

**Pellet Guns and BB Guns:  
Dangerous Playthings in the Open Market**



**California Senate Office of Research  
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# **Pellet Guns and BB Guns: Dangerous Playthings in the Open Market**

**Prepared by  
Max Vanzi**

**Senate Office of Research  
Don Moulds, Director**

**1020 N Street, Suite 200  
Sacramento, California 95814  
916-651-1500  
[www.sen.ca.gov/sor](http://www.sen.ca.gov/sor)**

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## ***Executive Summary***

The incidents kept popping up: A Los Angeles police officer, staring down the barrel of a carjacker's pistol, drew and fatally fired on the young man behind the gun. The gun turned out to be an air-powered pistol, looking very much like a semiautomatic firearm. In Pennsylvania, an accidental air gun shooting sent a 16-year-old boy into a three-year vegetative state, ending with his death in 2003. In 2004, a youth discharging a pellet gun from his back porch in Orinda, California, shot and inflicted a severe neck wound on a passing motorist.

Pellet guns are on the market today with projectile impact power often exceeding that of conventional firearms. Injuries nationally from so-called non-powder guns (NPGs) run to the tens of thousands—a big majority of them children or minors.

Yet there are few laws governing the use of NPGs, particularly in California. There are California laws barring the sale of an air-type gun to youths under 18, and placing restrictions on carrying such a weapon openly in public places, but little else in the California legal codes mandating safety controls of NPGs, or a clear path to applying penalties for NPG-inflicted injuries.

Other states provide more safety guidelines. Illinois, New Jersey and other states make powerful air-type guns subject to the same laws that govern the safe handling and possession of firearms. California has not done so. In one case Senate Office of Research (SOR) documents—the shooting in Orinda—a prosecutor opted not to charge a youth responsible for a pellet gun injury because he believed the basis in law was inadequate to sustain a conviction. Had the weapon in that case been a firearm, a prosecution would have likely proceeded.

Elsewhere in the country, some states prohibit discharging air guns anywhere in public, with rare exceptions. In Massachusetts,

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you can't shoot an air gun across a public road or railroad track. California lacks those prohibitions. And with the purchase price and proof of being at least 18, anyone can get a pellet gun capable of inflicting serious injury.\*

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\* Clarification. A previous version of this report stated on the last page of the Executive Summary that pellet guns are more powerful than some .45 automatic firearms. It is a fact that the muzzle velocity of many pellet guns—at 1,000 feet per second—exceeds the muzzle velocity of .45s commonly in use. However, the power of a gun is measured not just by muzzle velocity but also by the weight, or mass, of the projectile. As the projectile of firearms commonly exceeds the weight of pellets, the striking force of .45 caliber firearms invariably exceeds the striking force of pellet guns now on the market. The report has been updated throughout to reflect this understanding.

## ***Introduction***

Senator Jack Scott asked SOR to examine the air gun for its capacity to inflict injury and to gauge to what extent its use is governed by safety rules. Though considered by some a toy or a “starter gun” for kids, SOR found that the BB gun and more often the pellet gun show up in injury statistics as anything but harmless playthings.

This report examines the use and abuse of guns accessible to the public that are other than firearms. Among the departures from the gun norm are the air-powered BB and pellet guns. These and similarly powered guns appear to be growing in popularity, along with the increasing striking power that manufacturers are building into them. The public safety issue assumes added urgency from the demonstrated fact that a pellet gun, a BB gun and their variations are found mostly in the hands of children and adolescents, who also make up the majority of the victims from air gun-type wounds.

## ***Summary***

With these concerns in mind, this report looks at air guns from various perspectives and, to summarize what is expanded upon more fully later in the report, finds:

- Pellet guns being manufactured and sold today have inflicted serious injuries including fatal injuries.
- In California, the laws governing access and proscribed usage of these guns are fewer and weaker than the laws that apply to conventional firearms. In several other states, gun laws make fewer distinctions between NPGs and firearms and in some instances apply the same safety requirements to both.
- California’s laws pertaining to prosecution and penalties for causing injury with an air gun are subject to interpretation. In one

case we cite below, a prosecutor concluded he was unable to sustain a criminal charge where a pellet gun caused a serious injury—and said felony charges would have been automatically forthcoming had a firearm caused the injury.

- Tens of thousands of victims from pellet and BB gun injuries are recorded every year in the United States—more than three-quarters are children.
- Deaths have occurred from the discharge of air guns—and, occasionally, from instances where police officers mistake air guns for firearms and respond with deadly results.

## ***Air Gun Characteristics***

### ***I. Definitions and Classifications***

From references cited by gun-control groups and the gun industry:

Guns that are powered by hand-compressed air, or air power developed from carbon-dioxide gas canisters or mechanical spring, whether handguns or rifles, are known collectively as non-powder guns, or NPGs. BB and pellet guns are the most powerful of this class of guns.

Besides pellet and BB guns examined at length in this report, two other kinds of NPGs have wide appeal but are less powerful and therefore do less harm—“airsoft” guns and paint ball guns. Other forms of air-powered shooting devices, such as Tasers, described below, are less commonly in general circulation.

- The “airsoft” gun is described by makers as a low-impact device (muzzle velocities +/- 200 feet per second), using plastic BBs as ammunition. Airsoft guns closely resemble their firearm counterparts in appearance. As such, lawful uses include, besides target shooting, mock firearm drills during law enforcement training and as theatrical props. As a safety measure, AB 1455 (Negrete McLeod), Chapter 246, Statutes of 2003, required airsoft guns (but not other NPGs) to conform to federal law requiring “imitation firearms” to display identifying color markings.<sup>1</sup> (More about AB 1455 on page 20. For broader application with similar aims, see also SB 1858, page 20.)

