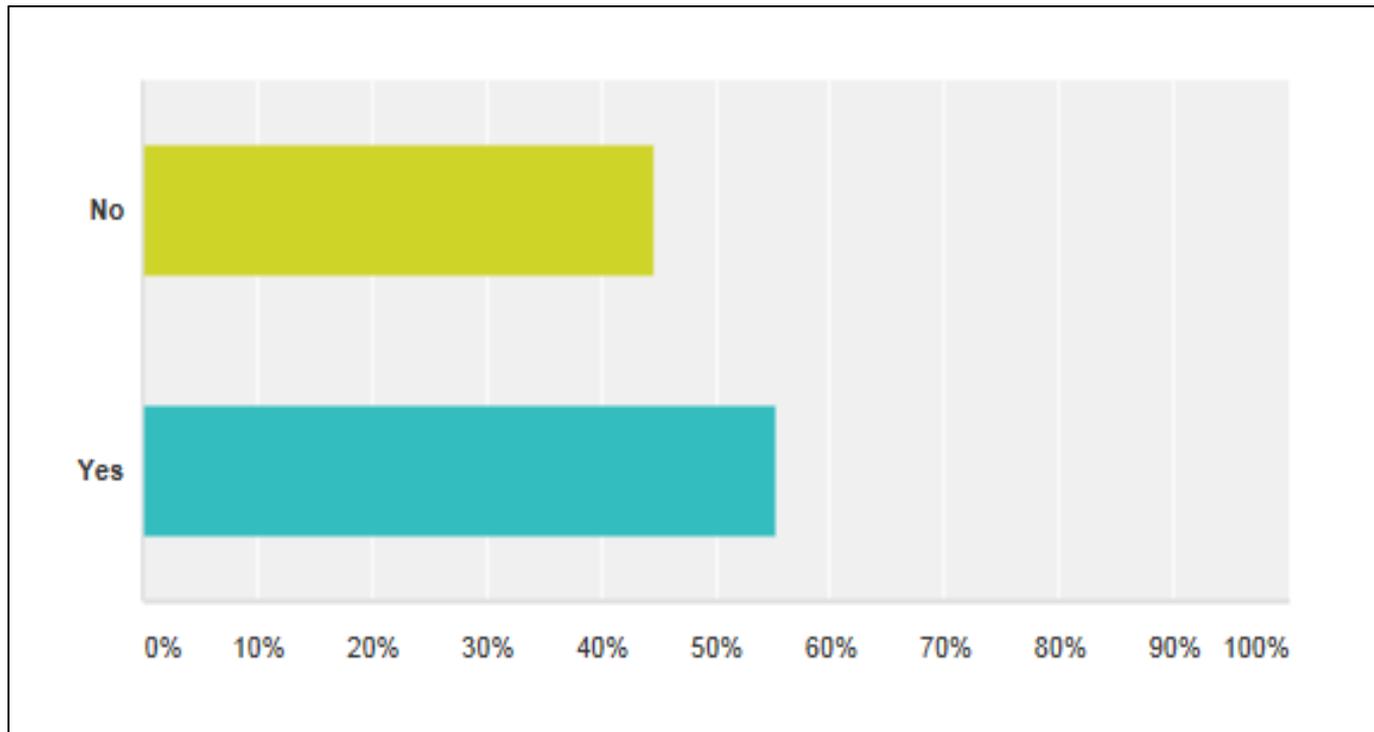


Figure 6. Percentage of 111 stores with nontoxic shotgun ammunition in shot size 5 or smaller on the shelf and available for purchase. Such shot sizes are well suited to hunting upland game birds.

Results

- Nontoxic shot other than steel, such as Tungsten-Matrix, HEVI-Shot or NICE Shot, were available in approximately 25 percent of stores (Fig. 7).