- The paintball gun is used by hobbyists or children playing war or gunfight games who discharge blobs of paint at one another. Propelling paint-filled projectiles at up to 350 feet per second (fps), paintball guns have attracted some 8.5 million users nationwide and have sent a rising number of targeted victims to hospital emergency rooms in recent years.<sup>2</sup>

In February 2004, a woman was killed in El Dorado County in a freak accident involving a paintball gun. While another person was preparing to remove from the gun the gas canister used to propel the paintball, the canister popped out of the gun under an estimated 800 pounds of escaping CO<sub>2</sub> gas pressure. The canister flew 8 to 10 feet, striking and killing the victim, another paintball hobbyist.<sup>3</sup>

- Tasers, used purely for self-defense and law enforcement purposes, can also be air-powered. When discharged, a Taser shoots a pair of charged wires capable of traveling 13 to 21 feet and upon making contact renders the target individual powerless to function. The electrical charge, commonly 50,000 volts, supposedly leaves no lingering physical impairment once the charge, lasting a matter of minutes, wears off.<sup>4</sup>

## II. Performance and Power

The remainder of this report concentrates on BB and pellet guns. Data is derived from, among other sources, government agencies, medical studies, legal authorities and nonprofit organizations that advocate for the safer handling of NPGs.

Mass and speed determine the penetrating/injuring capacity of any projectile discharged from most guns made available to the public. The speed characteristic is, in turn, determined by muzzle velocity, meaning the speed at which the projectile leaves the barrel of the gun.

Various references largely agree that, at a minimum, damage to the human eye can occur from a gun discharging a pellet or BB at a muzzle velocity of 130 fps and that penetration of skin and bone can occur at 350 fps.<sup>5</sup> (See more at Death and Injury section below.) But muzzle velocities are higher in many compressed-air guns. The federal Centers for Disease Control and Prevention (CDC) says that of the 3.2 million NPGs sold annually in the United States, the muzzle

velocities of 80 percent of those guns exceed 350 fps, and in 50 percent, muzzle velocities reach from 500 to 930 fps.<sup>6</sup> More recently, retailers report pellet guns are in circulation, and proving popular, with muzzle velocities of 1,000 fps.<sup>7</sup> A November 2004 study appearing in the journal *PEDIATRICS* states that some air guns achieve muzzle velocities of 1,200 fps.<sup>8</sup>

The ammunition and barrels of BB guns on the U.S. market are manufactured at .177 of an inch in radius, stated as .177 caliber. Pellet guns commonly are at .177 caliber as well. However, sales catalogs list pellet guns and ammunition at greater sizes, advertised at .20, .22, .25, 9mm (.35) and .45 caliber.<sup>9</sup>

(In comparison to firearms, other factors determine striking power and capacity to injure. While the velocity of some pellet guns may equal or exceed, for example, the velocity of a .45 caliber pistol, the projectile weight and subsequent kinetic energy developed in the discharge of a pellet gun is substantially less than that of a .45 caliber firearm. Thus the force of impact and capacity to injure also is less from the discharge of a pellet gun than that of a .45 and other firearms.<sup>10</sup>)

### III. Safe and Proper Use of Air Guns

The Daisy Manufacturing Company says that the 118-year-old air gun maker produces a safe product for consumers engaging in a widely accepted form of recreation. "Safety is key with us," said Marianne McBeth, vice president and general counsel at the company office in Rogers, Arkansas. In a phone conversation with SOR, McBeth said Daisy encourages the responsible handling of its guns, describes them as "not toys," and added, "We do not condone the misuse of our products against any person or property."

McBeth said the sport enjoys a good reputation. She said organizations such as the Boy Scouts, civil organizations and ROTC units engage in air gun target practice and competitions. NCAA scholarships are awarded for air gun marksmanship, and Harvard University is among institutions that conduct air gun programs. Air gun shooting is an Olympic sport, in which the United States won a gold medal in the 2000 Games, McBeth said.

### ***Tracing Limitations***

Crime scene investigations into injuries or deaths caused by an air gun lack the tools and particulars available to forensic analyzers of

crimes where a firearm is used. Unlike firearms, air guns are not stamped with serial numbers traceable to a first point of sale and an identified buyer. Instead, some but not all air gun manufacturers stamp a “lot number” on their products. Though lot numbers differ from gun to gun, the number can rarely be used to trace a gun beyond its first point of transshipment. Even if an air gun could be traced to point of sale, no records are made of the product’s first buyer, as is the case with firearms.

The one clue that could point to a specific air gun used in a crime might come from an examination of the discharged projectile. It may be possible to read the rifling marks on the projectile and link them to the discharging gun, but experience shows that identifiable rifling marks on the soft-lead pellet projectile frequently do not survive the force of impact. Furthermore, to make a match between a gun and the ammunition discharged from it, the suspect gun must be in possession of the investigators, and it must be a pellet gun. Among air guns that can do the most damage, only in pellet guns are barrels rifled. BB guns require smooth-bore barrels.<sup>11</sup>

## ***Death and Injury***

### **I. National Data**

The record of casualties as a result, largely, of accidental shootings, whether the fault lies with the shooter or the gun, is documented in a number of most-recent studies:

- In 2000, the Centers for Disease Control and Prevention (CDC) calculated there were 21,187 NPG injuries treated at hospital emergency rooms—76 percent of the patients were children or teenagers.<sup>12</sup>
- From 1980 to 2000, the Consumer Product Safety Commission (CPSC) recorded 63 deaths from NPG wounds. Alleged defects in air guns manufactured by one company alone accounted for 15 deaths and 171 serious injuries, including brain damage and permanent paralysis.<sup>13</sup>
- NPG injuries are highest in male children, ages 10 to 14, and mostly occur at home and in communities of less than 50,000 people. Those hospitalized are 80 percent white; 18 percent black.<sup>14</sup>

- Most NPG injuries are to the arms and legs; 6 percent are to the eyes.<sup>15</sup>
- From epidemiological and consumer-safety literature:
  - *BB/pellet gun-related injuries and their potentially harmful and lethal effects have been well-documented in the medical literature since the early 1980s. BB/pellet gunshot wounds, particularly those inflicted at close range can penetrate the abdomen, chest, head and eye and cause permanent damage and death.*<sup>16</sup>
  - *Often appearing trivial, BB and pellet gun injuries must be considered in the same class as those from small-caliber low-velocity powder firearms. A patient with a non-powder firearm (sic) injury must be evaluated with a high index of suspicion for injuries that are not apparent during a general physical examination.*<sup>17</sup>
  - *The American Academy of Ophthalmology considers BB and pellet gunshots a major cause of devastating eye injuries to children. However, BBs and pellets discharged from these guns can also cause serious internal injuries. BB/pellet projectiles have caused penetrating injuries to internal organs such as the liver, spleen, stomach, pancreas, bowel, and colon.*<sup>18</sup>
  - *A detailed analysis of 101 in-depth investigations conducted by the Consumer Product Safety Commission reveals that in 92 percent of the accidents, the product operated as it was intended [that is, did not malfunction]. Most injuries were caused by carelessness or intentional shooting. Some injuries resulted from children who were too young to realize the inherent hazards of non-powder guns, who had their parents' approval but were unsupervised. Meetings with consumers focus groups indicated a need for the consumer to understand the power of the various non-powder guns and the seriousness of non-powder gun injuries.*<sup>19</sup>
  - *A .177-caliber pellet requires 331 fps to penetrate skin, whereas a .22-caliber pellet requires a velocity of 245 fps. Primary penetration of bone occurs at velocities of 350 fps. Ocular penetration can occur at velocities of only 130 fps. The speed at which tissue penetration occurs is easily attainable with virtually all types of air guns.*<sup>20</sup>

## II. Injury Incident Reports Nationally

Below is a sampling of specific instances of fatal and nonfatal air gun injuries, demonstrating the patterns by which mostly the young become victims:

- The CPSC brought a lawsuit related to the fatal accidental BB gun shooting at close range of 16-year-old John “Tucker” Mahoney of New Hope, Pennsylvania. Believing the gun was unloaded—not noticing that a round remained in the magazine and had dropped into the discharging chamber—a friend aimed and discharged the gun, the round striking Tucker in the head. Tucker spent almost three years in a vegetative state and died in 2003. The gun maker, Daisy Manufacturing Company, settled another lawsuit brought by Tucker’s parents for \$18 million without admitting fault.<sup>21</sup>

These injury cases as of 1995 are cited by the Centers for Disease Control:<sup>22</sup>

- A 9-year-old boy was struck by a BB beneath his lower left eyelid after he stepped from behind a board at which other children were shooting. The children had been left unsupervised following a youth club target practice session.
- A 16-year-old boy sustained a severe midbrain injury from a self-inflicted combination BB/pellet gun wound through the roof of his mouth.
- A 9-year-old girl incurred a pellet injury to the back of her right ankle after four boys fired a pellet gun at her from a passing car while she was walking on a sidewalk.
- A 10-year-old boy sustained injuries to his neck and trachea after being struck by a BB from a gun that had been discharged unintentionally by an unspecified person.
- A 13-year-old boy was shot in the neck with a BB gun while he and a friend were playing in a house. The friend, who believed the gun was unloaded, had aimed the gun at the 13-year-old and pulled the trigger.

- A 16-year-old boy sustained a penetrating injury to his right eye after being struck by a BB that ricocheted from a gun fired by a friend.

### III. California Incident Reports

Steve Glazer of Orinda, a former legislative staff member in Sacramento, was injured in 2004 by a youth discharging a high-powered pellet gun in the direction of cars coming into range as they passed on the street below the shooter's hillside home. Glazer was on his way to pick up his daughter from a friend's house in a suburban Orinda neighborhood. With him in the car were his wife, Melba, and another daughter, Ariel, aged 12. As Glazer relates:

*It was a beautiful, nice evening. The top was down on the convertible . . . I felt a thump right on my neck. . . . I knew I had been hit by something. I thought it may have been a rock but Melba said that she heard a gunshot. I pulled over and stopped. I noticed I was bleeding. We tried calling 911 but were unable to get cell phone reception. I grabbed a towel to apply pressure to my neck in order to slow the bleeding. We drove to the home of a friend a few houses away. Paramedics treated me and moved me quickly to a hospital emergency room. Police moved quickly, too, making an arrest within an hour of the shooting.*

Arrested at his home was 18-year-old Eli Polk, a youth with a criminal record. Police learned Polk had been shooting toward passing cars from the deck of his home overlooking the street below earlier that same day. His weapon was a Winchester 1000 pellet gun, capable of discharging lead pellets at 1,000 feet per second—developing more striking power than many classes of handgun firearms.<sup>23</sup>

*The pellet penetrated two inches of tissue into my neck, stopping just short of my spine. Two hours of surgery were required to remove the pellet. X-rays show I was lucky that the pellet missed the carotid artery. Four months later, nerve damage remains and motion is limited on the left side of my face and left arm and shoulder.<sup>24</sup>*

Despite the shooting and injuring of Glazer, a prosecutor elected not to charge Polk with a crime. The prosecutor concluded, and an

outside legal authority concurred, that the case fell into a category of injury of one person by another that is not clearly marked out in law as a prosecutable offense. Had the weapon been a conventional firearm, a crime would have unambiguously occurred. (See more at California law below.)