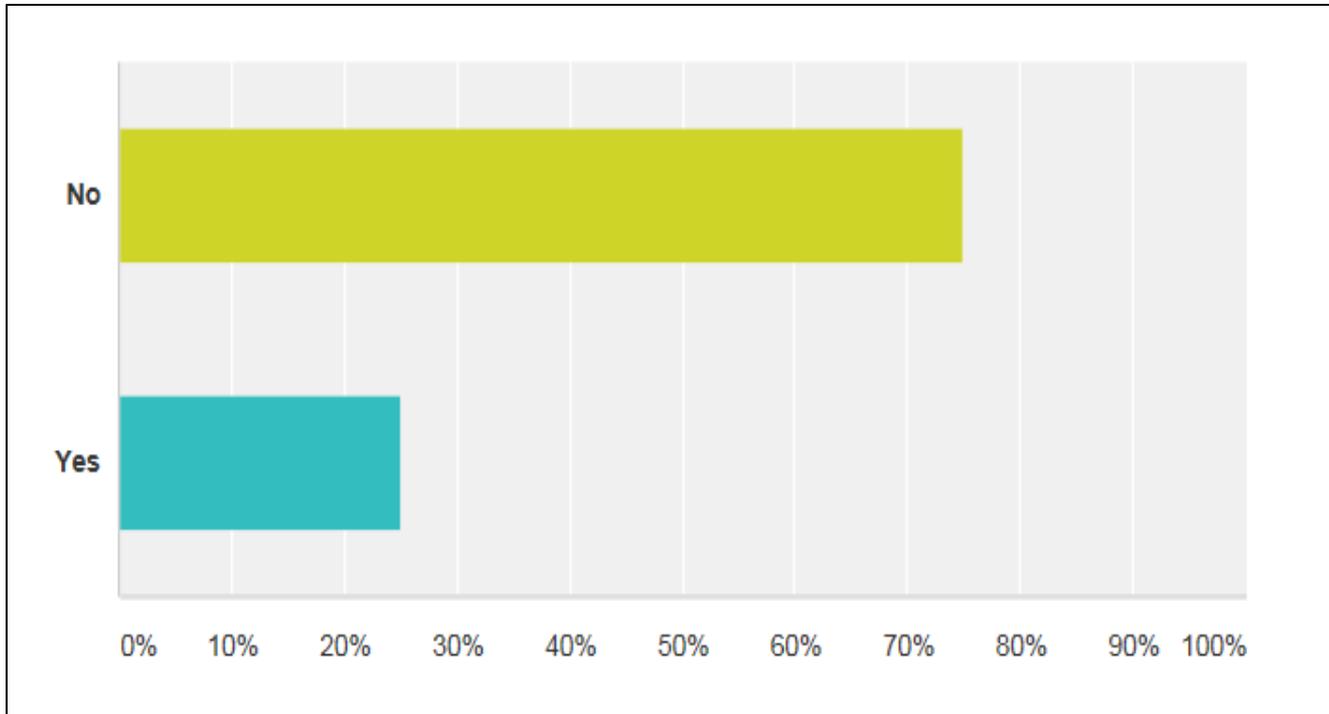
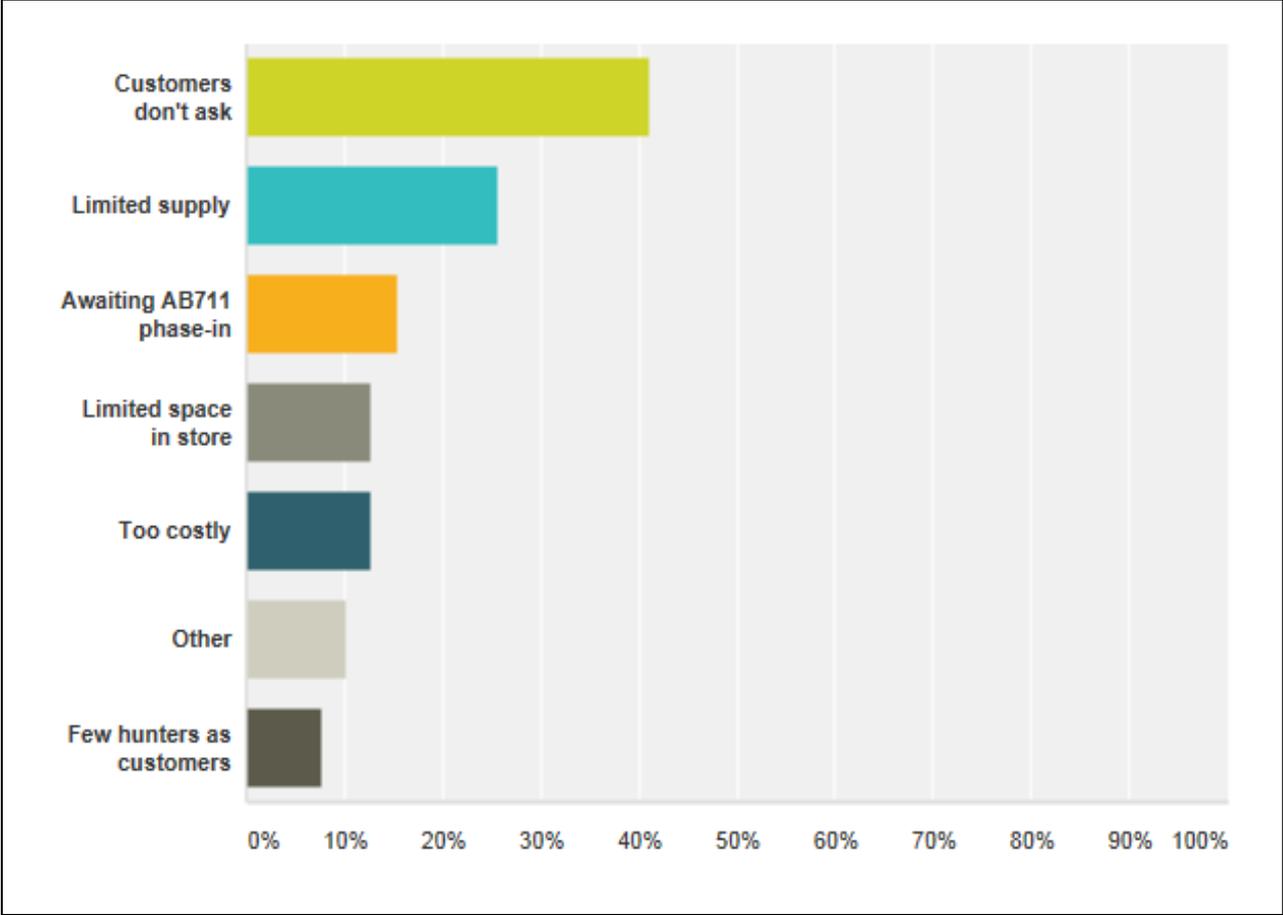