On September 22, 2003, Los Angeles police officers spotted a car used moments before in a carjacking and forced the driver to pull over. A young man jumped from the car and pointed a weapon at one of the officers. Believing his life was in danger, the officer shot and killed the 16-year-old youth. Upon examination later, police discovered the weapon pointed at the officer was not a firearm but a pellet gun—still capable of inflicting injury, though to what degree remained unknown in this case. Police investigators called the shooting of the boy tragic but said the Crosman 1008 gas-powered pellet gun, in profile, bore an exact resemblance to a .45 semiautomatic handgun. Adjudication was pending at this writing.<sup>25</sup>

## ***California Law***

### Comparisons to Firearms—Transferring and Transporting

By enforcement of Government Code Section 53071.5, state law “occupies the whole field” of regulations governing the manufacture, possession and sale of BB guns and air rifles. That is, state law technically pre-empts local jurisdiction over those controls on NPG-type weapons. State law, however, with the possible exception of recently added Section 417.4 of the Penal Code, is silent on the use of NPGs, although many local jurisdictions have ordinances prohibiting risky use. Among them are San Francisco (Article 9, Miscellaneous Conduct Regulations, Sec. 602) and San Diego (Ch.1 Shooting Regulations, Sec. 33.104).

State law is as follows:

- Two Penal Code sections regulate access to NPGs: It is unlawful to sell “BB devices”<sup>26</sup> to minors under 18 years old, or otherwise

furnish “BB devices” to minors without parental permission” (Sections 12551 and 12552).

- Two Penal Code sections impose restrictions on “BB devices” by, first, adding these devices to the definition of imitation firearms (Section 12550 (a)) and, second, to make it a misdemeanor to display an imitation firearm (here including BB devices) “in a threatening manner . . . causing a reasonable person apprehension or fear of bodily harm. . . .” (Section 417.4).
- Also, Penal Code Section 12556 levies fines and, for repeat offenses, misdemeanor penalties for displaying imitation firearms, including BB devices, in a public place, including streets, front yards, automobiles and buildings open to the public.
- Three other Penal Code sections also prohibit taking BB devices to certain places. Section 171b (a) prohibits taking any such gun into government buildings or open meeting venues. Section 171.5(b)(c) prohibits carrying a BB-type gun into secure and screened areas of airports. Section 626.10(a) bans possession on public or private school grounds.

By comparison, here is a selection of California laws governing firearms:<sup>27</sup>

- Persons subject to complying with protective orders are prohibited from even *attempting* to acquire a firearm (Penal Code Section 12021).
- Persons convicted of shooting at an inhabited building can be prohibited from possessing firearms—for life (Penal Code Section 12021).
- Anyone who has been convicted of a felony or certain misdemeanors, whether federal or state, or is addicted to narcotics is prohibited from possessing any firearm (Penal Code Section 12021(a)) or firearm ammunition (Penal Code Section 12316 (b)).
- Juveniles adjudged wards of the court for violent or other specified crimes are prohibited access to firearms until they reach the age of 30 (Penal Code Section 12021(e)).
- Anyone receiving in-patient therapy for various mental or sexual disorders, or who communicates to a psychotherapist a threat of

violence against anyone else, is barred from access to firearms (Welfare and Institutions Code Sections 8100, 8100(b) and 8103(a)).

- Carrying a concealed handgun without a license on one's person or in a vehicle violates Penal Code Section 12025.
- Carrying a loaded firearm is illegal in any public street or place where firing a gun is illegal (Penal Code Section 12031 (a)(1)).
- It is unlawful for a person to buy more than one handgun in a 30-day period (Penal Code Section 12072(a)).
- Handguns sold in California must meet certain safety and functionality standards (Penal Code Section 12125)).
- Transfer of firearms among private parties who are not licensed dealers must go through a licensed dealer or law enforcement agency to complete the transaction (Penal Code Sections 12071, 12072, 12082, 12084).
- Most purchasers of handguns must present to the dealer a safety certificate indicating, based on passing a test, knowledge of safe handling and applicable laws. The purchaser also must perform a safe handling demonstration to a Department of Justice (DOJ) certified instructor (Penal Code Section 1207(b)(8)).
- Only persons presenting proof of California residency may buy a handgun. People moving to California must report ownership of a handgun brought into California to the state DOJ within 60 days (Penal Code Section 12071(b)(8)).
- Guns are subject to forfeit if illegally carried on the person or in a vehicle or if used in the commission of a crime (Penal Code Section 12028(a)(b)).
- Taking guns into or within 1,000 feet of school grounds, grades 1-12 or state university or college campus, violates Penal Code Section 626.9.
- Drive-by shootings resulting in death are punishable by death or up to life in prison. Various penalties apply for other results of drive-by shootings (Penal Code Section 247).

- The possibility of a fine or prison sentence awaits the person found to be keeping a loaded firearm where a child finds and uses it improperly (Penal Code Section 1207(b)(8)(D)).
- All firearms in transfer transactions in California must be equipped with safety devices as prescribed by the DOJ (Penal Code Section 12088.1).