Figure 7. Percentage of 111 stores with nontoxic shotgun ammunition other than steel (i.e. Tungsten-Matrix, HEVI-Shot, or NICE shot) on the shelf and available for purchase.

Figure 8. Reasons given by stores with low or no nonlead ammunition on shelves. Percentages refer to the proportion of stores reporting a given reason.





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Dr. Thomas,

As you know I have followed the implementation of AB 711 in California with considerable interest and anticipation. The Kent Gamebore Corporation, through our facilities in West Virginia, has been supplying the California non-toxic shot shell market successfully for some years.

I can assure you that our company will be prepared to satisfy the increased demand that will ensue with the implementation of this legislation.

When the date is published our California distributors will provide forecasts based on consumer demand that will allow us to provide Tungsten Matrix® and Fasteel® products suitable for upland birds, small game, clay targets and the existing waterfowl market within a six month period.

Robert Cove
President & CEO
Kent Gamebore Corporation

Conclusions

There is widespread market and retail availability of all popular shotgun and rifle ammunition types for the take of wildlife in California.

Thus, California can speedily implement AB 711, meeting:

- Governor Brown's direction that the phase-in be "least disruptive;"
- DFW's consideration for "simple and enforceable" regulations; and,
- California's overarching goal of reducing the discharge of lead from ammunition into the environment.