### Comparisons to Firearms—Shooting and Injuring

The Penal Code defines a firearm as “any device designed to be used as a weapon, from which is expelled a projectile by the *force of any explosion, or other form of combustion* (emphasis added),” thus excluding NPGs. But it was not always so.

Until 1994, NPGs were included in the definition of firearms, but only for the specific purpose of bringing them within the prohibition on sales of firearms to minors. As pointed out by Hastings Law Professor David Jung,<sup>28</sup> Penal Code Section 12001(g) read:

*(g) For purposes of Section 12551 which prohibits sale of firearms to minors, the term “firearm” also shall include any instrument which expels a metallic projectile, such as a BB or a pellet, through the force of air pressure, CO<sub>2</sub> pressure or spring action, or any spot marker gun.*

In 1994, this section was amended, partially out of concerns, according to Jung, that the regulation of NPGs had been preempted by federal law.<sup>29</sup> Sections 12551 and 12552 (prohibiting the furnishing of a BB device to a minor without consent of the minor’s parents) now specifically regulate the sale and possession of “BB devices” by minors, and Section 12001 (g) now reads:

*(g) For purposes of Sections 12551 and 12552, the term “BB device” means any instrument that expels a projectile, such as a BB or a pellet, not exceeding 6 mm caliber, through the force of air pressure, gas pressure, or spring action, or any spot marker gun.*

After adoption of this amendment, it became clear that a defendant who injures someone with a pellet gun cannot be punished for violating provisions of the Penal Code that apply only to firearms.<sup>30</sup>

Shooting and Injuring—Not Always a Crime?

The distinction described above that divides air guns and firearms in the Penal Code was cited by a prosecutor as the deciding factor in the outcome of a recent pellet gun shooting in Contra Costa County. Barry Grove, the deputy district attorney who handled the case, told SOR he was forced to drop charges against Eli Polk, the admitted shooter of the victim, Steve Glazer. (See California Incident Reports above.) The prosecutor said his reading of the California Penal Code found there to be no violation from a pellet gun injury in this case and therefore concluded that “no judge in Contra Costa County” would have found grounds for a conviction.

One element cited by Grove was that the shooter denied intent to shoot Glazer, claiming he was shooting at tin cans, which left the prosecutor only with the ability to show negligence. But, according to Grove, the Penal Code has no provision making unlawful a nonfatal, negligent act involving a pellet gun.

Grove explains:

“If in the Glazer case the pellet gun had been a firearm, we would have been much more willing to bring a charge under Penal Code Section 246.3—negligent discharge of a firearm.” Because that option was not available, Grove said, “we were stuck with assault with a deadly weapon . . . which would have been fairly hard to prove.”

Had the victim died, sound grounds for pursuing a conviction would have been available, Grove said. “Under a reckless indifference theory where the person dies as a result of the assault, then the person who committed the act is liable for that person’s death in the form of murder.”

“However,” the prosecutor said, where a non-powder gun is used instead of a firearm, and where the shooting “could have resulted in death but instead resulted in an injury, even a bad injury, you can have the odd circumstance where there is no crime at all, at least in the Penal Code.” Grove gave a hypothetical example of this “anomaly” in the law:

“If you shoot a firearm up in the air and the bullet comes down and kills someone, you are guilty of a crime. If it comes down and injures someone, you are still guilty of negligent discharge of a firearm under Penal Code Section 246.3. With a pellet gun, if you negligently discharge the gun and kill someone, you are liable for a crime, at least

manslaughter. But if you negligently discharge a pellet gun and it takes someone's eye out, there is theoretically no crime with which the shooter can be charged."

Jung, the Hastings law professor quoted above, looked at statutes and case law governing liability for injuries caused by other than firearms, including non-powder guns, and essentially concurred with prosecutor Grove: "As a general rule, negligently injuring someone is not a crime. . . . That is to say, it would not be a crime if someone carelessly shot an arrow into the air" or otherwise caused an injury, even with dangerous, non-firearm devices.

Another perspective that could cause a prosecutor to hesitate in bringing a pellet gun injury case can be found in California jury instructions in assault and battery cases.<sup>31</sup> Those instructions provide criteria for defining assault. Among the conditions are that "a person willfully and unlawfully committed an act which by its nature would probably and directly result in the application of physical force on another person. . . ." Intent to harm the other person is not required.

But, noted Jung, cases where you are shooting at one thing and hit another "can present a prosecutor with the difficult problem of proof where the shooter's defense is that he was aiming at something else." All the more is this true, said Jung, when the weapon is a device recognized in law, if not in fact, as being not as inherently dangerous as a conventional firearm.

### Civil Liability

Air gun injuries have reached courtrooms, though rarely in California, as civil liability cases.<sup>32</sup> As noted above, the Daisy company settled a liability lawsuit for \$18 million brought by the parents of the young shooting victim who went into a coma and died from an air gun wound in Pennsylvania in 2003.

The Daisy lawsuit alleged flaws in the design and manufacture of the gun that caused the injury. A more contentious situation arises when a cause of action results from a claim that, even though a gun functioned properly, the manufacturer nevertheless bears liability when the product causes injury and death. California courts and the Legislature have addressed that issue but only in the case of firearms, in which gun makers do not enjoy an automatic immunity from liability.<sup>33</sup>

However, where air guns are concerned, courts have found civil liability on grounds other than design flaws or operational malfunction. For example, several cases in other states have turned on the issue of failure to warn, i.e., the presumption or inference of product liability based on failure to warn that the user of a product would have heeded an adequate warning had one been given.<sup>34</sup> Courts have ruled both up and down on liability.

Examples:

- From a 1954 Illinois case: A boy less than 7 years old shot a BB gun blinding a playmate. It was shown that the retailer who sold the gun knew it would be used by a young child. On appeal, a court found the gun retailer liable for knowingly selling a gun that wound up in the hands of a child lacking the knowledge that air rifles can be dangerous. (Semeniuk v Chentis (1954) 1 Ill App 2d 508, 117 NE2d 883)
- From a 1982 Pennsylvania case: A shot from a pellet gun struck a boy in the skull and brain, killing him. Suit was brought based on the manufacturer's failure to warn that repeated pumping actions increase the gun's penetration power. However, it was shown the youth who pointed the gun and pulled the trigger, thinking the safety was on, was aware of the lethal propensity of the gun. The court found shooter's error to be the cause of the accident, not failure to warn of the striking power by the manufacturer. (Sherk v Daisy-Heddon, Div. of Victor Comptometer Corp. (1982) 498 Pa 594, 450 A2d 615)

#### The Non-powder Gun as a Dangerous Weapon

In criminal law, questions arise over whether and in what circumstances a non-powder gun can be considered a dangerous weapon. As explained by Jung:

“While an NPG cannot be considered a firearm under the California Penal Code, NPGs can be ‘dangerous’ or ‘deadly’ weapons for purposes of various Penal Code sections that prohibit the use of other weapons in commission of crimes. Thus, a defendant who commits a robbery with a pellet gun is subject to the penalty enhancement contained in Penal Code Section 12022(b)(1) for personally using a deadly or dangerous weapon to commit a felony. (*People v. Schaefer* (1993) 18 Cal. App. 4<sup>th</sup> 950, 951)

“Similarly, an assault with a pellet gun can be an assault with a deadly weapon under Penal Code Section 245 (a)(1), which applies to ‘assault with a deadly weapon other than a firearm or by means of force likely to produce great bodily injury.’” (*People v. Lochtefeld* (2000) 77 Cal. App. 4<sup>th</sup> 533, 540-541). (Note, however, that NPGs are not mentioned by name in the cited section, raising the question for some—including Grove in the Glazer case cited above—on whether that fact alone might block a conviction.)

Jung concludes: “These ambiguities could potentially create problems in the prosecution of crimes committed with pellet guns, because the power of a pellet gun can depend on many variables”—the amount of air pumped into it, muzzle velocity, nature of ammunition and other factors. “Proving that a certain pellet gun was capable of causing great bodily injury at the time the defendant fired it could present substantial hurdles for prosecutors.”

## **Other States**

Laws enacted in other states include pairing controls on NPGs with firearms and imposing specified prohibitions on possession and use.

- Maine, Michigan, Nevada, New Jersey and Rhode Island define non-powder guns as firearms.
- These states define NPGs as dangerous weapons, combine NPGs with statutes describing controls on dangerous weapons or exact the same penalties for the illegal uses of firearms and NPGs: Minnesota (Minn. Statute 609.66 Criminal Code); South Dakota (S.D. Codified Laws, Section 13-32-7); New Jersey (N.J. Stat. Section 2C:39-1 (f); Alabama (Code of Ala. Section 13A-11-50) specific to concealed weapons, same penalties air guns/firearms; Washington: (Rev. Code. Wash. (ARCW) Section 9.41.230, and, Section 9.41.280 (e), dangerous weapons on school property; Nevada (NRS Section 202.290 (2) and Section 212.185) possession by incarcerated person; Oklahoma (21 Okl. St. Section 1287) used to commit felony, firearm/air gun, same penalty and (Section 645) regarding assault with dangerous weapon; North Carolina (N.C. Gen. Stat., Section 14-316 (b) Air guns as “dangerous firearms” but only in 17 specified counties; North Dakota (N.D. Cent. Code, Section 12.1-01-04 (6)).
- Illinois defines as firearms any air guns that exceed 700 feet per second in muzzle velocity and measure above .18 caliber.<sup>35</sup>

Some states also regulate possession and safe handling. Among them:

- Massachusetts prohibits discharging an air-type gun across streets and railroad tracks and places special restrictions on minors, such as prohibiting minors from displaying air guns in public places.<sup>36</sup>
- Michigan prohibits, other than at home, use by minors of NPGs that are handguns.<sup>37</sup>
- With few exceptions, New York prohibits possession of air rifles and air guns to minors under 16 and requires posted notice of the prohibition at all retail outlets selling such guns.<sup>38</sup>
- In Pennsylvania, minors are prohibited from discharging an air gun in public or carrying it in public unless accompanied by an adult or unless the gun is wrapped or encased. Exceptions specify permitted possession and usage at home, within safety limits on private property and at authorized clubs or ranges.<sup>39</sup>

### ***Recent Legislation and Future Options***

#### 2003 and 2004 Bills

- In 2003, AB 1455 (Negrete McLeod), Chapter 246, expanded California code references to non-powder guns to include those that discharged projectiles whether made of metal or any other material. Previously, code sections governing NPGs referred only to those discharging “metallic projectiles.” The new legislation thus extended existing controls to more NPGs, affecting mainly “airsoft” guns that discharge projectiles made of plastic.
- SB 1858 (Dunn) Chapter 607, Statutes of 2004, concerned mainly the perceived lethality of “imitation firearms”—being mistaken for actual firearms, for example, leading possibly to a deadly outcome. The bill makes it illegal to brandish a gun, even if only an imitation firearm, if it could be taken for a firearm. Certain markings are required to clearly identify look-alike weapons as imitations. Separately, the bill also includes some new controls incorporating air guns as one form of imitation firearms. However, among the bill’s provisions, not all the controls required for imitation firearms apply to air guns. The controls on imitation firearms that do apply to air guns are as follows: Using an air gun to threaten harm to a person becomes a new misdemeanor.<sup>40</sup> Openly displaying an air gun in a public place is outlawed.<sup>41</sup> Air guns sold to the public

must come with a “conspicuous advisory in writing” warning that the gun may be mistaken by law enforcement for a firearm and that other new controls are in force.<sup>42</sup>

- But SB 1858 does not fully address, nor does it set out to address, all the issues raised in this report. Safety measures placed in statute as a result of SB 1858 mandate additional safe handling of non-powder guns, but those measures are less inclusive than those of some other states, as shown in this report. And, SB 1858 does not propose to legislate in the area of penalties as a result of an air gun injury.

#### Options for Future Legislation

- Clarify “deadly weapon.” As noted by Jung,<sup>43</sup> whether a pellet-type gun is a deadly weapon is a matter requiring a showing of evidence, case by case. One appellate court held, for example, that a pellet gun is a deadly weapon as a matter of law only if the particular gun is “capable of inflicting great bodily injury.”<sup>44</sup> The prosecution in that case had to show that the gun the defendant used could force a projectile through the skin to a depth of 1½ inches or could put out an eye. Only then was there sufficient evidence to support the defendant’s conviction of assault with a deadly weapon under Penal Code Section 245 (a)(1).

Legislation that clarified the standard for considering a pellet gun a “deadly” or “dangerous” weapon would obviate the need for expert testimony to demonstrate dangerousness, case by case, gun by gun. See Illinois above for one way that lawmaking has addressed this issue.

- Incorporate non-powder guns, given their capacity to injure, into selected California laws governing access to and possession of firearms. Examples: Require registration at point of purchase; prohibit sales to known felons, the mentally ill and those required to observe protective orders; and require forfeiture when the weapon is used in a crime, when negligent use causes injury and when discharging of an NPG takes place in a public place threatening public safety.
- Remove some of the disparity between safety requirements for firearms and non-powder guns such as pellet guns. One could look to other states that have applied safety requirements lacking in California. As noted above, Massachusetts requires adult

supervision of minors carrying an air gun in public, and it is unlawful to discharge pellets or BBs across streets and railroad tracks. In New York, possession by minors is closely controlled, making it legal at only a few kinds of locations. Where exceptions apply, licensing is required.

## ***Conclusion***

As we show in this report, California deals differently with guns capable of inflicting injury and death. One long list of statutes controls the access, use and handling of firearms, particularly handguns. Another list shrinks to a handful the safety conditions placed on access, use and handling of non-powder guns, including pellet guns. Nationally, we cite official and other credible sources reporting the proliferation of pellet and other air-type guns in the millions and injuries caused by them in the tens of thousands—most of the victims children and teens. Still, despite the hazards presented by a less than robust regime of safety measures, the legal process lacks clarity when it comes to prosecuting the unwise and dangerous use of such weapons.

In light of these findings, we suggest possible improvements in the monitoring and safe usage of air-type guns in California. We suggest, for example, exploring in the Penal Code where gun controls over firearms and over non-powder guns might converge. We suggest creating a measurable standard—as Illinois has done—between the more dangerous and less dangerous types of pellet guns and assigning appropriate controls accordingly.

## **Endnotes**

- <sup>1</sup> Title 15, United States Code, section 5001, subdivision (b)(1).
- <sup>2</sup> <<http://www.csmonitor.com/2004/0205/p03s02-usgn.html>>.
- <sup>3</sup> SOR interview with investigating officer.
- <sup>4</sup> < <http://www.tbotech.com/taser-specifications.htm>>.
- <sup>5</sup> Examples: *American Journal of Diseases of Children*, June 1984, Vol. 138 quoting Bowen DI, Magauran DM: Ocular Injuries Caused by Air Gun Pellets, *Br Med J* 1973; 1:333—337, and DiMaio VJM: “Penetration of Skin by Bullets and Missiles,” *Forensic Science Gazette* 1980; 11:1-2.
- <sup>6</sup> “BB and Pellet gun-related injuries—United States, June 1992-1994,” *Morbidity and Mortality Weekly Report*, CDC, 1995; 44:909-913.
- <sup>7</sup> Sporting goods and gun stores in the Sacramento area report selling 1,000-fps pellet rifles, capable of achieving maximum pressurized air power, by hand, with one gun-cocking motion.
- <sup>8</sup> Danielle Laraque, MD, and the Committee on Injury, Violence and Poison Prevention, “Injury Risk of Non-powder Guns,” *PEDIATRICS*, Vol. 114, No. 5, November, 2004, p.1357.
- <sup>9</sup> For example, see Pyramid Air Gun Mall at <[http://www.pyramydair.com/cgi-bin/show.pl?cmd\\_pellets=show](http://www.pyramydair.com/cgi-bin/show.pl?cmd_pellets=show)>.
- <sup>10</sup> SOR interviews: Frederic A. Tulleners, Director, Forensic Science Graduate Program, UC Davis Extension; John Conway, associate professor, Department of Physics, UC Davis.
- <sup>11</sup> SOR interview, Jeff Galan, former Miami-Dade PD firearms inspector and currently a consultant on air gun forensics for air gun manufacturers.
- <sup>12</sup> Gun safety group HELP Network quoting CDC Firearm Injury Surveillance Study (unpublished date) 2000.
- <sup>13</sup> CPSC re Daisy Manufacturing Company. Ref to death, injury: Federal Register, Vol. 66, No. 215, p.56083, 11/6/2001. Though CPSC staff cited this and other cases as evidence of product defect in two models of Daisy air guns, and brought a product-liability suit against Daisy calling for recall of the models in question, the commission settled the case finding no liability. Instead, the company was required to advertise and post warnings and instructions of the safe handling of the company’s guns. See also, Brian Gruley, “Teenage Shooting Opens a Window on Safety Agency,” *Wall Street Journal*, p.1, April 29, 2004. Note also: The Consumer Federation of America called the settlement “arbitrary and capricious, an abuse of discretion, and otherwise not in accordance with law and without observance of procedure required by law.” CFA letter to CPSC 12/23/03.
- <sup>14</sup> HELP Network quoting Bratton, S; Dowd, D; Brogan, T; Hegenbarth, M, “Serious and Fatal Air Gun Injuries: More Than Meets the Eye,” *PEDIATRICS*, Vol. 100, pp. 609-612, 1997.
- <sup>15</sup> HELP Network quoting McNeil AM, Annest JL. “The Ongoing Hazard of BB and Pellet Gun-Related Injuries in the United States,” *Annals of Emergency Medicine*, Vol. 27, pp. 187-194. 1995.
- <sup>16</sup> Ibid., p.188.
- <sup>17</sup> H. Steven Lawrence, MD, *Fatal Non-powder Firearm [sic] Wounds: Case Report and Review of Literature*. *PEDIATRICS*, Vol. 85 No. 2, February, 1990.
- <sup>18</sup> McNeill and Annest, “Gun-Related Injuries,” *Annals of Emergency Medicine*, August 1995, p.192.
- <sup>19</sup> “Standard Consumer Safety Specifications for Non-Powder Guns,” *American Society of Standards and Training*, Designation: F 589 – 00, 2004.
- <sup>20</sup> Op cit., Bond, Schier, Miller, “Air-Powered Guns,” p.3.

- <sup>21</sup> Op cit., “Teenage Shooting,” *Wall Street Journal*, and follow-up SOR interview with CPSC staff.
- <sup>22</sup> Case reports section, Mortality and Morbidity Weekly Reports, Centers for Disease Control, Dec. 15, 1995.
- <sup>23</sup> See Definitions and Characteristics above.
- <sup>24</sup> *Orinda News*, *Contra Costa Times* stories and SOR interviews.
- <sup>25</sup> SOR interview with Critical Incident Investigation Division, LAPD.
- <sup>26</sup> California Penal Code references to “BB devices” include pellet guns and other forms of non-powder guns. Penal Code Section 12001 (g)).
- <sup>27</sup> See complete list at *California Firearms Laws*, 2004, California Department of Justice, <<http://caag.state.ca.us/firearms/forms/pdf/cfl.pdf>>.
- <sup>28</sup> David J. Jung, Professor of Law, and Director, Public Law Research Institute, Hastings School of Law. Also assisting SOR on the law: Kay Bassett, California District Attorneys Association.
- <sup>29</sup> 15 U.S.C. 5001 (g) (i) and (ii) Prohibits states from banning sale or manufacture of certain imitation firearms or of banning the sale of BB type devices except to minors.
- <sup>30</sup> *In re Jose*, (1992) 5 Cal. App. 4<sup>th</sup> 679, 700-702 (assault with a pellet gun was not an assault with a firearm within the meaning of Penal Code § 245 (a)(2) or Penal Code § 417 (a)(2).)
- <sup>31</sup> CALJIC 9.00, Assault Defined.
- <sup>32</sup> California shooting victim Steve Glazer filed a negligence lawsuit against the shooter in August 2004. To date, it has not proceeded to trial.
- <sup>33</sup> In 2001, the California Supreme Court, in *Merrill v. Navegar*, 26 Cal.4<sup>th</sup> 465 (2001), read California law to grant the gun industry immunity from product liability based on the inherent dangerousness of the weapon. The Legislature responded in 2002 by repealing the statute that drove the court’s decision. The legislation, AB 496 (Koretz), Chapter 906, Statutes of 2002, and SB 682 (Perata), Chapter 913, Statutes of 2002, also amended Civil Code Section 1714 to expressly provide that the “design, distribution or marketing of firearms and ammunition is not exempt” from the duty to use ordinary care and skill in creating safe products. The case law and the legislative history were limited to firearms, and do not apply to air guns.
- <sup>34</sup> See 94 A.L.R.3d 291, for a discussion of case law around the nation addressing product liability for air guns and BB guns.
- <sup>35</sup> 430 ILCS 65/1.1, Ch.38, par. 83-1.1, Sec. 1.1.
- <sup>36</sup> Annotated Laws of Mass. Ch. 269, Sec. 12B (2005).
- <sup>37</sup> Mich. Comp. Laws, Ch. 752 Crimes and Offenses, Sec. 752.891.
- <sup>38</sup> NY Penal, Sec. 265.05; NY Gen Bus, Sec. 399—s. (2004).
- <sup>39</sup> Pa. C.S.A., s 6304, Title 18.
- <sup>40</sup> Penal Code Section 417.4.
- <sup>41</sup> Penal Code Section 12556.
- <sup>42</sup> Penal Code Section 12554.
- <sup>43</sup> Pp. 19-20.
- <sup>44</sup> *People v. Lochtefeld*, 77 Cal. App.4<sup>th</sup> 533; 91 Cal. Rptr. 2d 778 (2000).